

An abstract graphic composed of several 3D cubes and rectangular blocks in various shades of red and white. The blocks are arranged in a way that suggests a complex, interconnected structure. A series of parallel lines extends from one of the larger blocks towards the right, creating a sense of depth and movement. The overall composition is dynamic and modern.

5th Supply Chain Monitor – from green to sustainable supply chain management

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Premise

Heightened environmental sensibility and increased regulation have propelled green considerations up the supply chain management agenda in recent years. In our last *Green Supply Chain Monitor, From Awareness to Action Report* (2010–11), we saw companies beginning to turn initial intentions into committed action. Four years on, we revisited companies' plans and actions in those same markets and geographies to see how far they have come, and to test out a number of hypotheses. We also broadened the scope of the current survey to include the US and social aspects – for comparative purposes and to explore how global green supply chain strategies have evolved.

During the preparation of the current report, a major global summit on climate change took place in Paris¹ – where more world leaders than ever before came together to agree new measures and targets to reduce the impact of manmade climate damage to the planet. As a result of this renewed international drive for improvement, we can expect to see companies increase their efforts to reduce their carbon footprint across their operations and supply chain activities.

In our 2010–11 report, we saw evidence of sustainable changes being made to logistics and production networks. In 2015, another element of sustainability – social responsibility – came to the fore for companies and their supply chain activities.

Regulatory requirements are already beginning to emerge governing social responsibility, as is social pressure, so we can expect to see growing activity here. We believe these additional requirements demand a new wave of adaptive sustainability measures, to level social efforts with carbon reduction achievements – both in recording and reporting terms, and in operational changes.

We hope that our *5th Supply Chain Monitor* provides rich food for thought.



Matthias Loebich
Partner



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Partner

Paris COP21 – outcomes of the global climate summit of December 2015

All participating countries committed to cut carbon emissions, key pledges including:

- Keeping global temperature rises “well below” 3.6°F (2°C) and “endeavoring to limit” them even further to 2.7°F (1.5°C)
- Limiting the amount of greenhouse gases (emitted by human activity) to levels that trees, soil and oceans can absorb naturally (beginning at some point between 2050–2100)
- Reviews of each country's contribution to cutting emissions to take place every five years
- Rich countries helping poorer nations with “climate finance” to adapt to climate change and switch to renewable energy
- At least 20 percent of all road transport vehicles globally to be electrically driven by 2030
- Update 22nd April, 2016: 174 countries have signed the agreement, which requires individual ratification by each of the countries in order to see further progress.

¹ <http://newsroom.unfccc.int/paris/>; Outcomes: see box

Management summary

We found evidence that companies' green supply chain efforts have lost some of their momentum since our last report four years ago. We interpret this in different directions.

Companies have now largely harvested the low-hanging fruits (for example, training drivers to be more economical with fuel, and optimizing networks through dynamic routing and scheduling). There seems to be an emerging trend that the first round of implementation work and environmental measures are reaching their limits – in terms of their ability to deliver additional positive carbon reduction improvements, cost savings or efficiency gains are achievable only with increased investment.

The loss of regulatory momentum driven by the failed climate conferences prior to Paris 2015 hasn't helped to motivate companies to invest in green or sustainable supply chains. The lengthy economic crisis diverted attention away from carbon reduction targets in a number of countries, and the formal penalties for companies that haven't met their green commitment have not been consistent. The Volkswagen emissions testing scandal that emerged during the second half of 2015 may change all that, however, causing brands, regulators and investors to tighten their controls to minimize the chance of exposure to this kind of deception.

There is a widespread view that implementing basic green actions in the supply chain is no longer a source of competitive advantage. Carbon accounting is established, structured and expected now: if companies are only investing in rudimentary improvements this will not impress the market. Companies need to do more, then, but the challenge is how to move forward. New green actions will need investment, and not necessarily with direct internal payback – or at least not in the immediate term.

Social responsibility efforts, on the other hand, span a broad spectrum and are hard to pin down and measure. Systems for measuring and documenting improvements in a standard way are lacking, and applications remain diffuse, largely created internally where they exist. Incentive systems for broader sustainability are rare, too. In general, social aspects within the supply chain are at a maturity level equivalent to that of carbon reduction activities some 5–8 years ago, though there is a desire to deliver a more comprehensively sustainable supply chain.

Moving from green to sustainable supply chain management

Predominantly, sustainability efforts are prioritized where there is a clear economic benefit. Typically, companies will choose the greener, more socially responsible option only when there is a cost benefit, or does not come at a premium. Although there is a public pressure for companies and their supply chain partners to be more environmentally and socially conscious, there is a sense that customers don't want to foot the bill for this and, competitively, companies don't feel they can absorb the cost either if there is unlikely to be a tangible payback.

There are signs too that while sustainability is a big issue in the boardroom, that impetus hasn't filtered down to functional levels (e.g. procurement) where managers are still led by the need to be cost-efficient above all.

Methodology and survey participation

The research for BearingPoint's *5th Supply Chain Monitor – From Green to Sustainable Supply Chain Management* was conducted by questionnaire. The research pool was very international in spread. Some 215 European companies and 51 US companies took part. 134 questionnaires have been filled in completely. 76 percent of the respondents came from the Germany/Switzerland/Austria region (52 percent of respondents were located in Germany, followed by 14 percent in Switzerland and 10 percent from Austria). 15 percent of respondents came from the Nordics, 7 percent from France and two percent from Benelux countries. For comparative purpose, only selected questions were asked to respondents coming from the US.

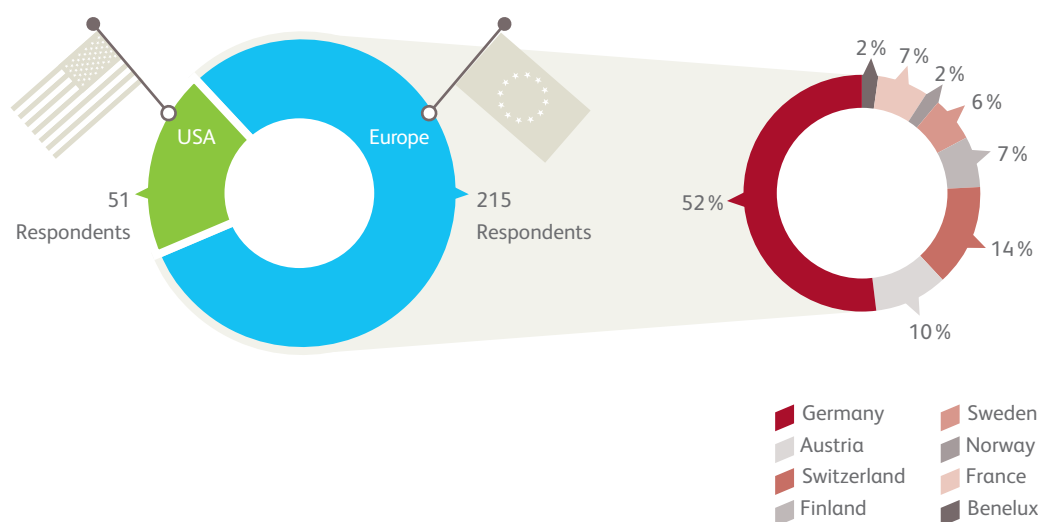
Some 215 European companies and 51 US companies took part

Just over a third (35 percent) of respondents were in sustainable development/environment-related positions, and a further 28 percent worked in the supply chain department. Other functions held included safety and quality manager.

In size terms, close to half (44 percent) of respondents were from companies turning over up to 500 million euros annually, while 40 percent clustered at the higher end of 1000–5000 million euros. Only 10 percent fell in the middle bracket of 500–1000 million, and just 6 percent topped 5000 million. The majority of respondents (62 percent) employed more than 1000 people; 17 percent employed 101 to 500, and 15 percent 501 to 1000 people respectively.

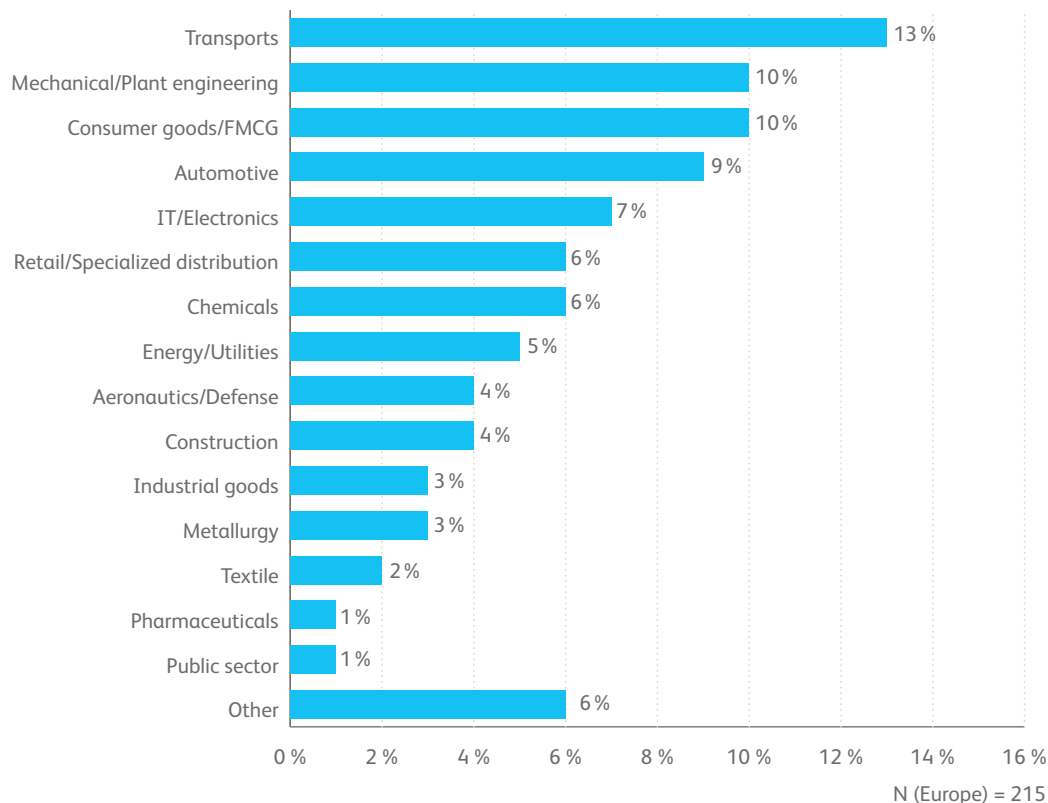
Although responses were reasonably well spread across industry sectors, we had strong representation (13 percent of respondents) from transport companies. The next strongest sectors represented were mechanical engineering, consumer goods, and automotive. In order to allow additional analysis we have assigned the respondents to B2C and B2B clusters. For benchmark purposes we have compared for selected questions the overall sample with the segment leader of third-party logistics service provider (3PL) and for shipper. The leading companies were selected by their Dow Jones Sustainability Score. The conduction of the survey started in 2014, the analysis of the results has been completed in the end of 2015.

FIGURE 1: LOCATION OF RESPONDENTS



Transport, consumer, mechanical and automotive companies are highly represented

FIGURE 2: DISTRIBUTION OF RESPONDENTS BY SECTOR



This year, the Swiss University of St. Gallen's Chair of Logistics Management supported the conceptual design and the implementation of the study. In particular, Prof. Dr. Wolfgang Stölzle and Dr. Thorsten Klaas-Wissing provided input regarding current research topics in sustainable logistics, inspired data analysis, gave feedback on the interpretation of the results, and critically reviewed the final manuscript.

What we expected

In general terms, we expected to find that in Europe, where green activities were already seen to be progressing in 2010–11, focus had now broadened to 'sustainable supply chain management', including a new emphasis on social responsibility. We envisaged this would be posing its own set of challenges: forcing a need to look beyond internal logistics-based improvements, to the potential to make a difference cross-company.

Although CSR² departments exist in many companies now, they don't necessarily have the broad view or the decision-making power to move things forward to the degree needed. Measuring, recording and reporting on social responsibility effort is an immature discipline too, compared to monitoring and being transparent about carbon reduction initiatives, so we expected to see this presenting some issues for respondents.

We deduced that companies would now need to implement professional management concepts in order to successfully plan, execute and control their extended sustainable supply chain management activities, while both internal and external incentive systems will be necessary to drive tangible change.

² Corporate Social Responsibility

Study results

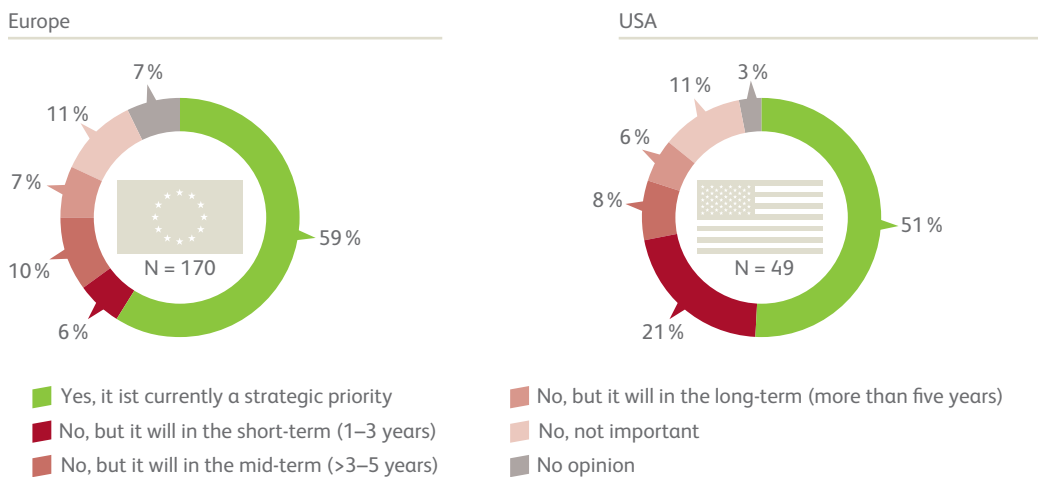
How much of a priority is the green supply chain today?

In 2015, the green supply chain is widely seen as a strategic priority: if it isn't already, it will be within the next 1–3 years.

Having a green supply chain is now high on the agenda for 59 percent of European companies, and for 51 percent of US companies. Considerably more US companies (21 percent compared with 6 percent of European companies) see it becoming an important priority in the short term (the next 1–3 years), as they strive to close the gap and bring their activities in line with Europe.

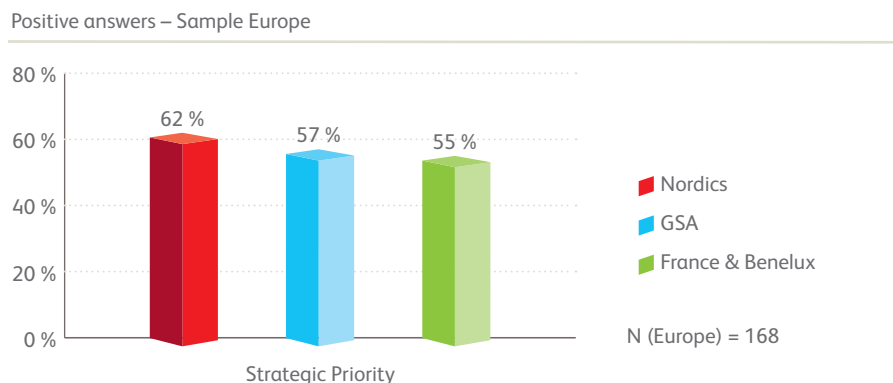
For 59 percent of European companies, and for 51 percent of US companies a green supply chain is a strategic priority

FIGURE 3: IS THE GREEN SUPPLY CHAIN A STRATEGIC PRIORITY IN THE ORGANIZATION?



Most companies have increased their efforts over the past three years in Europe, but especially in the Nordics where measurement and reporting has been notably poor: almost two-thirds (62 percent) of Nordic respondents said they had intensified their green supply chain efforts over the past three years.

FIGURE 4: OVER THE PAST THREE YEARS, HAS YOUR ORGANIZATION INTENSIFIED THE EFFORT IN THE GREEN SUPPLY CHAIN?



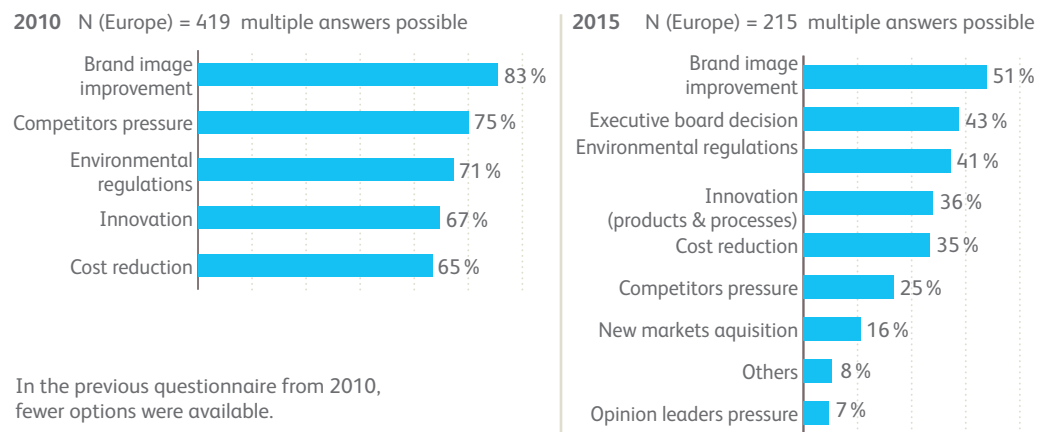
The majority of companies in every region of our sample intensified their efforts in green supply chain: With 62 percent, the Nordic countries had the highest percentage

Key drivers

As in 2010–11, brand impact was the most overt business driver for increasing green supply chain efforts, and this remains true today (for 51 percent of respondents, compared with 83 percent last time). However, we can infer that this is now becoming more of a risk mitigation exercise (avoiding negative publicity) rather than as a source of positive brand differentiation, since green principles are now expected – and that competitive pressures are much less of a driver in 2015 than they were in 2010–11. Regulatory pressures still feature highly, so again there is a strong element of risk avoidance (companies don't want to be found not to be green). Executive pressure is even more of a factor now though, as green responsibility weighs heavily on the board's shoulders.

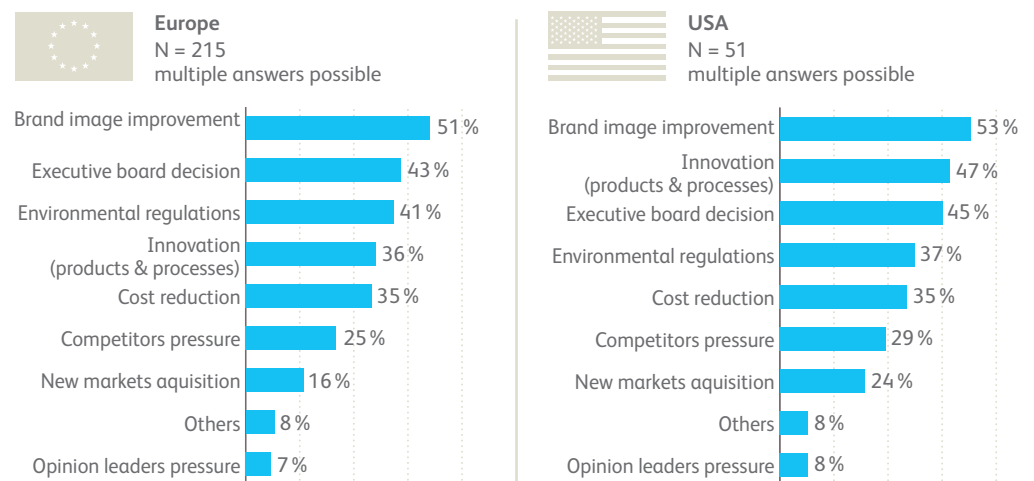
The top 3 key drivers for Green SCM are brand image, board decision and regulations

FIGURE 5: MOTIVATIONS FOR THE IMPLEMENTATION OF GREEN ACTIONS



In the US, green efforts are seen as a source of product and process innovation reflecting the relative immaturity of the green supply chain across the Atlantic.

FIGURE 6: MOTIVATIONS FOR THE IMPLEMENTATION OF GREEN ACTIONS – EUROPE VS. USA

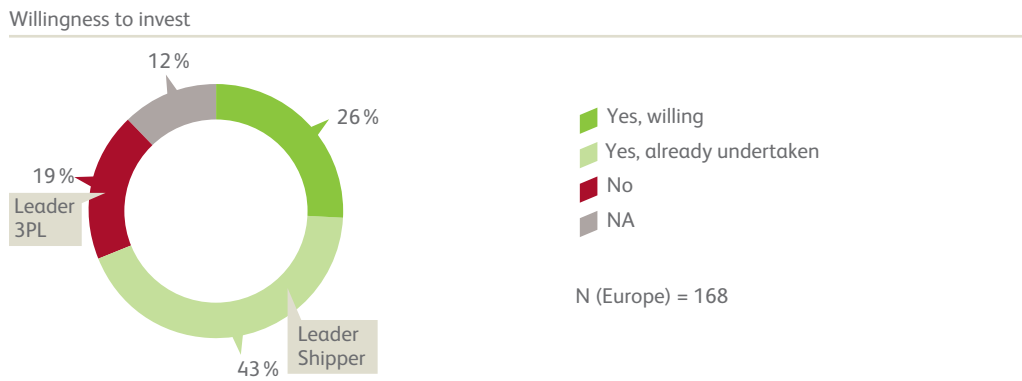


Willingness to invest

In our last report, in 2010–11, when we looked solely at Europe, 70 percent saw a green supply chain as a true economical lever, and over half (56 percent) a source of easily measurable profits (56 percent). For 47 percent of the companies, an ROI was achievable within three years. Even the international financial crisis had done little to curb progress. Green KPIs were seen as a critical success factor and competitive differentiator.

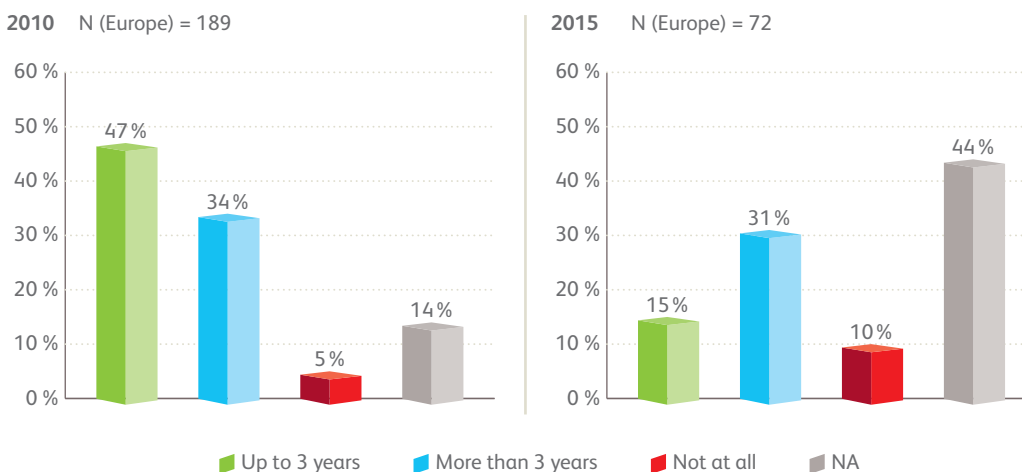
In 2015, progress in Europe is well advanced: 43 percent have already made investments, and 26 percent are willing to do so even without direct financial benefit. Only 19 percent of respondents expressed an unwillingness to invest, though companies in France and Benelux were less likely than GSA and Nordic companies to invest without a direct positive financial outcome.

FIGURE 7: OUR SAMPLE SHOWS THE WILLINGNESS TO INVEST IN ENVIRONMENTAL PROTECTION EVEN WITHOUT DIRECT FINANCIAL BENEFITS



In 2010–11, 81 percent of respondents reported tangible ROI from initial projects, reflecting the focus on 'easy wins' – measures that simultaneously reduced costs and boosted operational efficiency. In 2015, only 46 percent could say the same, as projects become more ambitious. Both the perceived short- and long-term pay-off had decreased, while the proportion of companies expecting no payback on their green investments increased by five percent.

FIGURE 8: HOW FAST DID INVESTMENTS INTO ENVIRONMENTAL PROTECTION PAY OFF?



The low hanging fruits are harvested

Carbon accounting

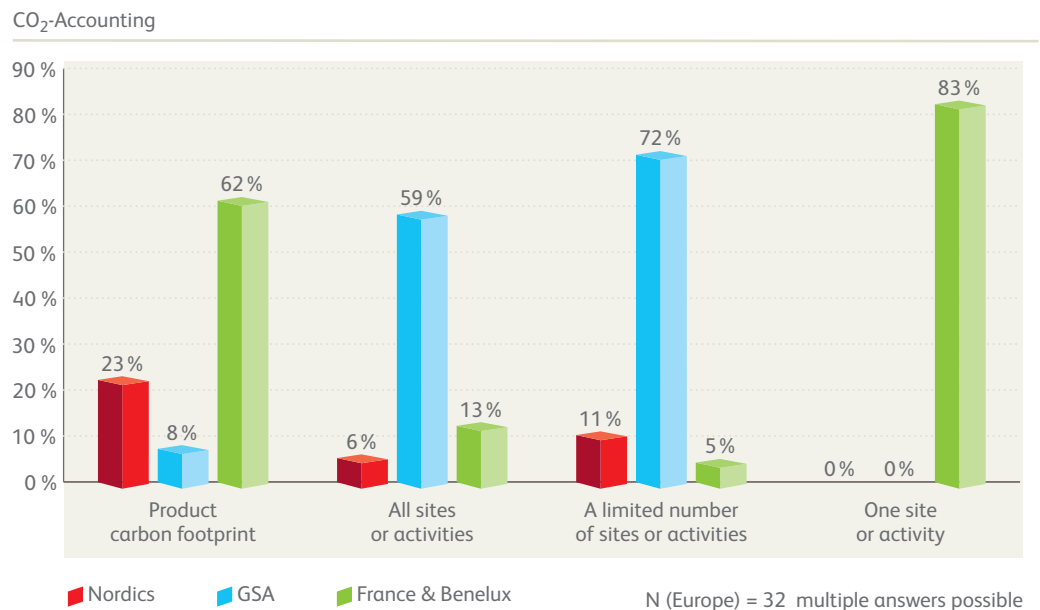
Formal carbon accounting activity has increased over the past four years. In 2010–11, we saw that companies already committed to measuring green performance were doing this at least yearly (70 percent). This reflected a realization that monitoring progress is as important as making positive changes – to justify investment, provide evidence to regulators/auditors, and to promote improvements to customers and investors.

Nordic companies pulled the average down, however. In the current survey, just a third of Nordic companies said they had prepared carbon accounts, compared with 55 percent of France/Benelux companies and 54 percent of companies in the GSA region, so there is some catching up to do here.

Reporting could be more comprehensive, too. In Europe, nearly half of companies (45 percent) actively reporting are focussing their attention on a limited number of sites of activities, compared with 39 percent that say they're doing it across broader operations. 16 percent claim to be recording the carbon footprint at a product level, with France leading the way here. Companies in the GSA region tend to have broader coverage, but are weaker on product-level carbon visibility, while Nordic companies are comparatively poor in all aspects of carbon accounting.

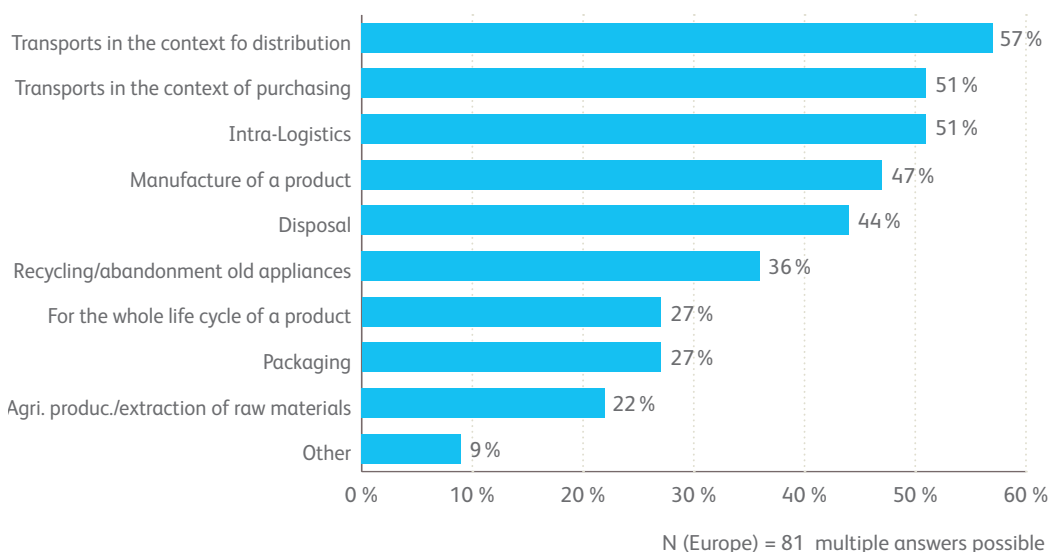
Across the whole European sample, we saw a 14 percent increase to 51 percent of respondents in companies preparing carbon emission accounts for their supply chain in 2015 compared to 2010–11

FIGURE 9: SCOPE OF THE ASSESSMENT OF CARBON EMISSIONS ACCOUNTING



Transport has been the main focus of companies' carbon accounting efforts in Europe – for distribution (57 percent), purchasing (51 percent) and intra-logistics (also 51 percent). Manufacture and disposal/recycling are the next most common areas of focus. Not only are these areas typically the most advanced for green efforts, they are also potentially the easiest to report on – against existing standards/requirements, and in accounting terms. By contrast, warehouse- and production-based carbon measurement is at a comparatively low level. This can be at least partly explained by a lack of standards and smart meters in these domains.

FIGURE 10: FOR WHICH ELEMENT OF THE VALUE CHAIN HAS CARBON EMISSIONS ACCOUNTING BEEN PERFORMED?



Accounting scope

Almost 88 percent of respondents accounted or planned to account for direct emissions (Scope I), compared with 69 percent reporting on indirect purchasing and energy-related carbon use, and 49 percent for emissions related to Scope II. Although the Dow Jones Sustainability Index has been requesting Scope III emissions data since 2013, this requirement does not touch all companies.

Accounting frequency

Although the majority of companies (69 percent) are performing their carbon footprint calculations on an annual basis, 5 percent are calculating performance every six months, 6 percent are conducting monthly reviews (including a leading 3PL player selected for deeper analysis), and 11 percent are doing this as often as required. The ability to maintain an up-to-date view could become increasingly important for regulators, to meet growing expectations for transparency, and to demonstrate the rate of improvement to customers and investors.

69 percent of companies undertake a carbon assessment only once a year

Accounting frameworks/software solutions

A third (33 percent) indicated that this is not currently their practice. Where companies are using formal systems, no particular software package has emerged as the definitive solution: among European companies 14 percent simply use Excel, while 11 percent have created their own in-house systems.

Asked which standards companies were using as their benchmarks, respondents cited a range. The most popular standards companies use as their benchmarks are: ISO 1400 standard series as well as EN16258.

Internal impact of measuring carbon performance

In 2010, the vast majority (80 percent) of companies in Europe felt the process of carbon accounting was helping them to uncover potential for improvement. However, in 2015 this confidence decreased, with only 60 percent of companies saying the same. Compared to 2010, in 2015 more companies were struggling to identify new potential to safeguard the environment (2010: 12 percent versus 2015: 26 percent).

Where companies were able to identify opportunities, these were primarily logistics/transport-related – cited by 56 percent. Just over a fifth mentioned recycling potential, and 16 percent cited supplier selection opportunities. Only 6 percent felt they had identified or could pinpoint new savings to be made in energy consumption.

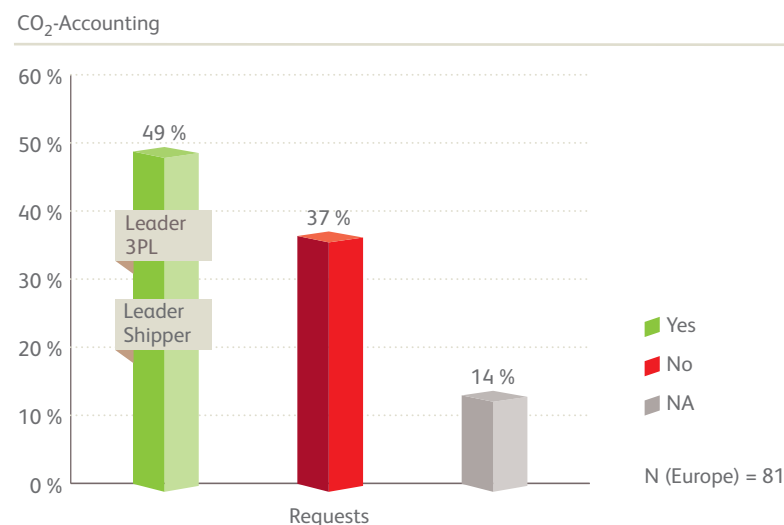
External drivers for reporting on carbon performance

Asked what was driving carbon reporting externally, a little under half of companies in Europe (49 percent), including the leader 3PL and leading shipper we examined, said that customers were requesting carbon emissions data. This indicates that it is more in response to external pressure that companies have intensified their efforts to measure and report on performance. Only just over a third (37 percent) said they hadn't had customer data requests.

Most commonly such requests came in the range of 5–50, though five percent said they'd received up to 200 enquiries about carbon emissions information.

Customers ask for carbon data

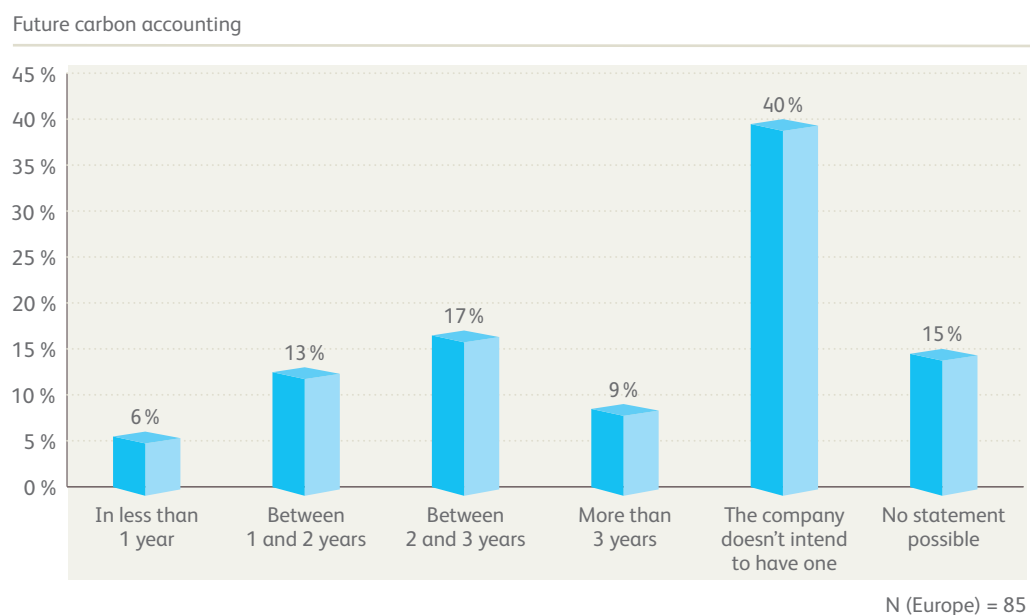
FIGURE 11: DO YOUR CUSTOMERS REQUEST CARBON EMISSIONS DATA?



Carbon accounting: outlook

Surprisingly, especially in light of external pressure to produce this sort of information, 40 percent of EU and Swiss firms stated they had no plans to introduce carbon accounting in future. It is likely this is because many of those companies already have some form of measurement in place. By contrast, 45 percent of companies said they did have an interest in establishing carbon accounting in the future.

FIGURE 12: DO YOU INTEND TO ESTABLISH CARBON EMISSIONS ACCOUNTING IN THE FUTURE?



45 percent of interviewed companies intend to establish a carbon accounting system within the next 3 years

Typically, those with plans to implement carbon accounting have set a timeframe of 1–3 years for implementing formal measurement. Most commonly, this was a strategic priority in Nordic countries, where carbon accounting is currently at its lowest. Nordic players are aware of the backlog and have signaled their intention to catch up.

The focus on environmental efforts

Eco-design/development

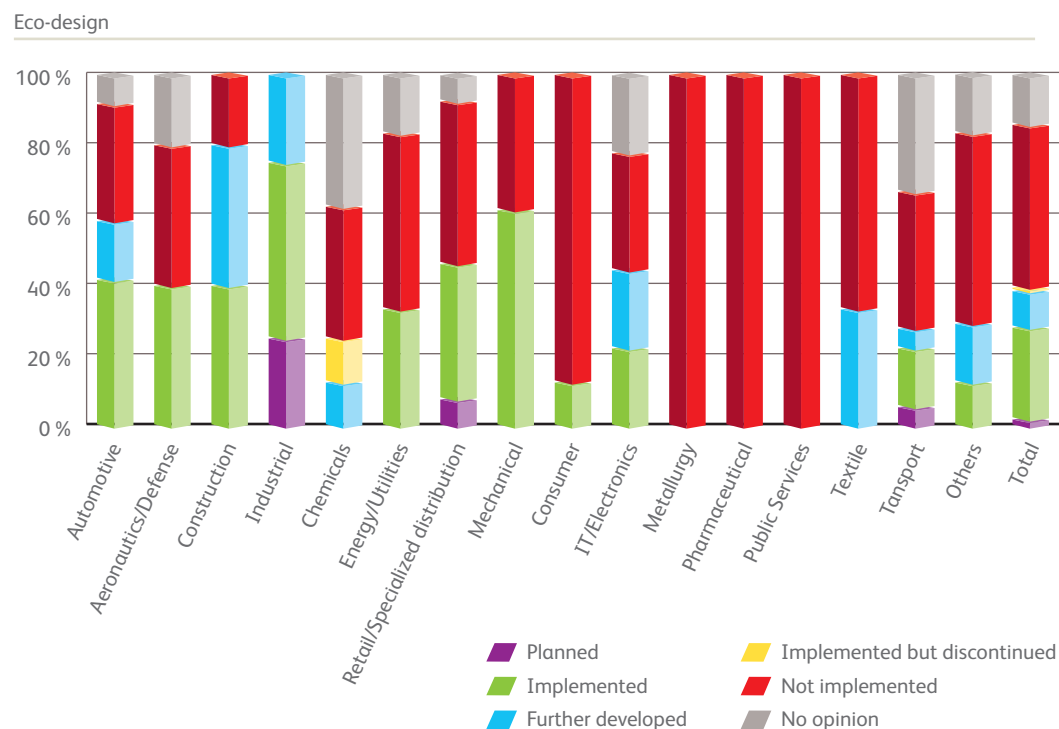
Although few of the interviewed companies in 2010–11 claimed to have gone down the eco-design path, those that had found that they had achieved their goals – whether compliance with laws, brand image improvement, fulfilling customer requirements, or optimizing recycling potential. If a product is designed to be more environmentally friendly, this has a bearing on the materials used, power consumption, lifespan and potential for recycling.

Eco-design: topic of high interest in the Nordics, France and Benelux

This year, eco-design was found to be well established – in France and Benelux countries in particular. Around two-thirds of respondents located in France and Benelux (64 percent) and the Nordic countries (67 percent) had launched an eco-design program over the past three years, or moved such activities on to the next stage. France and Benelux are ahead now, but more Nordics have short-term plans. Companies in the GSA region are behind in this area overall – slightly ahead of the US now, but with lower impetus in the near future.

Respondents from industrial goods, construction and consumer goods sectors indicated they were most active in launching and further developing eco-design programs.

FIGURE 13: HAS YOUR COMPANY LAUNCHED AN ECO-DESIGN PROGRAM IN THE PAST 3 YEARS?



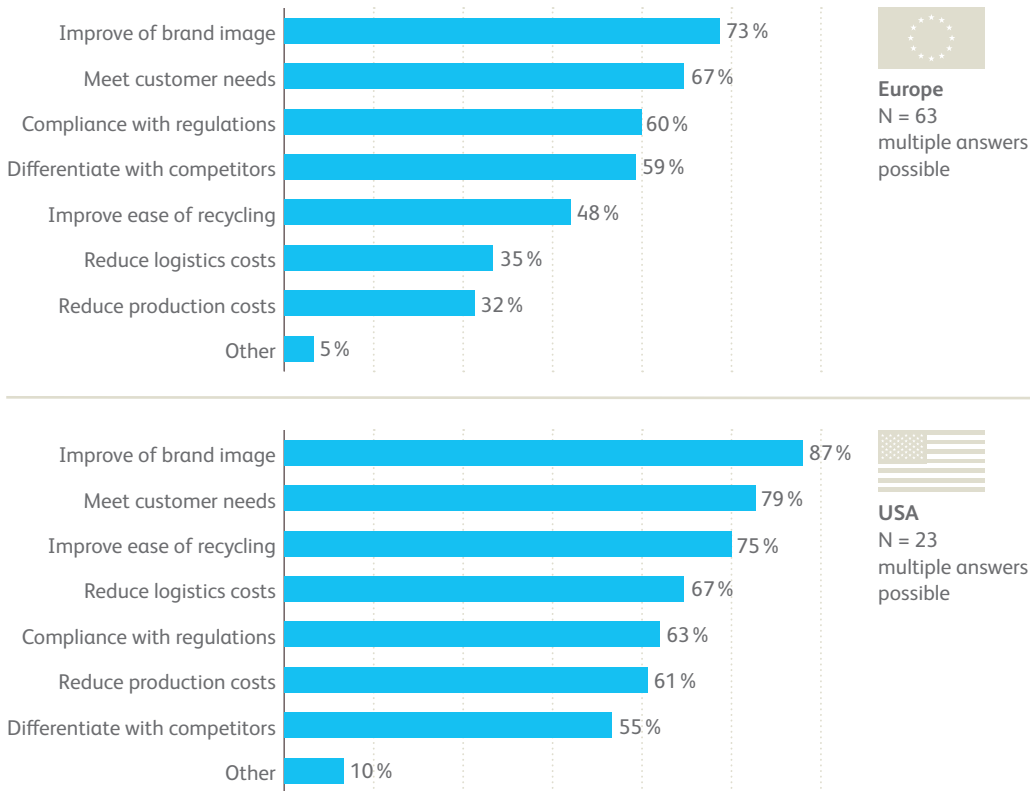
In Europe, the primary focus of eco-design efforts is the products themselves – as was the case in 2010–11. Components is now second, above production processes and logistics design. Packaging, a core area of focus last time, is now lower down the agenda. The main goals of eco-design efforts in Europe are to improve the brand image and fulfill customer needs – these drivers are more common priorities than regulatory compliance factors. This is also where companies are seeing the best results – 73 percent of European companies said improving brand image was their main achievement (as four years ago) from eco-design.

Fulfilling customer needs and brand image are major goals of eco-design efforts in Europe

In the US, the focus of eco-design is much broader – logistics, packaging and production processes are getting similar levels of attention to the products themselves. That said, three-quarters of US respondents cited products (75 percent) and distribution (74 percent) as their main focus for eco-design programs. The expected achievements were also across a broader spectrum, starting with brand image and meeting customer demands, but also improving recycling potential. Better design could also help reduce operational costs (across both logistics and production), US companies indicated.

FIGURE 14: ACHIEVEMENTS THROUGH ECO-DESIGN PROGRAMS

Europe vs. USA – Eco-design



Green production

At a manufacturing level, there remains a mismatch between companies' awareness of the potential for green improvements and actual investment.

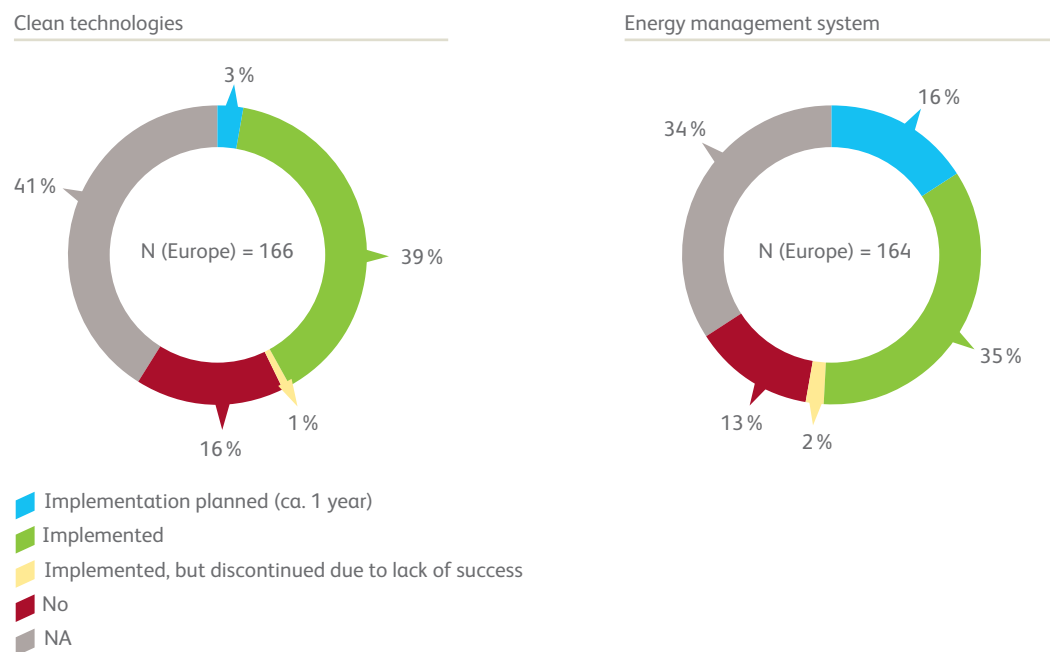
For two-thirds (66 percent) of European respondents in the 2015 survey, environmental issues are considered highly relevant within production – and becoming more so (a further 6 percent see this being the case in future). Overwhelmingly (for 86 percent of European companies) the main benefit of being greener at a production level is to reduce resource consumption, followed by waste (cited by 72 percent as a potential outcome), reduce carbon emissions (mentioned by 69 percent), and noise pollution (41 percent).

The main driver for green production is to reduce resource consumption

Companies' knowledge of the energy consumption of their production lines is primarily at a location-based level. 41 percent of European companies have an understanding of their consumption per site, compared with just 18 percent who can break this down by function and 16 percent who can attribute this to each cost center.

On the basis that it is very difficult to improve what you don't measure, we drilled down to see whether companies had implemented or were planning to introduce particular technology solutions to help enhance matters. Just over half of European companies (51 percent) said this was the case for energy management systems (EMSs), while 42 percent had implemented or were planning to introduce clean technologies. Respondents mentioned education, solar energy and sustainable sourcing as further measures they either had implemented or would do so in the near future.

FIGURE 15: WHICH MEASURES ARE YOU PLANNING, DID YOU IMPLEMENT OR DISCONTINUE IN ECO-DESIGN AND GREEN PRODUCTION?



Green procurement

In the 2010–11 survey, two-thirds of companies had adopted or planned to adopt a more environmentally sustainable approach to purchasing. Without scrutinizing and having a preference with regards to suppliers' green efforts, companies risk compromising their own performance record. Among the criteria under assessment were suppliers' raw material consumption rates, use of recycled and recyclable materials, emissions controls, pollution levels, and energy consumption (e.g. as recognized by reliable eco-labels such as Energy Star).

This time, while 42 percent of European respondents already planned, implemented or further developed an environmentally green purchasing strategy, the same proportion have no plans.

Where there is a strategy, the most common approach is to audit suppliers, and have environmental clauses in contracts, which is consistent with plans five years ago. Interestingly, reporting now plays less of a role – in 2010, almost two-thirds of companies said they were introducing reporting to ensure purchasing became more environmentally sustainable, but this time only 42 percent said this was an action they had implemented.

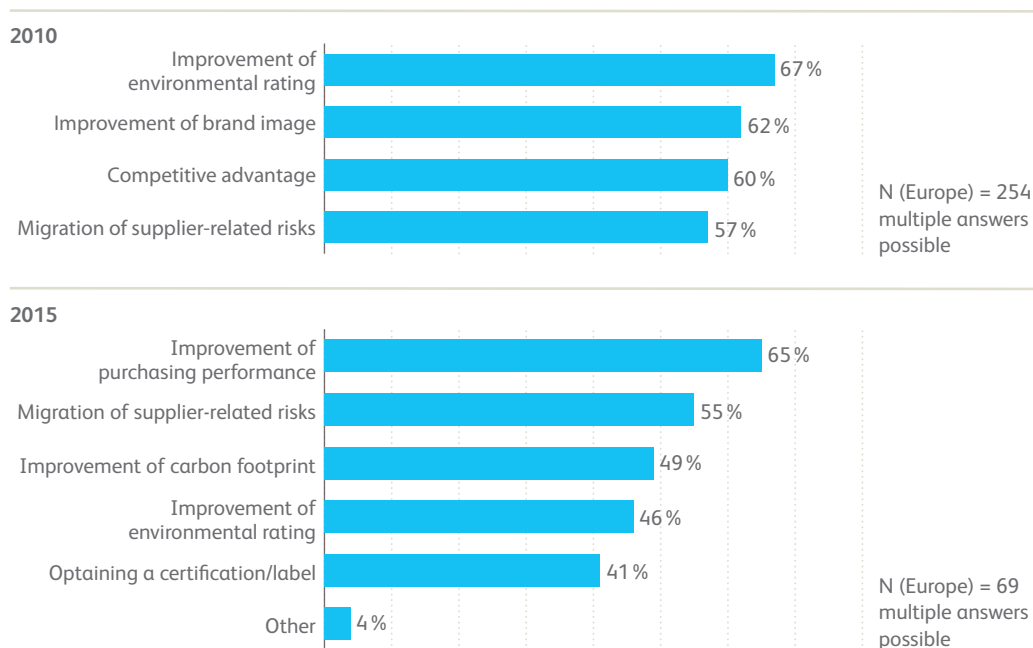
A shift from global to local sourcing was still a popular approach, cited by just over half of respondents as an action they had taken. A third had gone so far as to move to different suppliers to improve their green procurement record – the clearest and most radical sign of direct action.

Slightly more (35 percent) had introduced a green charter for suppliers to sign up to. Failure to comply with this could result in more suppliers being dropped in favor of greener partners.

Improvements to purchasing performance and mitigated supplier-related risks were the main benefits of implementing green procurement programs – the factors companies are less directly able to control because they lie outside of their own operational boundaries. These factors far outweighed the perceived impact on brand image, perhaps because purchasing is not a frontline activity as far as external observers are concerned. At least, it is not yet subject to the same scrutiny as a company's own practices.

Typical approaches to green procurement: supplier score cards, supplier and clauses

FIGURE 16: WITHIN THE FRAMEWORK OF YOUR SUSTAINABLE PURCHASING STRATEGY, WHAT ACTIONS HAVE BEEN IMPLEMENTED?



Green logistics – still a hot topic: 56 percent of all interviewed companies have it on their agenda

Green logistics

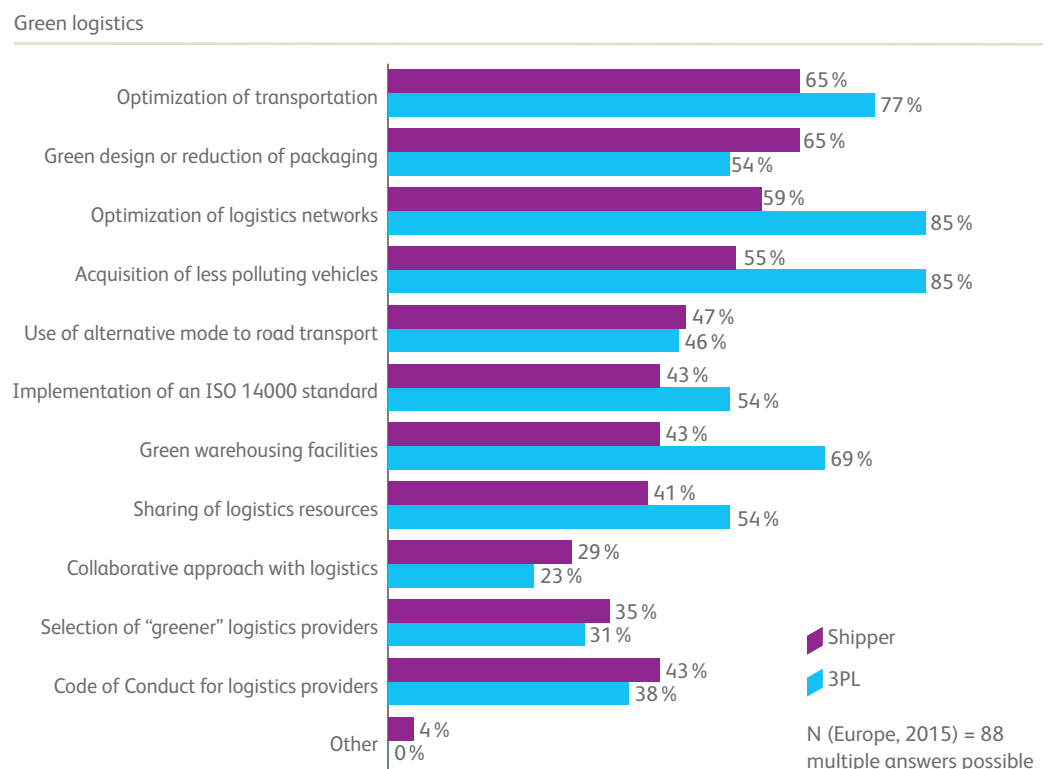
More than half (56 percent) of European companies of our sample had already implemented, planned to implement or further developed a program for green logistics, while 34 percent had no plans in this area. Our leading logistics service provider had already implemented sound measures, while the leading 3PL company had introduced more advanced developments.

Closer analysis confirmed that companies had typically gone for the quick gains, optimizing transport (64 percent), reducing or making packaging greener (61 percent), and optimizing logistics networks (58 percent). Just over half said they had acquired less polluting vehicles (53 percent), and 44 percent indicated they were now using alternative modes of transport.

Warehouse improvements were not as advanced (cited by 42 percent of companies only), which could be due to a lack of green standards at this level – compared to transport-related emissions. Strategic choices about sharing logistics resources and collaborating more intelligently.

Comparing responses from 3PLs and shippers in Europe revealed some notable differences. The former are much more advanced with regard to optimization of logistics networks (85 percent of 3PLs have done this vs. 59 percent of shippers), acquisition of less polluting vehicles (85 vs. 55 percent), optimization of transport (77 vs. 65 percent), green warehousing facilities (69 vs. 43 percent), and to a lesser extent sharing of logistics resources (54 vs. 41 percent). 3PLs were also somewhat ahead on implementing the ISO 14000 standard. As expected, shippers were ahead in their approaches to dealing with logistics providers, 43 percent setting down a code of conduct, 35 percent proactively choosing greener logistics providers, and 29 percent favoring a more collaborative approach to dealing with these partners. Shippers were also marginally ahead (47 vs. 3PLs' 46 percent) on the use of modes of transport other than road.

FIGURE 17: IN TERMS OF WAREHOUSING AND TRANSPORTATION, WHAT ACTIONS HAVE YOU IMPLEMENTED IN ORDER TO REDUCE YOUR ENVIRONMENTAL FOOTPRINT?



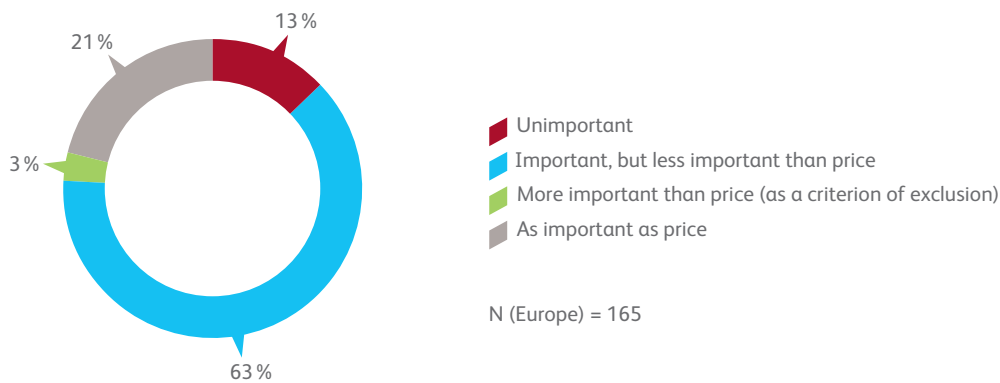
Reducing fuel and making better use of capacity have been the main achievements to make logistics greener in 2015 (cited by 71 percent this time, compared to 59 percent four years ago), and make better use of capacity (63 percent said they had reduced instances of trucks being empty on return, and 62 percent said trucks were had fuller loads). Improved packaging was still a significant success, but is now the fourth most common achievement, as truck capacity use has improved and a more vigilant approach to packaging has become more standard.

Reducing fuel and making better use of capacity were the main achievements in 2015 to make logistics greener

Companies in the GSA region were the most positive about success rates for greener logistics (79 percent), followed by France and Benelux (63 percent). Nordic respondents were far less likely to report success in this area – only 14 percent of respondents in the region claimed to have successfully implemented green logistics measures.

The real test of companies' commitment to environmental sustainability is in their preparedness to pay more for greener supply chain services. Just 3 percent of European respondents said green factors ranked above price when choosing a third-party logistics provider. Just over a fifth (21 percent) of companies put the two factors on par, while almost two-thirds (63 percent) conceded that price was still the primary determinant of a logistics partner. This suggests that, when it comes to transport and warehousing matters, market and consumer pressures do not yet extend along the entire supply chain.

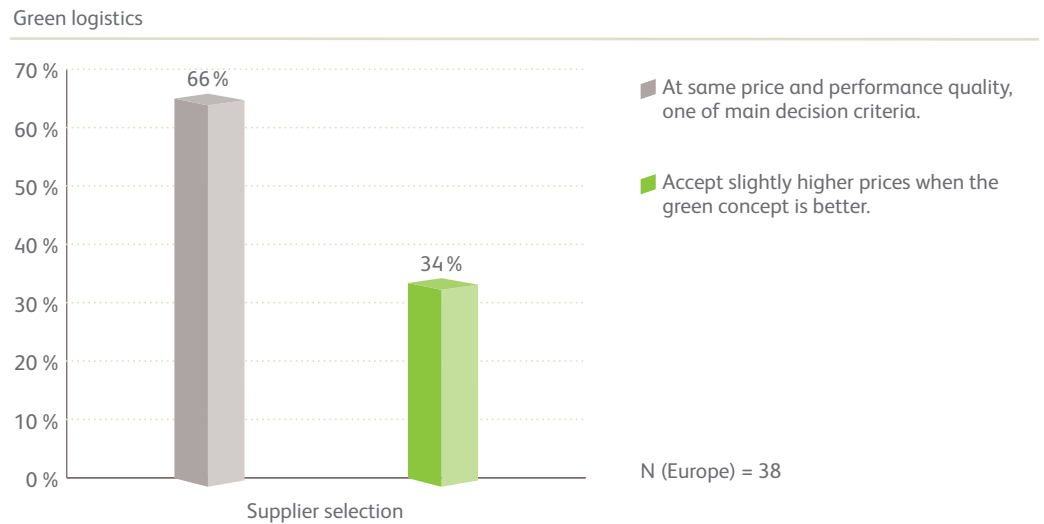
FIGURE 18: HOW DO YOU RATE THE IMPORTANCE OF GREEN CONCEPTS WHEN YOU SELECT A NEW 3PL?



The picture does shift slightly by industry sector. Companies in high-polluting/highly scrutinized industries such as chemicals, transportation and automotive were more likely to say the green option was important (though less so than price) if choosing a new 3PL. Across all sectors, only transportation companies were likely to put green factors ahead of price when selecting a new partner, and even this was the exception rather than the rule. B2C organizations were more likely to rate green commitment alongside price, but were no more likely than B2B companies to favor green choices above price. This suggests that even in consumer-facing markets, the pressure to stay competitive on cost beats the pressure to make positive green choices.

We asked the companies answering “as important as price” or “more important” to specify their answer: 34 percent were answering that they would accept slightly higher prices when the green concept is better.

FIGURE 19: IMPORTANCE OF GREEN CONCEPT IN SELECTION OF 3PL



In the few instances where companies did say they would be prepared to make positive choices about green 3PL partners, the vast majority (80 percent) said they would consider a price premium of up to ten percent only.

Recycling

A closer look at recycling efforts reveals that packaging (transport-related, followed by product packaging) is a key area, along with the waste created during production. The 2010 survey shows that 71 percent of all responding companies were able to improve the ease of recycling due to considering recycling questions already within the design phase of a product. In 2015 this success rate decreased to 48 percent. In 2015 we have asked the first time European and US companies for the relevance of life-cycle assessments: 29 percent of European compared to 62 percent of American companies answered, that they consider cradle-to-grave already within the design phase.

71 percent of all responding companies were able to improve the ease of recycling by already considering recycling questions during the design phase of a product

Beyond environmental measures: social responsibility rises up the agenda

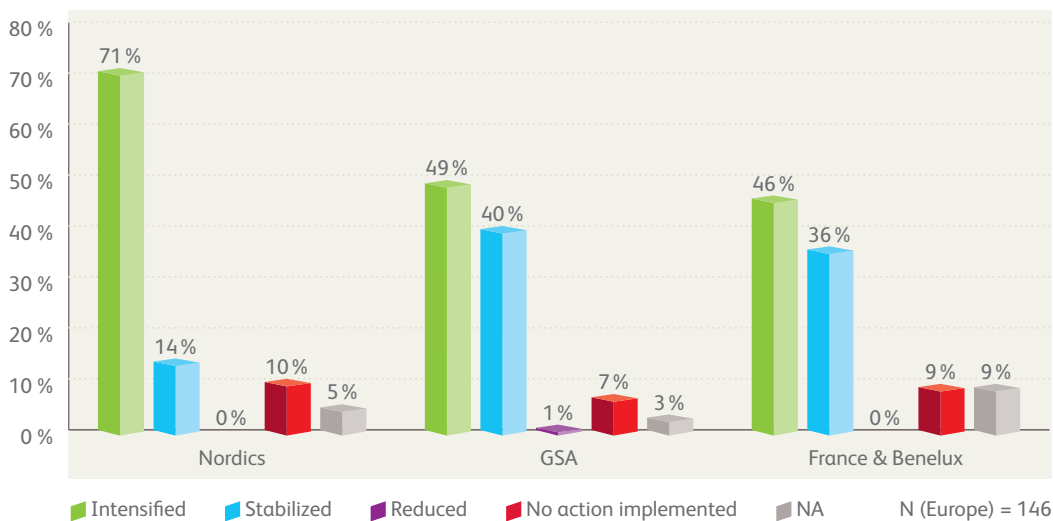
In the recent research, we aimed to find empirical evidence for the proposition, that social aspects of corporate responsibility are moving up the agenda rapidly now – an area we have not previously explored within the scope of our *Supply Chain Monitor* reports.

As predicted, we found that companies had increased their efforts to be more socially conscious in their supply chains in 2015. In Europe, this activity is now roughly on par with where green efforts were in 2010–11. This reflects a growing demand from some national regulators for companies to include social responsibility information in their CSR reporting.

For 70 percent of companies in Europe, the social aspects were now a strategic priority in their supply chain management endeavors. A further 12 percent said this would be the case within the next 1–5 years. Only 11 percent felt the social impact of their supply chain to be of no importance. Half of European respondents said they had intensified efforts in this area over the last three years (including the leading shipper), while a third (including the leading 3PL company) said their efforts had stabilized. Shippers were as likely as 3PLs to exhibit this trend. Surprisingly B2B companies in our sample have intensified their social efforts on a comparable level like B2C players. This could indicate that B2C parties were already slightly ahead and B2B is now catching up.

Social aspects are a strategic priority in supply chain management endeavors for 70 percent of European companies in our sample

FIGURE 20: HAS YOUR ORGANIZATION INTENSIFIED, REDUCED OR STABILIZED EFFORTS IN THE AREA OF SOCIAL SUSTAINABILITY IN THE SUPPLY CHAIN IN THE PAST 3 YEARS?



25 percent of respondents in Europe mentioned employee satisfaction as a KPI for socially sustainable supply chain management activities

To date, the primary drivers for improving social responsibility efforts in Europe are regulatory pressure and executive management demands. Companies do not yet seem to feel direct pressure from consumers and competitors. Nevertheless 25 percent of respondents in Europe mentioned employee satisfaction as a KPI for socially sustainable supply chain management activities.

Internally, social sustainability is currently measured on health and safety (e.g. worker/driver conditions), and employee development/education, though flexible working hours and charitable donations are also widespread measures. Most respondents are planning to introduce a supplier scorecard, and switch to sustainable suppliers, as part of their social responsibility efforts in their supply chain management.

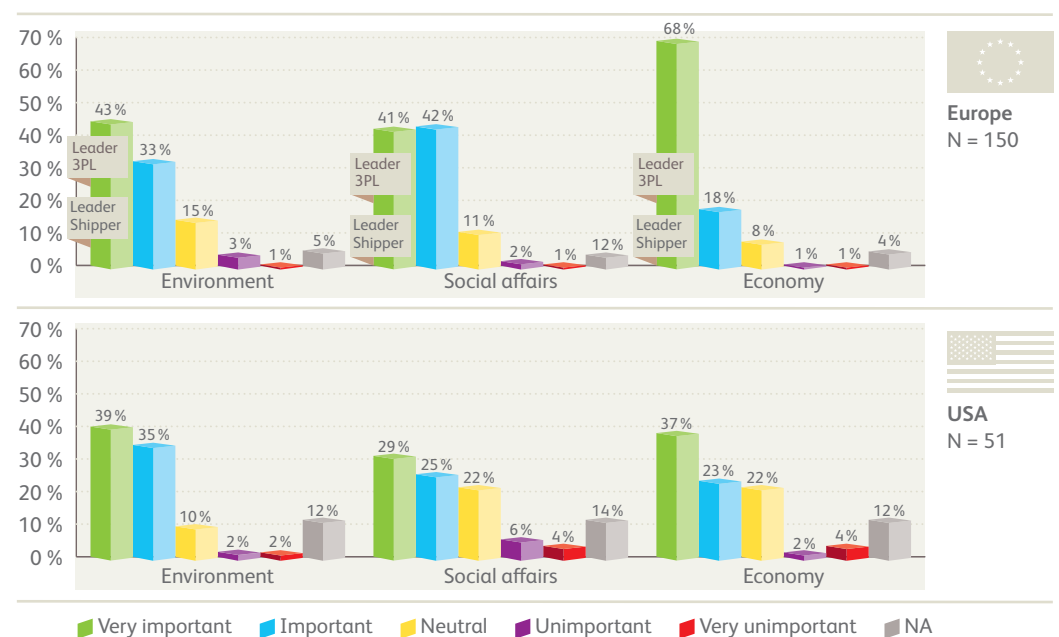
When it comes to external measurement, companies are more concerned with measuring against health and safety compliance and adherence to labor standards, rather than some of the softer social efforts such as charitable efforts and employee engagement. This is likely because of the tougher regulations that have been introduced to protect employees, and because standards and systems have not yet evolved to record additional kinds of socially responsible activity.

Who is driving the sustainability agenda internally?

In Europe, teams with responsibility for sustainability appear to be more concerned with economic factors above and beyond environmental and social performance. Two-thirds (68 percent) rated economical sustainability to be 'very important', compared with 43 percent who said the same for environmental measures and 41 percent for social matters. Adding 'important' to 'very important', and social consideration are ranked above environmental factors currently (cited as one or the other by 83 vs. 76 percent of European respondents).

In the US, sustainability teams are marginally more concerned with the environmental aspects of their work above economic factors, though attention is fairly evenly balanced across the two, with social affairs trailing slightly. Each factor is deemed important or neutral rather than a burning priority, suggesting general diligence rather than a sense of urgency in any one area.

FIGURE 21: IMPORTANCE OF ENVIRONMENT, SOCIAL AFFAIRS AND ECONOMY FOR THE SUSTAINABILITY TEAM



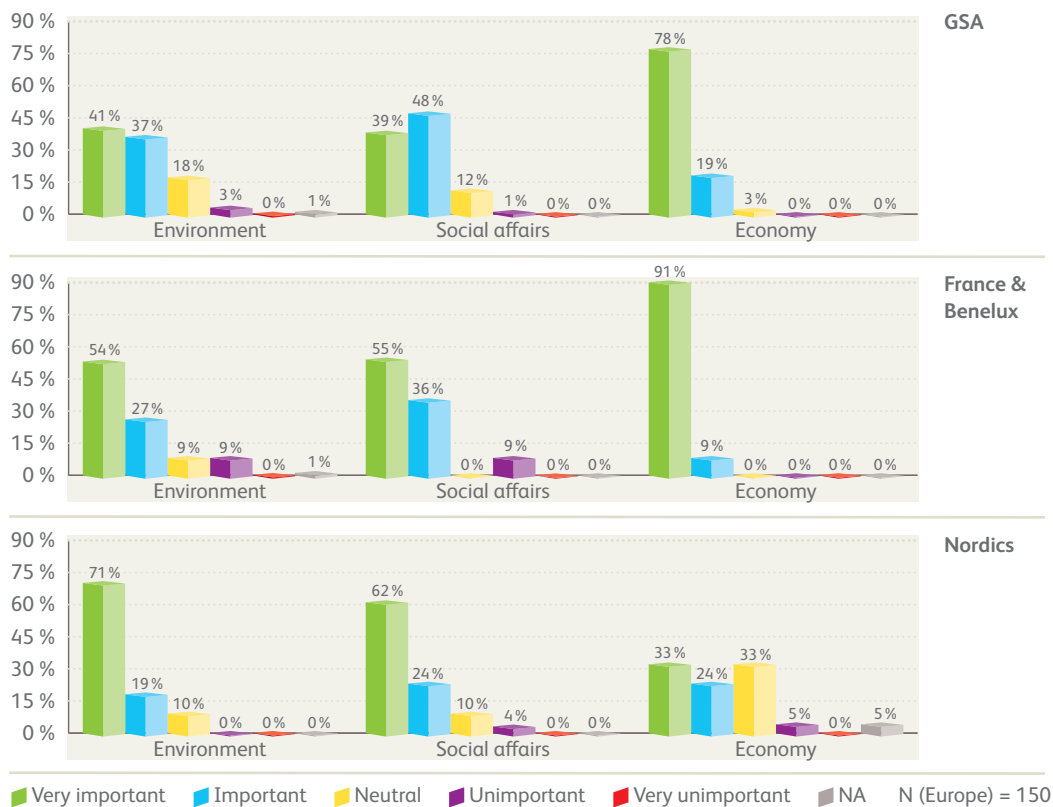
Closer analysis of European companies' priorities revealed that the main EU 3PL players were more acutely concerned about social factors than shipping companies. Segmented by customer focus, B2B companies were much more concerned with economic measures than B2C companies.

Relatively speaking, social affairs have grown in focus the most sharply over the past three years, followed by the environment. This reflects the comparative immaturity of social responsibility measures until quite recently. Just over half (51 percent) of European companies said they had intensified efforts in social terms over the past three years, compared to 48 percent which said the same for the environment, and 45 percent in relation to the economic factors.

Reflecting this increase in effort, almost half (46 percent) of respondents indicated that their companies had either increased or heavily increased the number of employees working on sustainability topics. The US in particular has raised its game, which we can attribute to the fact that activity here has to date lagged European efforts by a visible margin. US companies were considerably more likely to have set up sustainability teams in the last three years (over half had done this), compared with European companies (little over a third had, whereas more than a half had not). Presumably, the majority of European respondents had set up their taskforces much earlier.

Interestingly, the leading shipper we analyzed in greater detail had increased its staff levels, while the leading 3PL was among the small percentage that had decreased the number of employees tasked with sustainability. An operational breakdown of the figures reveals that 3PL companies are typically more likely to have maintained (rather than increased) the number of employees assigned to sustainability topics, compared with shippers, while shippers are much more likely to have added to their headcount. B2C companies are more likely to have boosted their numbers in this area.

FIGURE 22: IMPORTANCE OF ENVIRONMENT, SOCIAL AFFAIRS AND ECONOMY FOR THE SUSTAINABILITY TEAM

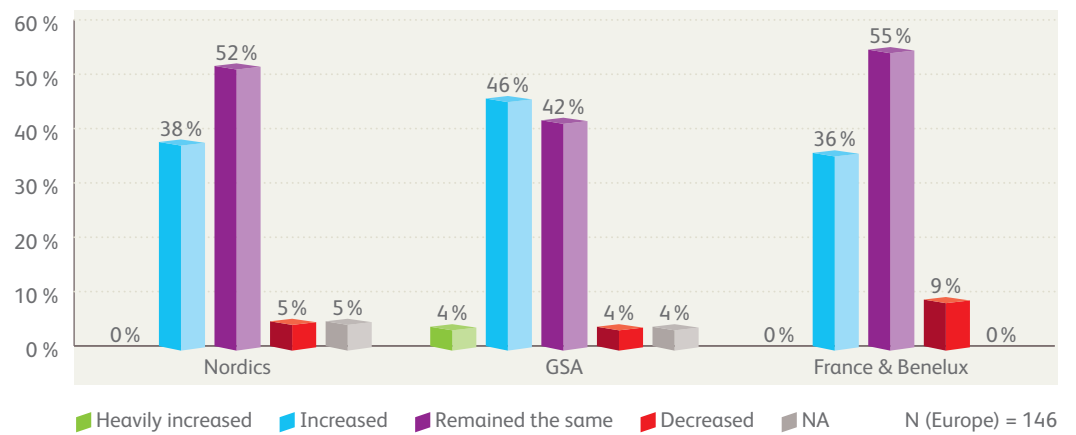


For sustainable teams the economic topics in GSA, France and Benelux are more important than in the Nordics

Two-thirds of companies said their sustainability teams are involved in the decision-making process

In Europe, nearly two-thirds of companies said their sustainability teams had at least some input to strategic decision-making. Just over a third (36 percent) of companies indicated they have introduced or are developing internal incentive systems; 18 percent of respondents say this is the case for external incentive systems. That a large proportion had not, or did not know if this was the case, reflects the relative immaturity of systems, standards and guidelines on how to do this. We can conclude from this that management has incentive systems on their agenda, but has yet to determine rules and specific plans for how to take this forward.

FIGURE 23: HOW DID THE NUMBER OF EMPLOYEES WORKING ON SUSTAINABILITY TOPICS DEVELOP?

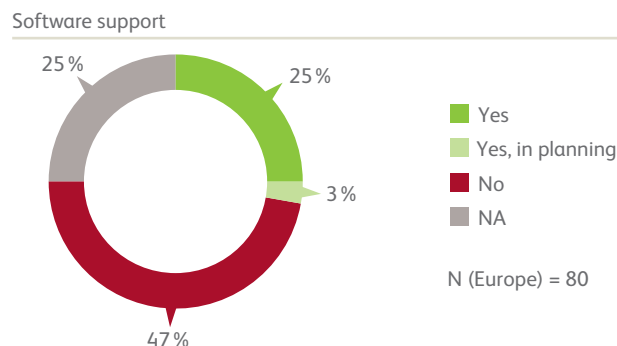


Employee participation schemes are the most common approach to incentive systems to date, followed by bonuses, then links to performance goals and scorecards.

Most of the companies with more than 1000 employees had begun broader CSR reporting. Thus, the size of an company was the clearest determinant of advancement, as broader sustainability reporting is the exception rather than the rule (although environmental reporting is becoming more common). Only 25 percent of European companies of our sample produce this kind of report, and just 3 percent are planning to. This reflects the immaturity of fuller CSR activities (i.e. including social measurements), and the current lack of systems which allow these activities to be recorded and measured.

In keeping with this finding, almost half (47 percent) of respondents confirmed they had no software support for preparing sustainability reports, shippers being less likely than 3PL firms to have formal systems for this activity. For the 15 respondents in Europe that did have systems on the cards or already in place, the majority had been developed in house.

FIGURE 24 ARE YOU SUPPORTED BY SOFTWARE WHEN PREPARING YOUR SUSTAINABILITY REPORT?



Conclusions

Since we last reviewed supply chain management practices and plans four years ago, the business and regulatory environment has moved on, and we can see this reflected in companies' more recent activities and emerging priorities. As much as environmental criteria are reappearing on politicians' agendas, because of the latest global climate conference, and driven by incidents such as the VW emissions scandal, new regulations have been in short supply since we published our last report. As a result, now that European supply chains have harvested the low-hanging fruit, momentum has plateaued.

Green is back on the agenda

In the US, while the situation is less mature, activity at a green level is accelerating as the country strives to catch up – both in terms of national pledges on climate change and from a regulatory perspective. Interestingly, despite being an international issue, the VW scandal was first picked up in the US. This has helped focus companies' attention on what happens when respected brands are exposed for not acting responsibly towards the environment. As a result, pressure has increased on companies to act rather than simply pay lipservice to environmental performance improvements. We can expect the VW saga to lift Europe out of a state of inertia too. Certainly, European companies will not want to risk being overtaken by their US counterparts on green matters.

Going forward, we can suppose the next waves of action to include more comprehensive and standardized measurement and accounting on environmental sustainability, right across operations and supply ecosystems. But this will also require further development and expansion of standards, and harmonization of formal reporting. The comparative performance of companies needs to be more transparent, so that a light is shone on those companies that have made tangible, positive changes – and those companies falling short. The various national and international authorities will also need to come down more heavily on companies that do not fulfill their obligations.

All of this will continue to accelerate board-level sponsorship, freeing up funds for a new raft of investment – including some of the more challenging and longer term initiatives, where the ROI might be a longer time coming, or non-existent in financial terms. Such moves should include new building structures, implementing electric engines in warehouses, and replacing vans and trucks with electric equivalents.

At the moment, it seems there is only so much companies are prepared to do when it comes to scoring additional 'green' points. But this should change if and when standards and measures are fixed to make comparative reporting and public transparency mandatory. The Global Logistics Emissions Council (GLEC)³ is currently working to provide one universal and transparent way of calculating logistics emissions across the global multi-modal supply chain. Following this idea European standard might migrate to an global, ISO standard.

In the meantime, rising market and consumer pressure are likely to be increasingly important drivers for positive change. Certainly, we can expect customers and investors to be more vigilant following the VW scandal. In a recent BearingPoint survey, which asked 1002 consumers about the importance of emissions performance when choosing a new car, two thirds rated this to be either important or very important.⁴

If companies want to see a greater benefit from their environmentally sustainable supply chain efforts, they need to promote any extraordinary measures prominently as a differentiator. Even just a few years ago, the market couldn't have predicted that a discount retailer such as Wal-Mart would lead the way in stocking greener-footprint products, and introducing strict codes of conduct and scorecards for its suppliers. But now this is a new reason for consumers to shop at its stores.

³ Global Logistics Emissions Council <http://www.smartfreightcentre.org/glec/what-is-glec>

⁴ <http://www.bearingpoint.com/de-de/news-room/pressemitteilungen/fuer-eine-abgasfreie-zukunft/>

In the wake of the VW scandal, we can expect eco-leading car manufacturers (including VW) doing more to showcase their green credentials, responding to the market's heightened interest and due diligence.

We can also expect to see growing consumer consciousness driving companies to be more active and vocal about the *social* aspects of corporate responsibility. Currently, this doesn't emerge as a prominent motivator for positive action; rather companies appear more concerned with falling foul of employment law and health and safety requirements.

But consumers are more socially conscious now, unable to ignore the news – not only about factory workers in developing nations being killed in their thousands by dangerous working conditions, but also about the conditions of those producing goods. Fair trade is the new free-range/organic and many consumers will pay more or will select the more fair product to know they've sourced something ethically.

The current research has confirmed the emerging trend away from a 'green' supply chain to more generally sustainable supply chain management. Measurement and reporting of social initiatives and performance are currently at a similar level to where carbon reduction initiatives were four years ago, but new regulatory requirements around social responsibility (e.g. probably as part of the Global Reporting Initiative) should help push activity to the next level, along with growing public and employee pressure.

The perennial challenge is determining how improved performance environmentally and socially can benefit a company commercially. If companies and their supply chains can demonstrate this more clearly to themselves and others, the business case is strengthened.

Measurement and reporting of social initiatives and performance are currently at a similar level to carbon reduction initiatives four years ago

Recommendations

It is a mistake to limit or set boundaries to efforts to build a more sustainable supply chain. Doing only half a job could mean investing repeatedly, as companies are forced to go back and fill gaps. It could also mean that they compromise results – failing to maximize the fuller potential for savings, and to impress the market.

As part of renewed efforts, it is advisable that companies consider all opportunities for improvement, including those which transcend their own operational boundaries, using tools to streamline and automate the process wherever possible:

- Integrating and including Scope III emissions data, in the knowledge that rating agencies and legal requirements for sustainability reporting will apply pressure on each party to satisfy questions about up- or downstream suppliers.
- Automating carbon footprint calculations, to ensure companies can satisfy the increasing demands of different parties. Requests may vary in the way they are ordered, and require different levels of granularity, so a single report cannot be relied upon to satisfy all needs. In future companies may find they need to answer questions on demand too, rather than filing a static report periodically.
- Joining official programs such as LEAN and GREEN by GS1 or Green Freight Europe to structure and report energy and CO₂ reductions in a formalized manner.
- Moving from initial lighthouse projects to continuous improvement programs for energy and carbon efficiency.
- Identify where it is most efficient from an ROI perspective to reduce emissions. For example with a one euro investment in China or other emerging countries, the reduction in emissions is likely more significant than in European operations, due to their less widely spread or developed green tech.
- Bringing 'green' goals and plans down to a functional level so that they are incorporated into everyday behavior. Today, procurement departments are still largely basing procurement decisions on monetary/quality factors, for example, despite environmental sustainability being a board-level priority. Don't underestimate employees' desire to support green efforts, if empowered to back campaigns and make positive choices.
- Joining sustainable supplier rating platforms such as EcoVadis (<http://www.ecovadis.com/>), to reduce the need to handle repeated requests.
- Use a materiality assessment to understand your internal and external stakeholders and their goals.
- Reduce your supply chain risks by assessing your suppliers with score cards on sustainability.
- Check relevance of ISO 26000 and guidelines of the Global Reporting Initiative on sustainability for your company.

Sustainability becomes a decision criterion to tackle challenges pro-actively

Outlook and predictions

Any planning for 2016 and beyond will also need to take into account likely changes in the future, to ensure that companies are able to adapt to these. Given the notable developments since our last report four years ago, what can we expect from BearingPoint's next review of the sustainable supply chain in 4–5 years' time?

Revival of the green agenda

After a plateauing of green momentum in the current research, our belief is that the agreement reached at the COP21 global climate summit in Paris in December 2015 (*see box on page 3*) will lead to renewed commitment to positive change, as countries recommit to targets and extend the mandate to big business in the form of new regulations and data requirements. Leading companies that have continued with their sustainability drives and invested in improvements will benefit from this foresight, having gained ground at the expense of their competitors. Others have some catching up to do.

Penalties are likely to become more severe – and more consistently applied – in future, as national authorities step up their controls on industries' polluting behavior. It is hoped that they will press for greater transparency too, so that interested parties can more easily compare one suppliers' carbon performance with that of their peers. This in turn will increase the incentive for companies to make positive, lasting improvements – and to make the more costly investments.

In the long term, regional initiatives such as EN 16258 and the French decree 2011:1336 are likely to gain traction and be replicated internationally, driven by initiatives such as GLEC, from the Global Logistics Emissions Council – a single, universal and transparent way of calculating logistics emissions across the global multi-modal supply chain. Similar actions can be expected concerning truck emissions test procedures. These will become more realistic, and develop from a regional approach to standards to a global one.

Requirements around reporting accuracy and granularity will increase too, as demand grows for lifecycle assessments, product carbon assessments, traceability and transparency, creating a continuous digital information flow and supply chain record. This data can now be crunched, sliced and diced in vast quantities.

The scope of environmental monitoring and reporting is likely to increase too – for example, we can expect to see the current focus on carbon extended to other pollutants included noise, moving towards not just a carbon footprint report but an overall *environmental health* footprint encompassing all of these dimensions.

"Fossil Divestment" by investors is increasing. As an example, the Norwegian Sovereign Wealth Fund, one of the largest global funds, has stopped investment into fossil fuels. Additionally, many OECD countries have signed agreements to coordinate efforts and more and more European banks are joining the divestment movement. Each has increasingly come to realize that "fossil" (i.e. carbon intensive energies) no longer has a future and investments no longer provide an acceptable risk-return profile.

Social measures

As we have noted, apart from ecologic and economic factors *social* topics are now (finally) emerging from the shadows: we can expect to see social topics rise quickly in importance as regulators sharpen their focus on social sustainability, and market pressure for more ethical behavior increases. It is our view that this will happen alongside a renewed commitment to green considerations.

Social topics are catching up

Poor working conditions and exploitation are becoming business-critical criteria. In the current research, social aspects are currently at a state of maturity equivalent to where the market was with environmental sustainability when we last reviewed the market four years ago: standards are lacking or exist only at a high level. But we believe this situation will evolve relatively quickly now, as customer increasingly differentiate and select the 'fairer' product.

Given the lack of transparency around what other companies may or may not be doing, it is a dangerous strategy here too for companies to hold off investment until new legislation is brought in about companies' obligations. As with green matters, this responsibility extends along the supply chain – it does not stop at the company's gates. If suppliers or outsourcing partners are found to have poor standards, companies upstream will be called to account – and ignorance will not be accepted as a mitigating factor. Again, closer supplier vetting using scorecards is a good place to start in monitoring ecosystems for weak links.

Treating sustainability holistically

As corporate behavior comes under scrutiny at numerous different levels, the hope is that companies will begin to move away from rules and regulations, fragmented processes and data silos. Gradually, they will need to adopt a broader, deeper, more ingrained approach to the way that the business and its activities affect the world at large. This is what the discipline of CSR was fundamentally designed to promote, after all.

By looking at a brand's CSR record, customers and investors should be able to get a feel for a company's values, choices and practices and feel good about doing business with them. As a whole range of measures come under the spotlight, it is hoped that we will see more leaders seizing the opportunity to do more and be better, showing what's possible. The tools are there to help them, and social media will soon get the message out where companies are seen to be genuinely trailblazing. In addition, the 2014/95/EU directive has been a major signal for European companies that CSR reporting obligations will increase.

It is no coincidence that dedicated CSR departments are on the rise, with so much work to be done. We look forward to seeing how far supply chains have come in our next study.

Importance of sustainability will increase further

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