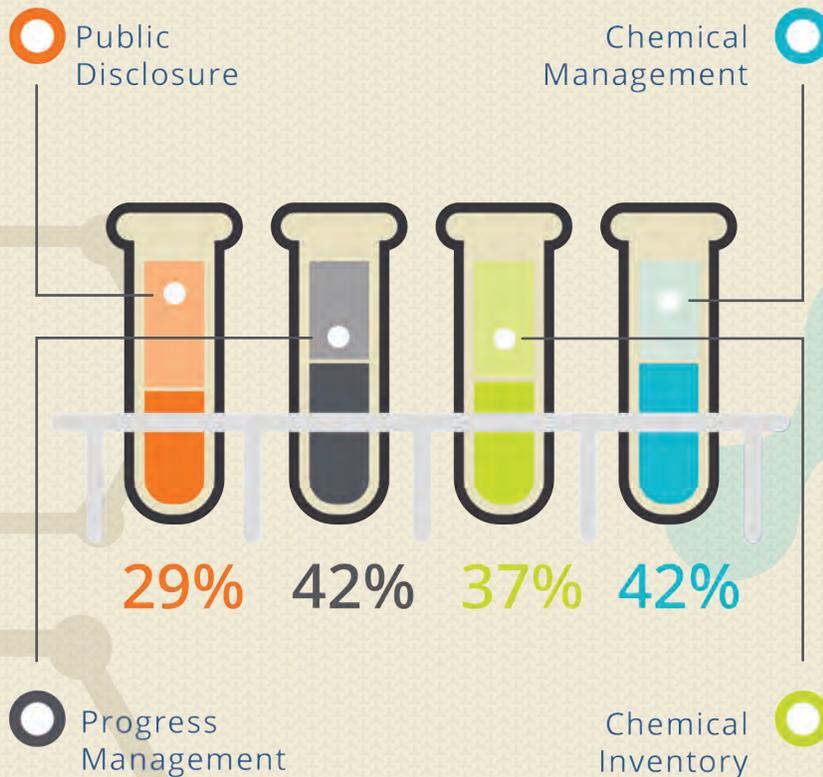


4



Key Findings from the 2015
Chemical Footprint Project Survey

CHAPTER 4

Key Findings from the 2015 Chemical Footprint Project Survey

The results from the 2015 Chemical Footprint Project survey provide valuable insights into how 24 different companies manage chemicals in their products and supply chains.³⁰ This first data set provides a window into current business practice and is an indicator of how front-runners manage chemicals in their products and supply chains.

This chapter begins with a brief discussion of the initial data set and its quality, then summarizes and analyzes the results for the four key performance categories as a whole, and for each of the four categories of Management Strategy, Chemical Inventory, Footprint Measurement, and Disclosure & Verification.

Respondents to the 2015 Survey & Data Quality

Participating companies varied by business sector (see Figure 1), product type, firm size, and whether they are publicly-traded or privately-held. Of the 24 companies, 19 sell articles and five sell formulated products. Nine companies are large, five are medium, and ten are small in size. We categorized 20 companies as using a Continuous Improvement business strategy and four as using a Design for Health business strategy (see Chapter 3 for definitions). The four Design for Health companies are all small in size, with two selling formulated products and two selling articles.

Regarding the answers submitted by the 24 companies, note the following caveats:

- **Division- not corporate-wide data:** five companies reported data for divisions of their business, rather than the entire corporation (while the intent of the survey is to include the entire corporation).
- **Inconsistent application of terms:** participating companies did not consistently apply the

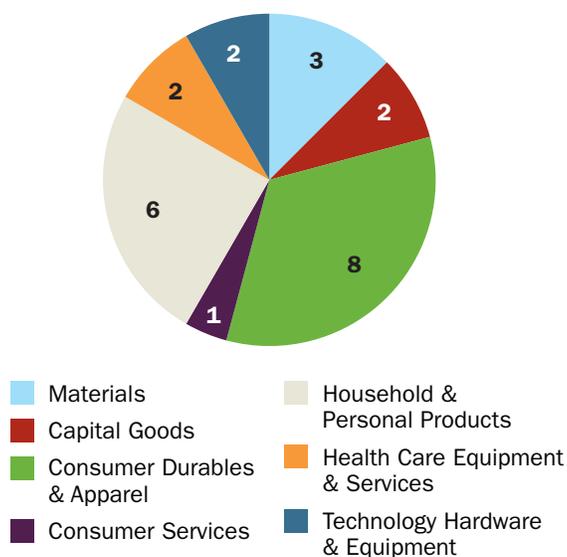
Chemicals of High Concern (CoHCs)

The Chemical Footprint Project defines a CoHC as a chemical that meets any of the following criteria:

- Carcinogenic, mutagenic, or toxic to reproduction (CMR);
- Persistent, bioaccumulative, and toxic (PBT);
- Any other chemical for which there is scientific evidence of probable serious effects to human health or the environment that gives rise to an equivalent level of concern (for example, an endocrine disruptor or neurotoxicant); or
- A chemical whose breakdown products result in a CoHC that meets any of the above criteria.

For 2015, respondents were asked to measure their use of CoHCs (Indicator F1) on the basis of chemicals listed on the California Candidate Chemicals List.

FIGURE 1 Chemical Footprint Project Survey: Participating Companies by Sector



Beautycounter is fully transparent to the public about ingredients in our products, including fragrances, and preservatives and flavors.

Chemical Footprint Project’s definitions for: “Chemicals of High Concern (CoHCs),” “Restricted Substances List (RSL),” “Beyond RSL,” “Chemical Ingredient Information,” or “Safer Alternative” (see glossary of terms in Appendix 1). For the 2015 survey, the Chemical Footprint Project specified a CoHC as any chemical on the State of California’s Candidate Chemicals List.³¹ These inconsistencies affected how companies answered questions

and affected their final scores. This lack of harmonization on the language of chemical footprinting limited our ability to compare companies.

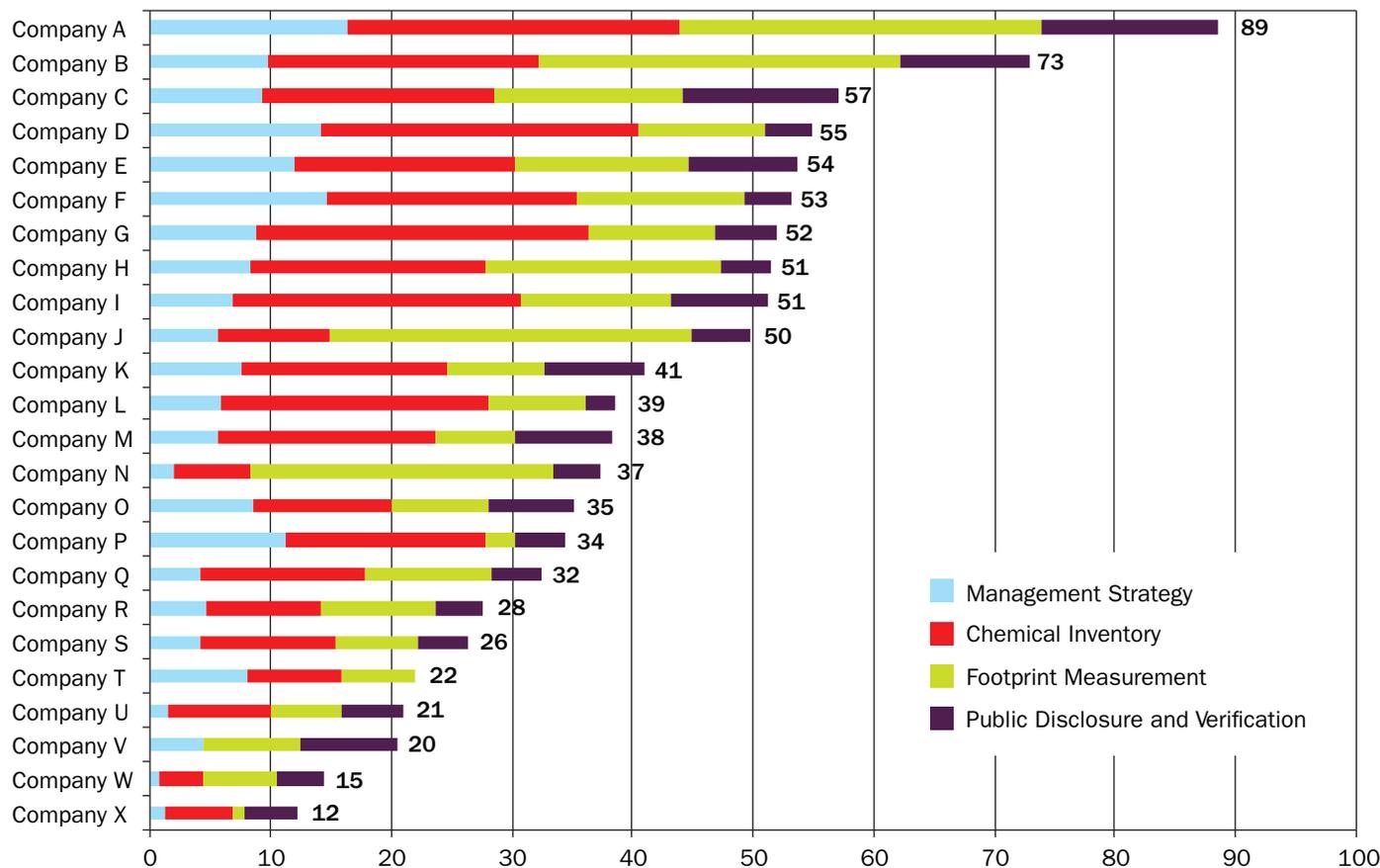
- **Natural material exception:** Companies using natural materials such as cotton or wool were not expected to know or provide chemical composition of those materials, unless these materials were known to contain CoHCs. In the future companies will need to demonstrate that natural materials do not contain CoHCs.³²

In updating the survey and guidance for 2016, the Chemical Footprint Project will clarify and emphasize what terms mean, how they must be applied, and how to report data related to natural materials.

Results Across All Indicators

Scores of the 24 respondents to the first annual Chemical Footprint Project survey varied widely, ranging from 12 to 89 points, while the average

FIGURE 2 Chemical Footprint Project Survey: Points Scored by Each Company



Leading the Way in Safer Chemical Use and Public Disclosure

The beauty industry is complex: there is little regulatory oversight, abundant consumer confusion, and much that is unknown about ingredients in products people put on their bodies everyday. Beautycounter is an education-first, mission-driven company building a movement for better beauty. Our 5 Step Ingredient Selection Process, coupled with our commitment to product performance, sets us apart from other skin care and cosmetic brands.

Step 1: Ban Intentionally — We begin our formulation process with our “Never List”—more than 1500 questionable or harmful ingredients that we formulate without. In this way, we preemptively avoid the use of chemicals of high concern.

Step 2: Screen Rigorously — We go much further than a restricted substance list: We screen every potential ingredient using the best available data, and avoid ingredients associated with hazards such as cancer, developmental toxicity, and hormone disruption. This helps our company to avoid “regrettable substitution,” or replacing one undesirable chemical with another that might have the same concerns.

Step 3: Learn Constantly — The absence of data does not mean that a chemical is safe. We regularly review emerging data on ingredients and we have begun to commission new studies to better inform our company’s decisions and to build the collective knowledge base. We consult with scientists and thought leaders working to reduce exposure to toxic chemicals, and hope to inspire the development of safer, greener chemicals from the start.

Step 4: Source Responsibly — We choose the best available organic, natural, or synthetic ingredient options that meet our high performance and safety standards. Over 80% of the ingredients in our products are natural or plant-derived. We work to source ingredients from sustainable, non-GMO sources and believe in supporting the U.S. economy. We do not test products or ingredients on animals, nor do we ask others to do so.

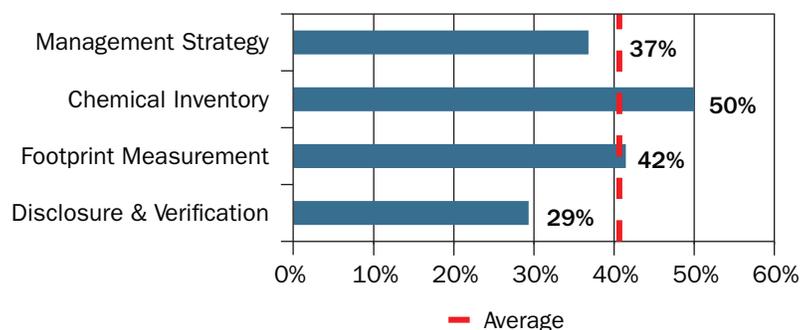
Step 5: Share Transparently — Beautycounter is transparent about ingredients in our products, including preservatives, fragrances, and flavors. We disclose ingredients on product packaging, on our website, and our online Ingredient Glossary lists every ingredient’s source and function—not only “key ingredients”—as well as the products in which it is used.

Beautycounter strives to be “far better,” not “less bad.” This is what it will take to truly lead in corporate chemicals management. Our belief in continual progress and raising the bar on safety and transparency—all while delivering exceptional product performance and empowering women—is the foundation of our company.

Mia Davis
Head of Environment,
Health & Safety

BEAUTYCOUNTER

FIGURE 3 Chemical Footprint Project Survey: Average Score by Key Performance Category



score was 41 points. Figure 2 shows the total score of each company sub-divided by the four key performance categories of Management Strategy, Chemical Inventory, Footprint Measurement, and Disclosure & Verification. Four companies scored above average for all four of the key performance categories. Nine additional companies scored at or above average in at least two of the four key performance categories. Of the 11 companies that had scores equal to or above 41 points, nine scored above average for Management Strategy, 10 scored above average for Chemical Inventory, eight scored above average for Footprint Measurement, and six scored above average for Disclosure & Verification.

The five companies selling formulated products averaged 61 points, while the 19 companies selling articles averaged 36 points. Companies selling formulated products have the advantage of knowing their products contain chemicals because they are legally required to list many of the chemicals on their product labels and they specify the chemicals in their formulations. Companies selling articles typically only know a few CoHCs in their products and they generally specify materials rather than full chemical formulations. Formulated product companies performed better on average than companies selling articles on every measure, from chemical risks (regulation, reputation, and redesign) to the key performance categories of Management Strategy, Chemical Inventory, Footprint Measurement, and Disclosure & Verification.

The four companies employing a Design for Health business strategy averaged 62 points, a significantly higher average score than the 37 points scored by the 20 companies using a Continuous Improvement business strategy. This is expected, given that these four companies integrate health and sustainability concerns into all facets of their business from the outset, including corporate policies, research and development, chemical and material evaluation and selection, marketing, and business strategy. Beautycounter's approach to chemicals management (see side box) exemplifies the implementation of a Design for Health strategy.

Scores also varied by company size (note the caveat to these findings due to five of the large companies reporting data for divisions instead of the entire company). The nine large firms averaged 46 points, followed by the ten small companies that averaged 43 points. The four companies employing a Design for Health strategy, all small, elevated the average score of the small companies. The five medium companies averaged 30 points.

Of the four key performance categories, companies scored highest on Chemical Inventory, followed by Footprint Measurement, Management Strategy, and lastly, Disclosure & Verification.

Figure 3 delineates the percent of total possible points companies averaged for each performance category, with the dashed red line representing the average score (as percent of total possible points) for all 20 indicators. For example, for Footprint Measurement the 24 respondents scored 299 points out of a possible 720 points or 42% of total possible points. Figure 3 normalizes the scores because the total (possible points) was not the same for every key performance category.

The following sections delve into the details behind the average scores by key performance category. For a complete list of the 20 survey questions by key performance category see Appendix 2.



KEY PERFORMANCE CATEGORY

Management Strategy

The five Management Strategy indicators (see side box) include the policies and strategies that companies implement to manage chemicals. Companies showing leadership in Management Strategy have comprehensive chemicals policies that avoid CoHCs and prefer safer alternatives, and integrate these policies into business strategy, job responsibilities, and public policy engagement. In the best case scenario, a leadership company will have chemicals management policies that cover its supply chain, manufacturing, products, and packaging. These policies will be public. A leadership company will determine safer substitutes based on a hazard assessment rather than relying solely on an authoritative list such as the European Union's REACH Candidate List of Substances of Very High Concern. A leadership company will have board-level engagement in chemicals management, compensate senior leadership based on chemicals management, and set and report publicly on goals. In addition, the company will engage in external initiatives to promote safer chemicals, including public policies.

Overall performance on Management Strategy was relatively weak in comparison to the other key performance categories, with firms earning on average 7.4 out of a possible 20 points (or 37 percent of the total possible points). Figure 4 details the scores of each company for the five Management Strategy indicators. Scores ranged widely from one point to 16 points. Those at the upper end of the scale have chemicals policies and integrate them into their business strategies, while those at the lower end have yet to formalize practices into policies, set goals, and integrate policies into ongoing responsibilities.

Management Strategy performance among companies was generally similar regardless of company size, with large firms performing slightly better than small and medium firms. Interestingly, companies with Design for Health

Management Strategy Indicators (20 points)

Corporate Policies

- M1. Creating a policy that aims to avoid chemicals of high concern (CoHCs)
- M2. Including a preference for the use of safer alternatives

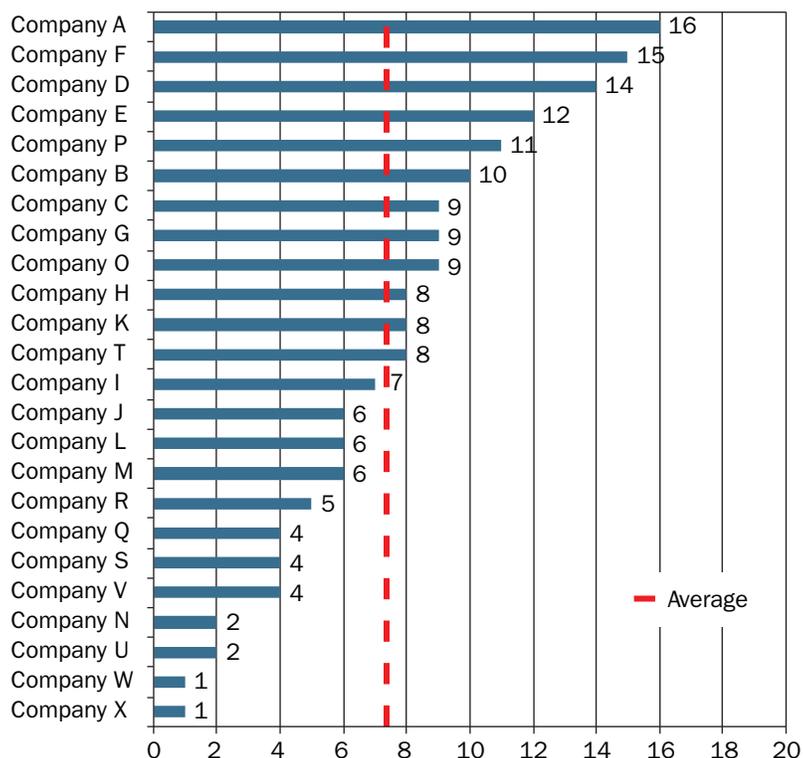
Corporate Integration & Accountability

- M3. Integrating chemicals policies into business strategy
- M5. Creating incentives to ensure implementation of chemicals policies

Public Policy Engagement

- M4. Engaging in public policy initiatives to promote the use of safer chemicals

FIGURE 4 Management Strategy: Points Scored by Each Company



strategies scored only somewhat better than companies with Continuous Improvement strategies. A key differentiator was product type, with firms that sell formulated products having nearly double the score compared to firms that sell articles. As formulated product companies face significant consumer demand for safer chemicals in their products and are more likely to have information on the chemicals in their formulations than companies that sell articles, it is not surprising that these companies are more advanced in developing formal policies and implementing them in their business strategies.

Figure 5 lists the average score (as the percent of total possible points) for each of the five Management Strategy indicators, and compares each indicator to the average score for all Management Strategy indicators (the red dashed line). Companies received the most points for having a restricted substances list (M1); followed by having goals (M3), a preference for safer alternatives

policy (M2), and corporate incentives (M5); and the fewest points for policy engagement (M4).

The key findings for each of the five Management Strategy indicators are included below and grouped by corporate policies (M1 and M2), corporate integration and accountability (M3 and M5), and public policy engagement (M4). For further details on the responses by each indicator see Appendix 3.

Management Strategy: Corporate Policy Indicators (M1 and M2)

The two corporate policy indicators are M1 (policies to address CoHCs) and M2 (policies to prefer safer alternatives). For both policies, companies were more likely to address chemicals in products than chemicals in manufacturing, supply chains, and/or packaging (see Figure 6). Only four companies have comprehensive corporate policies that aim to avoid CoHCs in products, manufacturing, supply chains, and packaging (M1). And four companies (interestingly only two of which overlap with M1) have comprehensive corporate policies that specify a preference for safer alternatives in products, manufacturing, supply chains, and packaging (M2).

While the majority of companies have policies to address CoHCs, half or less are not making these policies public. For example, only 50 percent of the companies either with policies for CoHCs in products (M1) or with policies preferring safer alternatives (M2) make them available to the public.

FIGURE 5 Management Strategy: Average Score by Indicator

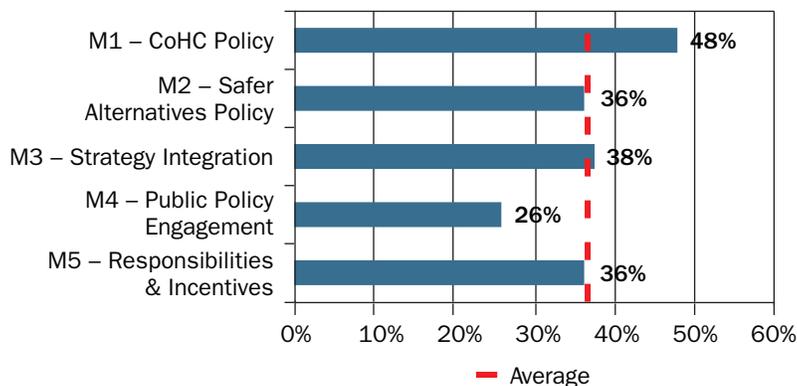
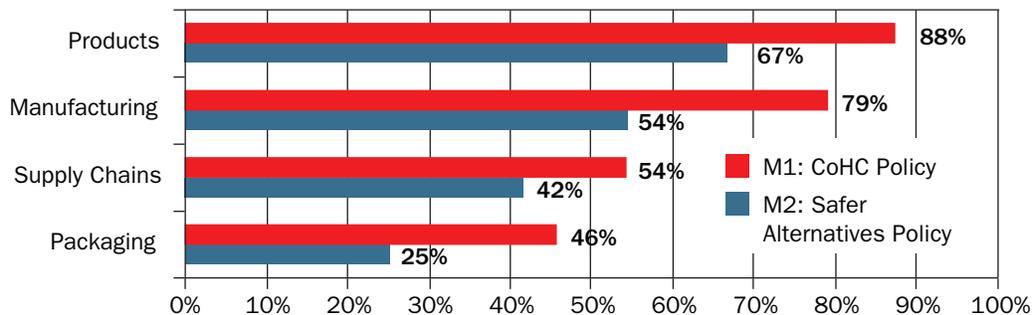


FIGURE 6 Management Strategy: Number of Companies with Corporate Chemical Policies (Indicators M1 and M2)



Leading the Way in Chemicals Management and Sustainable Chemistry

Levi Strauss & Co. (LS&Co.) is committed to minimizing the environmental impacts associated with the manufacturing of our products. For years, LS&Co. has been working to advance responsible chemical management and drive innovation on sustainable chemistry within the apparel industry. We are committed to the goal of zero discharge of hazardous chemicals by 2020, as reflected in our commitment to and participation in the Joint Roadmap Toward Zero Discharge of Hazardous Chemicals (ZDHC). To make this commitment a reality, LS&Co. began work on its Screened Chemistry Program in 2013.

Levi Strauss & Co.'s goal was to create a program for screening chemicals against human health and environmental toxicity hazard endpoints to identify best in class chemicals or better alternatives. The program leverages existing credible and transparent chemical hazard assessment methodologies, including the U.S. Environmental Protection Agency's Safer Choice Program and GreenScreen® for Safer Chemicals, to identify and substitute best in class or better alternatives upfront during the design phase, removing hazardous chemicals, and making decisions on alternatives before chemicals enter the supply chain. We believe this approach enables us not only to move toward zero discharge of hazardous chemicals, but also to identify where further research and development on alternatives is needed, and to achieve greater transparency overall on chemicals within the apparel supply chain.

LS&Co.'s Screened Chemistry program allows us to engage with our suppliers to scrutinize both approved and restricted chemicals for use in garment finishing and raw materials processing. It is a continuous improvement approach that promotes innovation and increases awareness with suppliers of good chemical management. As the program matures and moves from pilot to full implementation, all LS&Co. suppliers will transition to using a preferred chemical list, which includes a list of all chemicals screened to date and their score. LS&Co. understands that systemic change across the industry is required and is working with other brands, garment manufacturers, the chemical industry, NGOs, and other stakeholders to achieve this goal. LS&Co. has shared its Screened Chemistry program with the other apparel brands and is encouraging its wide adoption.

LS&Co. is committed to working with our suppliers and others to identify better alternatives when it comes to chemicals. We believe that innovation in this realm, both on our own and together with our garment manufacturers and chemical suppliers, presents significant business opportunities and that the time for action is now.

Bart Sights

Vice President, Technical Innovation

LEVI STRAUSS & CO.

Management Strategy: Corporate Integration & Accountability Indicators (M3 and M5)

The Integration & Accountability indicators are M3—integration of policies into business strategy and M5—responsibilities and incentives for policy implementation. For indicator M3, 71 percent of companies have a process for setting goals for safer chemicals and measuring progress toward those goals, yet only 24 percent of the companies that set goals make them public.

From a senior management accountability standpoint (M5), the 29 percent of firms with board-level oversight or senior management compensation tied to chemicals management performed better overall than firms with no such accountability—all seven firms had average or above average overall scores. Together these seven firms account for over half of the respondents with average or above average overall scores: three are formulated product companies and four are companies making articles.

Management Strategy:

Public Policy Engagement Indicator (M4)

Authentic engagement in public policies to advance safer chemicals is a challenge for most companies, as reflected by the data collected for indicator M4. Fewer than half of the respondents engage in a public policy initiative that advances safer chemicals, including collecting data on chemical hazards (25 percent of companies), reducing the use of CoHCs (29 percent of companies), development and use of safer alternatives

(25 percent of companies), and public disclosure of chemicals in products (21 percent of companies). Examples of public policy activities for which companies scored points included: hosting briefings for politicians on the need for better regulations and testifying or providing comments to regulatory agencies. Only two firms (8 percent), engaged in all five policy elements included in the survey.

Opportunities for Improvement

Companies can improve their corporate chemical policies and strategies by:

- Establishing or refining policies for CoHCs (M1) and preferring safer alternatives (M2) and broadening these policies to address chemicals in manufacturing, supply chains, products, and packaging for both M1 and M2.
- Setting and measuring progress to goals (M3).
- Engaging senior management and/or the board of directors in chemicals management (M5).
- Being transparent about efforts in chemicals management, including policies on CoHCs and safer alternatives (M1 and M2); setting goals to avoid CoHCs (M3); and engaging in public policies to promote the use of safer chemicals (M4).

For specific examples of Management Strategy activities see the sidebar on Levi Strauss & Co.'s approach to chemicals management.



KEY PERFORMANCE CATEGORY

Chemical Inventory

Chemical Inventory indicators include the information companies seek on chemicals in products and supply chains—ranging from CoHCs to all chemical ingredients in products. Companies showing leadership in Chemical Inventory prioritize the elimination of known CoHCs, seek to know 100 percent of the chemical substances in their products, and work with suppliers to collect that data and ensure its accuracy. In the best case scenario, a leadership company will know all of the chemical ingredients in its products³³ and will engage regularly with suppliers, including conducting trainings and performing audits.

Key Findings

Overall company performance on Chemical Inventory was relatively strong in comparison to the other key performance categories, with firms earning on average 15 out of a possible 30 points (or 50 percent of the total possible points).

Figure 7 details the total scores of each company for Chemical Inventory. Similar to Management Strategy, respondent scores varied widely, in this case, from zero to 28 points.

The Chemical Footprint Project distinguishes between legally restricted substances (RSLs) (I1) and beyond legally restricted substances (Beyond RSLs) (I2). A legally restricted substance is defined as a chemical that is restricted or banned in finished products by any country in the world. Beyond restricted substances are defined as hazardous chemicals identified by a company for management, reduction, elimination, or avoidance beyond legal requirements.

Companies with higher scores have RSLs and Beyond RSLs, actively engage suppliers, and create systems to manage chemicals data. Companies with lower scores are at the beginning of their journey to improve chemicals management and companies using natural materials scored lower as they do not track chemical use in their products.

Chemical Inventory Indicators (30 points)

“RSLs” – Restricted Substance Lists & Beyond

- I1. Managing legally restricted CoHCs
- I2. Identifying beyond legally restricted substances

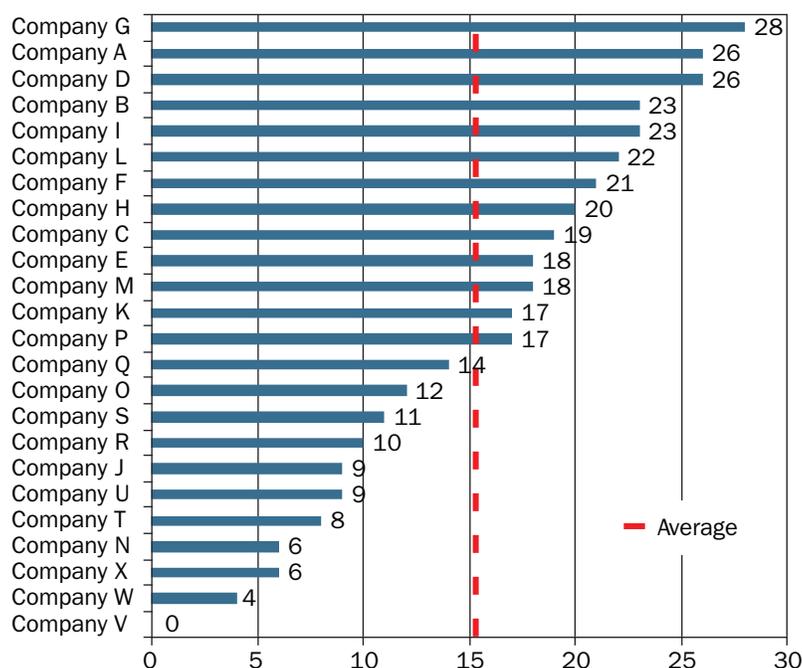
Chemical Ingredients

- I4. Knowing chemical ingredients in products
- I5. Managing chemical ingredient information

Suppliers

- I3. Collecting data from suppliers
- I6. Assuring supplier conformance with corporate policy

FIGURE 7 Chemical Inventory: Points Scored by Each Company



Company scores for the Chemical Inventory indicators varied widely depending on their product type and size, and marginally by business strategy. The four companies selling formulated products scored an average of 22 points in comparison to companies selling articles (average of 13 points). Large companies averaged 19 points,

while small companies averaged 16 points and medium companies averaged eight points. Companies with Design for Health strategies performed higher (averaging 23 points) than companies with Continuous Improvement Strategies (14 points).

Figure 8 lists the average score (as the percent of total possible points) for each of the six indicators, and compares each indicator to the average score (50 percent – the red dashed line) for all Chemical Inventory indicators. Companies received the most points for collecting information on legally restricted CoHCs (I1), followed by knowing chemical ingredients in products (I4), managing data on chemical ingredients in products, (I5), and collecting chemical information from suppliers (I3). Companies earned the fewest points for collecting information on beyond legally restricted substances (I2) along with ensuring supplier conformance to organizational policies (I6).

The key findings for each of the six Chemical Inventory indicators are included below and grouped by restricted substances lists (I1 and I2), chemical ingredients (I4 and I5), and suppliers (I3 and I6). For further details on the responses by each indicator see Appendix 4.

Restricted Substances List (RSL) Indicators (I1 and I2)

The average performance for RSL-related indicators was mixed, with the best performance on legally restricted substances (I1) where companies averaged 59 percent of possible points. Companies

scored significantly lower for Beyond RSLs (I2), averaging 48 percent of possible points. Twenty companies either have an RSL or procedures that eliminate the need for an RSL.³⁴ Of the companies with RSLs, most do not disclose their lists to the public: only three companies disclose their RSL (I1) and only four companies disclose their Beyond RSL (I2). Additionally, a few companies do not update their RSLs annually (see Appendix 4—Figure 1 for details).

Two-thirds of respondents (16 companies) review chemical hazard information beyond safety data sheets (SDSs) and/or engage with external stakeholders to identify additional CoHCs (I2). SDSs are a starting point for evaluating chemical hazards, but SDSs do not provide complete chemical inventories and a product's SDS may not list all CoHCs in the product.

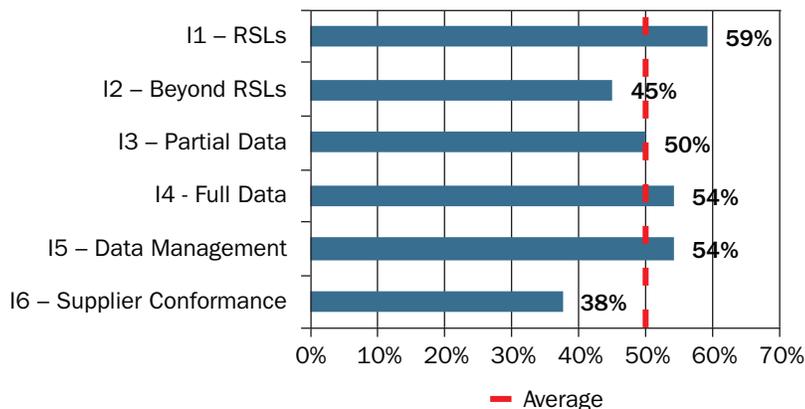
Chemical Ingredient Indicators (I4 and I5)

The most advanced companies are moving beyond tracking only CoHCs to collecting information on all chemicals in their products. With complete chemical ingredient information companies can be proactive and respond to new regulations and market demands by quickly checking databases to see if their products contain an emerging chemical of concern.

Nearly two-thirds of the companies collect chemical ingredient information for their products (I4). Of those 15 companies, 60 percent (nine companies) collect full chemical ingredient information for 99 percent or more of their products. Of these nine companies, three employ a Design for Health strategy and six employ a Continuous Improvement strategy; four are formulated product companies and five are companies making articles; four are small, one is medium, and four are large companies.

Almost two-thirds of the companies have a data system for chemical inventory (I5). Interestingly, not all the companies that collect ingredient information (I4) scored points for having a data system (I5) and vice versa, not all companies with data collection systems scored points for collecting ingredient information. Possible explanations for these anomalies may include: some companies use only natural materials and know what is in their products but do not collect

FIGURE 8 Chemical Inventory: Average Score by Indicator



chemical ingredient information, while others may not invest in linking chemical ingredient data to hazard data on those chemicals.

Supplier Indicators (I3 and I6)

Indicator I3 addresses the information companies request or require of their suppliers. Overall, 83 percent (20) of the respondents request or require some chemical information from suppliers, ranging from RSLs to full chemical ingredient information. Fifty-eight percent (14) of the respondents require RSL information and 63 percent (15) of the respondents request or require full chemical ingredient information. Only 17 percent (4) of the companies do not request or require any type of chemical information from their suppliers. Interestingly five of the 19 companies with RSLs do not include RSL requirements in supplier contracts.

A challenge for any company is to ensure that suppliers comply with the company's environmental, health, social, and governance requirements. Indicator I5 assesses how companies assure conformance to their policies. Two-thirds (16) of the companies perform at least one of the following activities: audit or train suppliers, test supplier products, or require suppliers to test their own products. Supplier audits (46 percent), routine testing of supplier products (42 percent), and training suppliers (38 percent) are the most common activities. One-third (8) of the companies do not engage their suppliers in any activity to determine conformance.

Opportunities for Improvement

Companies can improve their chemical knowledge and supplier conformance by:

- Updating RSLs (I1) and Beyond RSLs (I2) at least annually because global regulations and lists of CoHCs are frequently updated by governments and other authoritative bodies.
 - Informing investors and the public that they have an RSL and Beyond RSL.
 - Including in supplier contracts (I3) requirements to comply with RSLs.
 - Beginning to collect full chemical ingredient information (I4).
 - Establishing a data system either in-house or with a third party to manage data on chemical ingredients in products (I5).
 - Assuring supplier conformance to an RSL with audits and/or routine testing of products (I6).
- Creating a list of legally restricted substances (I1) to communicate to suppliers (or sell products that contain no legally restricted substances—although given the complexities of supply chains most companies need to have a list of legally restricted substances for their suppliers).





KEY PERFORMANCE CATEGORY

Footprint Measurement Indicators

The Footprint Measurement indicators assess the extent to which companies have baseline data on CoHCs in their products and track their progress to safer alternatives. Companies show leadership in Footprint Measurement by avoiding CoHCs by design or by collecting relevant data and reporting it. Companies employing a Design for Health strategy use safer chemicals and materials (e.g., natural fibers) by design and do not have CoHCs to report.

Companies employing a Continuous Improvement business strategy show leadership in Footprint Measurement by collecting data and reporting on their progress towards reducing the use of CoHCs. This requires companies to have an in-depth knowledge of chemicals in their products and supply chains, systems in place for tracking chemical ingredients in products, knowledge of those chemicals' hazards, and data on annual sales of their products. Additionally, leadership companies employ robust methods to evaluate chemical hazards and identify safer alternatives.

Footprint measurement may be the most challenging component of the Chemical Footprint Project, yet once companies collect the necessary data, they will have the capacity to track their progress from CoHCs toward safer alternatives.

Footprint Measurement Indicators (30 points)

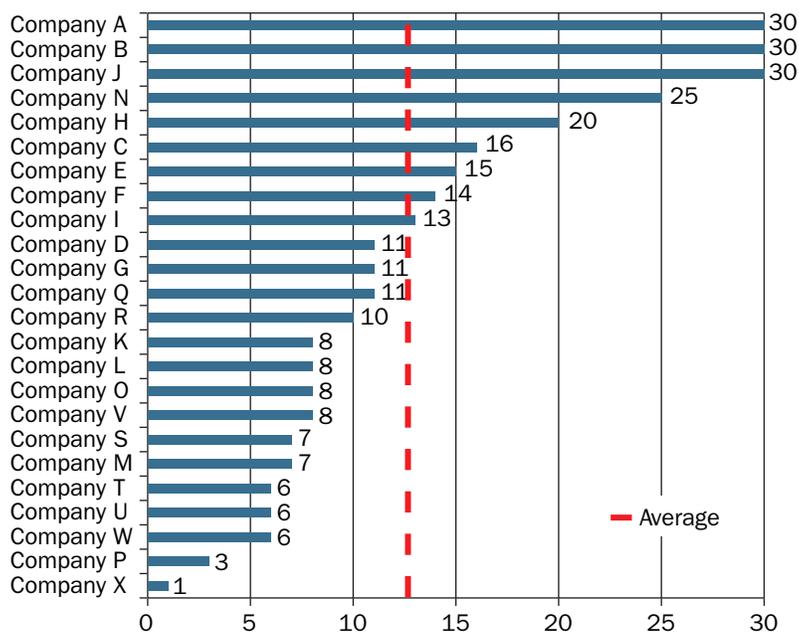
Measurement

- F1. Setting goals for reducing CoHCs & measuring progress
- F2. Measuring baseline chemical footprint
- F3. Measuring reduced use of CoHCs

Safer Alternatives

- F4. Assessing the hazards of chemicals
- F5. Encouraging the use of safer alternatives

FIGURE 9 Footprint Measurement: Points Scored by Each Company



Key Findings

In relation to the other key performance categories, companies performed second best with the Footprint Measurement indicators. The average company score was 42 percent of total possible points. However, Footprint Measurement performance was relatively weak with the exception of one indicator, F4 (methods for assessing chemical hazards), and for companies that employ a Design for Health strategy. If the points received for indicator F4 (where companies averaged 75 percent of total possible points) are eliminated the average score for Footprint Measurement drops to 33 percent.

Company performance on the Footprint Measurement indicators, as detailed in Figure 9, varied far more than any other key performance category, from one point to a perfect score of 30 points. The four companies employing a Design for Health business strategy scored 25 to 30 points as by design their products do not contain intentionally added CoHCs. In contrast, companies using a Continuous Improvement business strategy averaged only nine points. Small



companies averaged 18 points (aided by the Design for Health companies), large companies ten points, and medium companies five points. Companies selling formulated products averaged 27 points while companies selling articles averaged nine points.

The key findings for each of the five Footprint Measurement indicators are included below and grouped by measurement indicators (F1, F2, and F3) and safer alternatives (F4 and F5). For further details on the responses by each indicator see Appendix 5.

Measurement Indicators (F1, F2, and F3)

The Chemical Footprint Project measurement indicators are F1-goals to reduce CoHCs in products, F2-baseline chemical footprint measurement, and F3-reductions in intentionally added CoHCs. On average, respondents scored 46 percent of possible points for F1, 27 percent of possible points for F2, and 24 percent of possible points for F3 (see Figure 10).

For F1, the majority of companies (67 percent) reported setting goals for reducing CoHCs (13 companies) or not using CoHCs (four companies), while 33 percent (eight) of the companies reported not setting goals related to reducing CoHCs. Far fewer companies have the capacity or have begun trying to measure their footprint (F2). Only three companies reported knowing the number of CoHCs in their products; of those, one company also reported knowing the mass of CoHCs in its products. With the four companies that have no intentionally added CoHCs in their products, a total of seven companies (33 percent)

either know their CoHCs by number or mass or note that they do not use CoHCs. The remaining 71 percent (17) companies either do not know or did not report their use of CoHCs.

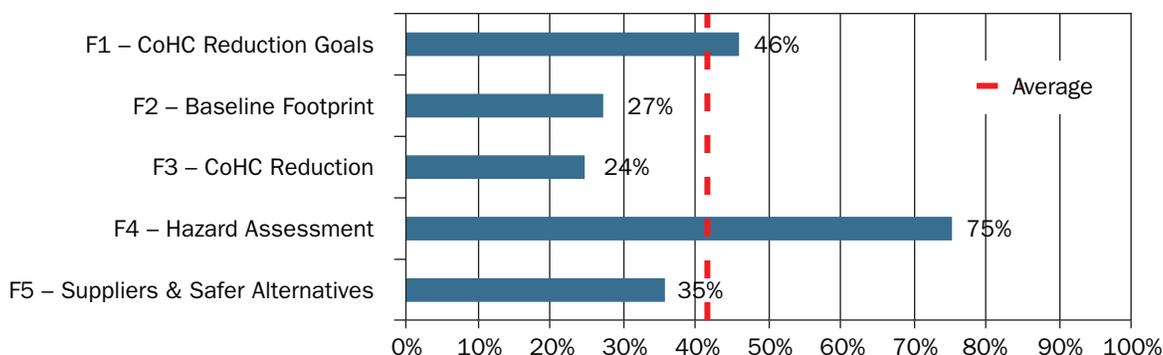
Measurement indicator F3 provides companies with the opportunity to report reductions in the use of CoHCs over the past two years. Six of the companies received points for F3, with two companies reporting reductions and four companies receiving points for not using CoHCs. Of the two reporting reductions, one company eliminated the use of one CoHC in its products. The remaining 75 percent of the companies report no reductions, with 16 of those noting that they do not have the necessary baseline data.

Safer Alternatives Indicators (F4 and F5)

On average, respondents scored 75 percent of possible points for F4 and 35 percent of possible points for F5. Companies scored 75 percent of the possible points for indicator F4, with 18 companies either using a tool (14) or asking their suppliers to perform the assessments (4). Six of the companies (25 percent) are not assessing the hazards of their chemicals. All of the six companies not assessing hazards sell articles and are evenly split across company size—two each for small, medium, and large companies.

Indicator F5 assesses the strategies companies use to encourage the use of safer alternatives. Overall 79 percent (19) of the companies use at least one of the approaches, such as asking suppliers to use their definition of safer alternative. Five of the companies (21 percent) are not taking any action to promote safer alternatives.

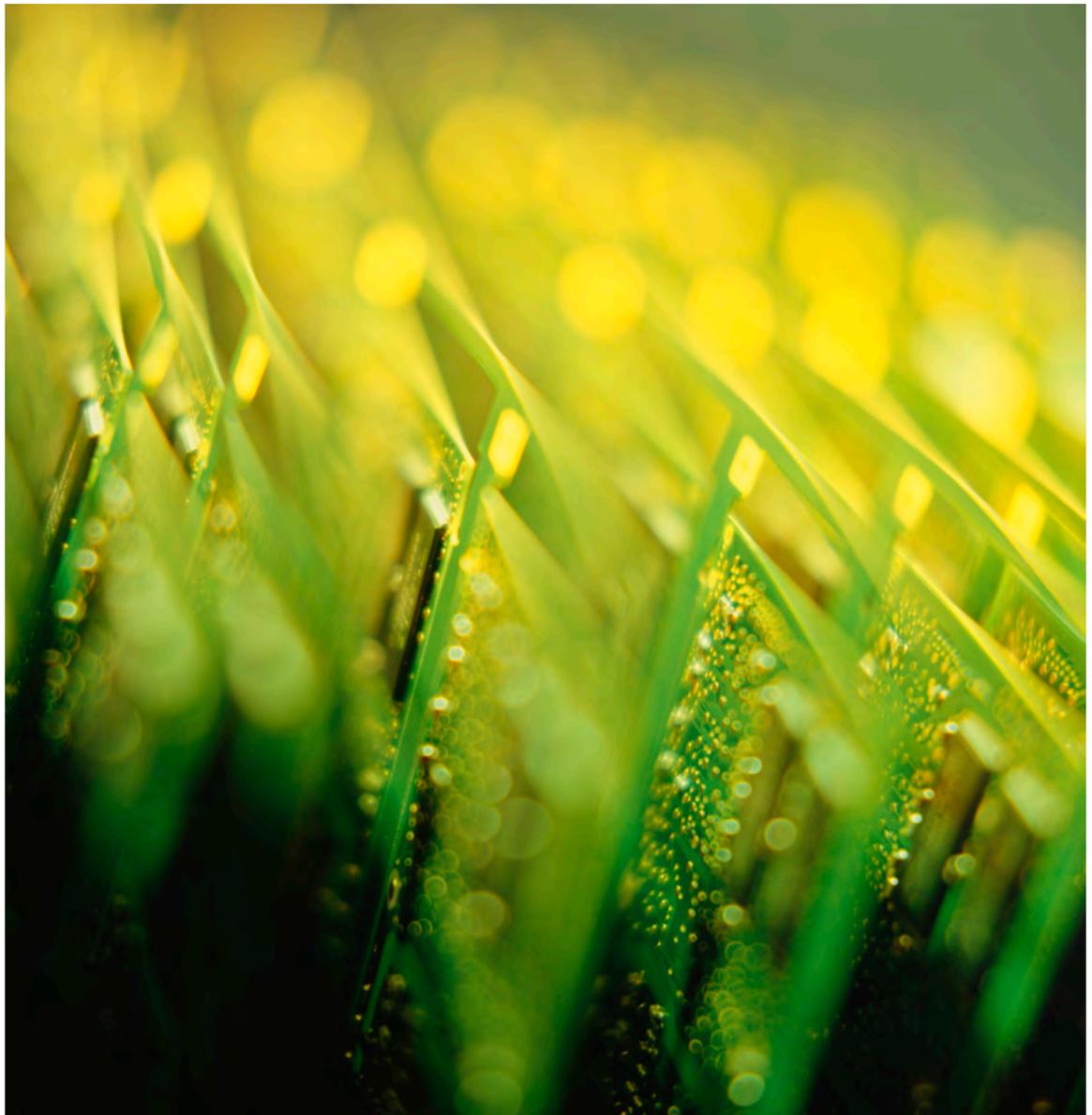
FIGURE 10 Footprint Measurement: Average Score by Indicator



Opportunities for Improvement

Companies can improve their footprint measurement by:

- Specifying the avoidance of CoHCs in the product design and development process.
- Setting goals and reporting progress in reducing CoHCs.
- Systematically collecting data on CoHCs in products, specifically chemicals on the California Candidate Chemicals List (a requirement for indicator F2).
- Using the baseline data on CoHCs in products (F2) to document progress to safer chemicals (F3).
- Developing initiatives to engage suppliers in identifying safer alternatives (F5), including: developing a clear definition of safer alternatives and making it public, rewarding suppliers that use safer alternatives, and integrating safer alternatives criteria into product design.





KEY PERFORMANCE CATEGORY

Disclosure & Verification

The Disclosure & Verification indicators evaluate the sharing of information on chemicals in products with the public beyond legal requirements, disclosure of participation in the Chemical Footprint Project, and steps taken to verify answers to the Chemical Footprint Project survey. Companies can show leadership in Disclosure & Verification by being transparent and verifying responses.

Key Findings

In general, across all the key performance categories, public disclosure lags behind company practice. Many of the indicators in other key performance categories include response options that give points for disclosure. For example, indicator M1 gives points for disclosing a company's policy to avoid CoHCs. Figure 11 compares the percent of companies that answered "yes" to an indicator (the "red" bar) to the percent of companies that answered "yes" and discloses their details publicly (the "blue" bar). From corporate policies (Management Strategy indicators M1, M2, and M3) to collecting data on CoHCs

Footprint Measurement Indicators (30 points)

Disclosure

- D1. Disclosing chemicals in products to the public
- D2. Disclosing participation in the Chemical Footprint Project
- D3. Disclosing responses to the Chemical Footprint Project questions

Verification

- D4. Providing third party verification of responses to the Chemical Footprint Project questions

(Chemical Inventory indicators I1 and I2) to setting CoHC reduction goals (Footprint Measurement indicator F1) companies disclose less than they actually practice. This may reflect a variety of factors, including: incomplete knowledge of chemicals in products and supply chains especially for companies making articles; perception of or actual limited external demand for transparency on chemicals management; and/or an approach to report successes only when complete, rather than report on interim progress.

FIGURE 11 Transparency by Key Performance Indicators

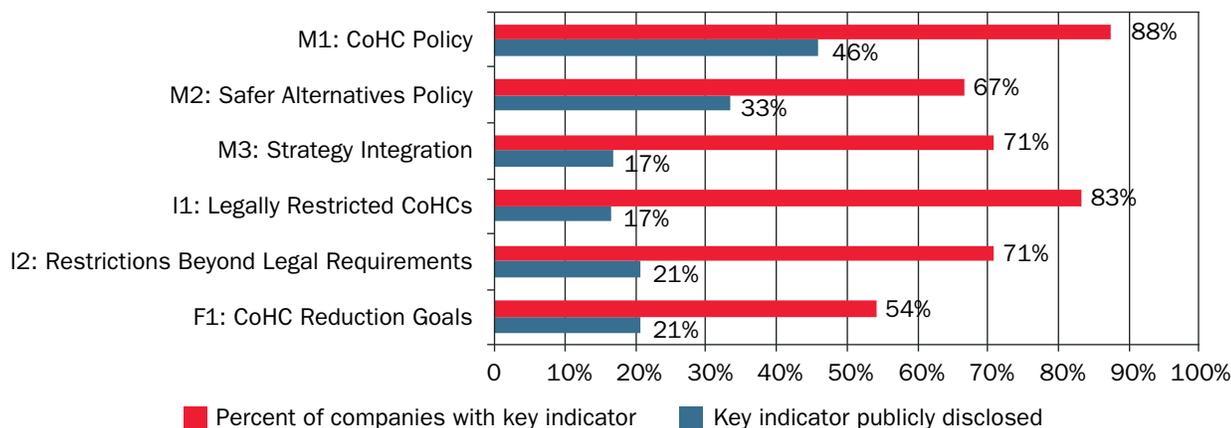
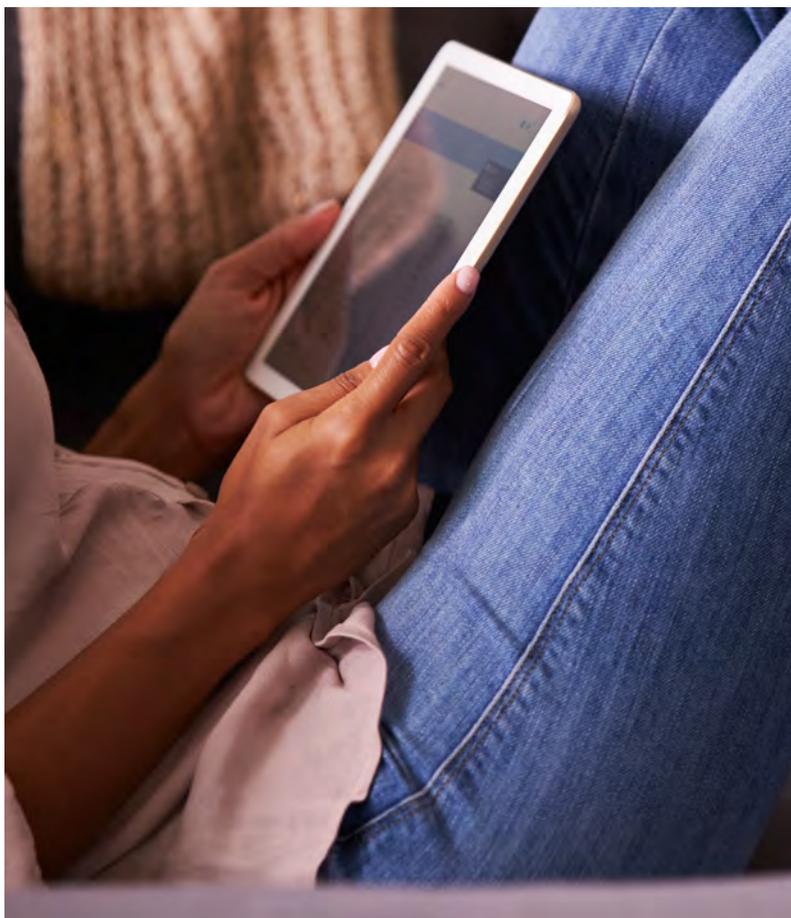
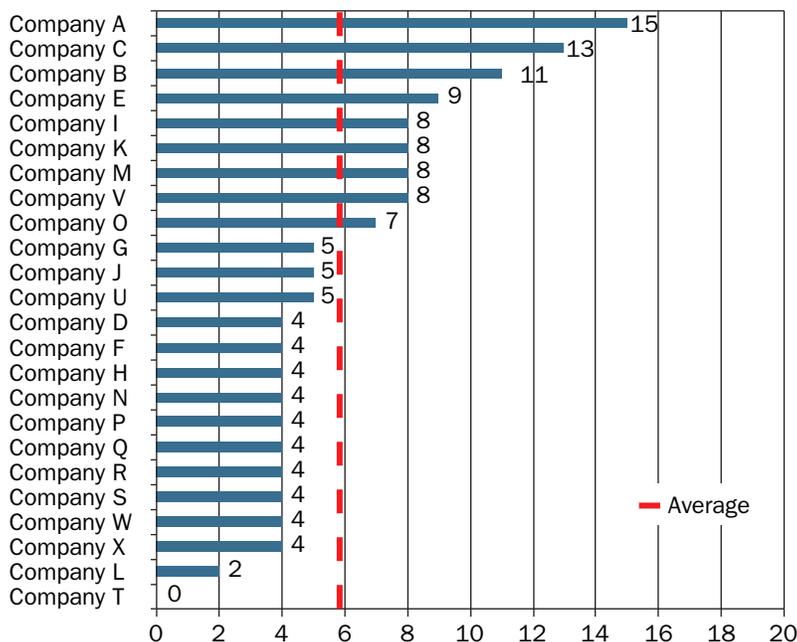


FIGURE 12 Disclosure & Verification: Points Scored by Each Company



Overall, companies received the lowest percentage of possible points for Disclosure & Verification, receiving an average of 30 percent of available points. Company performance on the Disclosure & Verification indicators, as detailed in Figure 12, varied from zero to 15 out of 20 possible points. On average, companies scored six points for all four Disclosure & Verification indicators. Those selling formulated products averaged eight points and those employing a Design for Health strategy averaged nine points, while those selling articles averaged six points and those employing a Continuous Improvement strategy averaged six points. Small, medium, and large companies all scored an average of six points.

Figure 13 details the average score (as percent of total possible points) for each indicator and compares it to the average score of 29 percent (red dashed line) for all Disclosure & Verification indicators. Absent D2, for which respondents received 92 percent of possible points, the average score for Disclosure & Verification indicators D1, D3, and D4 is 14 percent of total possible points.

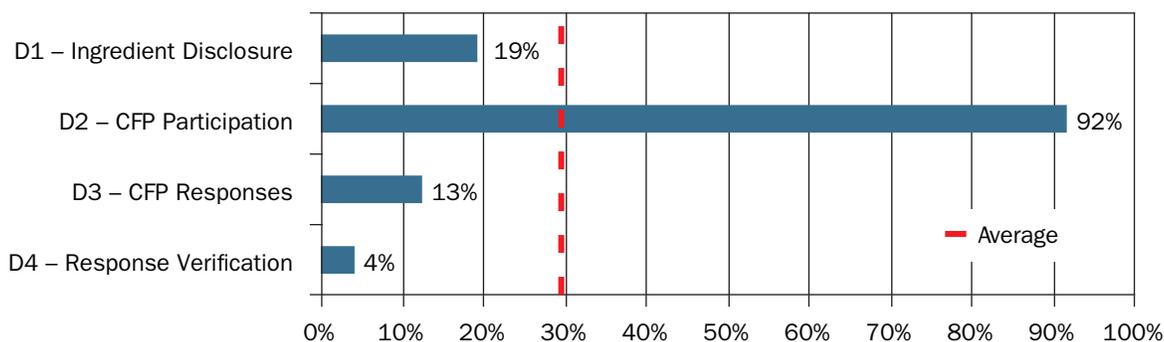
The key findings for each of the four Disclosure & Verification indicators are included below and grouped by disclosure (D1, D2, and D3) and verification (D4). For further details on the responses by each indicator see Appendix 6.

Disclosure Indicators (D1, D2, and D3)

The Disclosure indicators measure the extent to which companies share information with the public, including: sharing chemical ingredient information (D1), participating in the Chemical Footprint Project survey (D2), and making Chemical Footprint Project answers available (D3). Disclosure is limited except for question D2 where 92 percent of the respondents answered “yes” (see side box). For D1, the average company scored 21 percent of total possible points. Four of the five formulated product companies and five of the 19 companies making articles received points for D1.

Three companies agreed to make their answers public and received points for D3. They are: Becton Dickinson & Co., Beautycounter, and KYOCERA. Their answers can be found at www.chemicalfootprint.org.

FIGURE 13 **Disclosure & Verification: Average Score by Indicator**



Verification Indicator (D4)

Verification of Chemical Footprint Project answers scored the lowest possible points (four percent) of any indicator across all categories. Four companies had two to four responses

verified. Although participating companies are not required to use third party verification, this approach adds legitimacy to a respondents' answers.

Opportunities for Improvement

Companies can improve disclosure and verification by:

- Publicly disclosing chemicals in products beyond regulatory requirements.
- Making their Chemical Footprint Project answers available to the public.
- Seeking third party verification of responses.

In Summary

A mix of business types—various sizes, product types, and business strategies—scored above average across all four key performance categories. While all of companies with Design for Health strategies scored much better than average, some companies with Continuous Improvement strategies also scored above average, demonstrating the multiple pathways companies can take to improving their chemicals management performance. Opportunities for improvement abound, including implementing more comprehensive corporate policies, engaging suppliers in all facets of chemical management work, measuring the reduction of CoHCs, and being more transparent about current activities.



Public Participants in the 1st Annual Chemical Footprint Project Survey

Becton Dickinson & Co.
 Beautycounter
 California Baby
 Clorox Company
 Construction Specialties, Inc.
 Forms+Surfaces
 GOJO Industries, Inc.
 Hanseatic Bedding Products, Inc.
 Humanscale Corporation
 Interface, Inc.
 Jasper Group
 Johnson & Johnson
 Kimball International, Inc.
 KYOCERA Corporation
 Levi Strauss & Co.
 Radio Flyer, Inc.
 Seagate Technology, PLC
 Sealed Air Corporation
 Shaw Industries Group, Inc.
 Standard Textile Company, Inc.
 SYSCO Corporation
 WaterWipes (a division of Irish Breeze Ltd)