

Rotterdam School of Management Erasmus University RSM

Interface: Creating a Climate Fit for Life through Carpet Tiles



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Introduction

It was early October 2018 when Geanne van Arkel, Head of Sustainable Development at Interface, a global carpet company specialized in modular carpet and luxury vinyl tile (LVT), received a notification from the Intergovernmental Panel on Climate Change (IPCC) at her office in Scherpenzeel, the Netherlands. The IPCC had just released its Special Report *Global Warming of* $1.5^{\circ}C$,¹ which urged all countries to keep the total average global warming to $1.5^{\circ}C$, arguing that every point of a degree more counted and would have disastrous consequences.

In her office, Van Arkel read the report and was reminded again of the pivotal importance of Interface's climate change strategy and corroborated with a sense of pride related Interface's progressive approach with regards to reducing its climate impact since 1994. Since Van Arkel joined the company 15 years ago, she had been determined to reduce Interface's carbon footprint. The year before, she even received a Master's degree in Biomimicry to be able to apply nature's ways in the industry. In the past couple of years she succeeded in reducing the company's negative climate impact, together with the team of sustainability specialists around her. The company was now right on track to reach its 'Mission Zero' goals by 2020, which included the goal of having zero net carbon emissions.

However, Van Arkel's thoughts started to move towards the period after 2020, when Interface's new strategy, 'Climate Take Back', would officially take over from 'Mission Zero'. In 2015, Interface had already started to formulate this new strategy, challenged by environmentalist Paul Hawken. With the new mission, Interface would have to cultivate a terrain which had never before been cultivated by any company, namely creating a climate fit for life instead of only minimising the company's carbon footprint. Similar to the situation in 1994 when Interface's founder Ray Anderson decided to change direction and make Interface the first carbon neutral company in the world,² Geanne now had the responsibility to make the new sustainability mission of Climate Take Back happen for the EMEA region (Europe, Middle East, Africa) in an unexplored area. The EMEA headquarters had so far been a "living example of sustainable practices"³ within Interface because the site does not send any waste to landfills, has a closed water system for manufacturing and runs completely on renewable energy.

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The main question Van Arkel asked herself was: how could Interface tap the right resources and competences needed to make its new strategy a success? How would she explore positive climate change initiatives with Interface to make the new strategy a reality? How would she work with all stakeholders to successfully achieve Climate Take Back? And would she be able to speed up the implementation of the new strategy? With the urgency posed by the IPCC report in the back of her mind, Geanne started thinking...

The Carpet Tile Industry in 2018

Within the construction market, the flooring segment, which includes both soft and hard flooring, was one of the most popular segments in 2018. In the several years prior, the growth of modular carpets outpaced the overall growth of the flooring industry, due to the unique attributes of carpet tiles, and the industry continued to grow internationally. In addition to the traditional advantages of soft floor covering, carpet tiles offer easier transport, and allow for rearrangement and easy replacement and removal, which increases the cost efficiency of the floor covering and the average life of the carpet.⁴

In 2018, the largest players in the carpet tile industry, aside from Interface, included Bentley Mills, the Dixie Group, the Shaw Contract Group, and the Miliken Group.⁵ For some of these producers, carpet tile was only one segment of their business, and they had greater financial resources than Interface. In the European market, Desso was Interface's largest competitor. ⁶ The carpet tile industry competed with producers of other types of floor covering, such as broadloom carpet. It had a large number of manufacturers, although the industry had experienced significant consolidation.⁷

The production of carpet tiles was generally heavily dependent on petrochemicals, produced a lot of waste, and was very polluting due to a 'take-make-waste' mindset and the low biodegradability of the materials used. The need for consumption and replacement lay at the foundation of most business models, including those in the carpet tile industry. Most companies complied with only the minimum requirements of environmental regulations.

About Interface

The company was founded by Ray Anderson in 1973 and was one of the first companies to produce modular carpets. In addition to producing the carpets tiles, Interface also provided installation, maintenance and replacement services. Soon after 1973, the company became the largest carpet tile manufacturer in the world. In 1987, Interface took over another leading carpet tile manufacturing company – Heuga – through which it further strengthened its industry position.

The company operated as a recognised leader in the global commercial interiors market. Interface's carpet tiles were known for their fine design, reliability, quality

and premium brand. The modular carpet tiles were usually cut precisely in regular squares or rectangles of a specific size (**Appendix A**). Interface's carpet tiles positively contributed to the indoor climate by holding fine dust and contributing to better acoustics.

In 2018, Interface sold its carpets in over 100 countries. The year before, Interface experienced a 3.9% growth, with net sales increasing from US\$959 million in 2016 to US\$996 million in 2017. In 2017, Interface also employed approximately 3100 employees in total worldwide, and employed more than 650 well trained and experienced sales force employees spread over 70 locations in more than 30 countries. Interface's customers were mainly from the non-residential sector. Its carpet tiles could be found in offices, hospitality spaces, airports, health care and retail facilities, as well as educational and other institutions. A smaller part of the customer base used the carpet tiles in residential interiors.⁸

Interface's carpets were manufactured in the company's own facilities across North America, Europe, Asia and Oceania. In 2017, Interface had 10 regional headquarters, located in Australia, Canada, China, the Netherlands, India, Japan, Mexico, Singapore, South Korea and the US. The largest EMEA headquarters was located in Scherpenzeel in the Netherlands, with approximately 350 employees. The Scherpenzeel headquarters manufactured and distributed carpet tiles to the EMEA region and also had departments for marketing, research and development, sales and customer service. The EMEA region accounted for 25 percent of Interface's sales in 2017 (Exhibit 1).⁹ Although there were multiple Interface headquarters around the world, the company adopted a uniform and global strategy and company culture.



Exhibit 1: An overview of the manufacturing facilities and percentage of sales

Source: Notice of Annual Meeting of Shareholders¹⁰

Note: The above figures are percentages of 2017 net sales.

In addition to being a market leader in carpet tiles, Interface was also known for its global leadership in ecological sustainability, i.e., it no longer only 'took' from the earth or caused harm to the biosphere but was making steps to turn the tables on its footprint.¹¹ Interface's sustainability strategy of *Mission Zero* started in 1994 and was implemented steadily ever since. By 2018, the company claimed great progress toward that end: a range of more sustainable products and strategies had successfully been implemented, and the activities undertaken by Interface had been re-inspired by sustainability.¹² Interface had incentivised sustainable production with its suppliers through new partnerships, and had discontinued contracts with suppliers not willing to move towards sustainable solutions while allowing sustainable suppliers to grow.

The sustainability department's internal role was crucial to Interface's maintaining its global leadership in that area, and the Scherpenzeel headquarters was the best example and showcase of sustainability practices within the company.¹³

Inception of Interface's Sustainable Goals

Ray Anderson had played a huge role in redirecting Interface from a regular carpet tile company to a sustainable market leader. Anderson founded his company in 1973 and had led the company from its inception to a successful and mature carpet tile company 20 years later. In the summer of 1994, Anderson read Paul Hawken's book *Ecology of Commerce*, in which Hawken describes business and industries as the major reasons for the decline of the biosphere, but also proposes business as the only institution with sufficient size and power to lead the world 'out of this mess'.¹⁴ After reading Hawken's book, Anderson radically changed direction with his company. He challenged all of his employees and other organisations become sustainable; to take nothing from the earth, and to do no more harm.

Mission Zero

Resulting from Anderson's epiphany moment in 1994, Interface introduced a new mission: *Mission Zero*. This comprised of a new goal in which Interface would reduce its environmental impact to zero by 2020. Anderson's vision with *Mission Zero* included: "Operating our petroleum-intensive company in such a way as to take from the earth only what can be renewed by the earth – naturally and rapidly – not another fresh drop of oil – and to do no harm to the biosphere".¹⁵ From 1994 onwards, sustainability became the lens through which Interface saw the world, and the carpet tile was the medium that let Interface show what is possible.¹⁶ *Mission Zero* was built around seven fronts of systems thinking, including eliminating waste, closing the loop, redesigning commerce, sensitising stakeholders and ensuring benign emissions through the use of healthy materials, among others (**Exhibit 2**). These seven fronts were based on the system conditions of The Natural Step and the Life's Principles of biomimicry in which design lessons were taken nature.

Watch this video on Mission Zero (3:00 - 8:18):



InterfaceFLOR - Mission Zero™



Exhibit 2: The 7 fronts crucial to *Mission Zero* (See Appendix B for extended explanation)

Because of *Mission Zero*, Interface saw the need to fully redesign the way of doing business and to introduce new methods, product designs and programmes that contributed to the sustainability strategy. Since these things had not been attempted before by any global corporate, the 'Eco Dream Team', was called into life (**Appendix C**). This team, with external advisors, was responsible for creating frameworks that

would help Interface apply sustainability to the company.¹⁷ Partly due to this team, Interface started to use the New Industrial Model, which simultaneously prioritises more jobs, greater profits and reduced environmental impact.¹⁸ Additionally, Interface collaborated with other organisations, scientists and other partners in order to reach zero environmental impact by 2020.

New Sources of Inspiration

The main concepts in Interface's sustainable journey became biomimicry, biophilic design and inclusive business.¹⁹ Nature in these concepts was central as both inspiration and role model for the design of the products, ensuring that the whole design would be greater than the sum of its parts (an idea put forth by Aristotle).

- Biomimicry: mimicking and integrating processes from nature to enhance business. Interface collaborated with consultancy firm Biomimicry 3.8 as one of its main advisors (**Appendix D**).
- Biophilic design: enhancing spaces through designing direct contact with nature in a space, use references to, or representations of, nature in designing spaces, or mimicking the natural environment's spatial qualities to improve human responses (**Appendix E**).²⁰
- Inclusive business: an enterprise that is economically profitable by creating employment directly for low-income communities, which results in positive environmental and socioeconomic impact (definition Interface). The Net-Works programme is an example of inclusive business, where discarded fishing nets from the ocean were collected by locals in the Philippines and Cameroon to be recycled into carpet tiles, which resulted in improved job opportunities and additional income for these people, as well as a cleaner ocean.

New Products and Programmes

From Life Cycle Assessment (LCA) it appeared that raw materials used in Interface's carpet tiles, namely yarn, had the largest CO₂ emissions in the product life cycle (**Exhibit 3**). For this reason, Interface focused on decreasing the environmental impact of its raw materials in three ways: using less yarn, find alternatives to yarn, and using more recycled yarn.²¹ Therefore, some of Interface's main carpet tiles were redesigned – not only the product itself but also the product life cycle.²² Some examples of raw material innovations in the carpet tile life cycle were:

• TacTiles[®] : These glue-less small squares were introduced in 2006 and enabled carpet tiles to be secured to the floor without glue (**Appendix F**) and thus reduce the amount of materials used. Since 2006, 40 million square meters had been sold.

- Poly Vinyl Butral (PVB): a recycled material used for Interface's carpet tiles' pre-coat. PVB is recycled from car window lamination and was introduced after seven years of R&D. The PVB innovation led to an 80% carbon footprint reduction of the carpet tile pre-coat and was intended for use in most of Interface's carpet tile collections²³ (Appendix G).
- Conscient: a carpet tile made with bio-based yarn and a backing where the 15% petroleum for flexibility has been replaced by bioplastic. The bio-based yarn, made out of castor bean oil, proved to be as strong and durable as regular petroleum based nylon.²⁴





In addition to innovated products, Interface also launched several innovative programmes to recycle raw materials. With Re-entry 2.0, for example, Interface recycled carpet tiles into new carpets. Interface also sought different ways to collect nylon.

In addition, the Net-Works programme was launched in 2012 as an inclusive circular business model. The Net-Works programme was the first programme for Interface to not only take less from the earth, but actually also restore the environment and climate. The fishing nets collected were recycled into new yarn for Interface's carpet tiles. In 2017, 163,000 pounds of fishing nets were collected and shipped to be recycled by Interface's yarn supplier Aquafil.²⁵ In addition, Net-Works also had a positive social impact for local communities, and thus fit well with the concept of inclusive business (**Appendix H**).

Source: Interface

Progress on Mission Zero

In the years after 1994, Anderson showed that changing direction with Interface was not only the right thing, but also the smart thing to do. Sustainability became a business case for Interface, resulting in lower costs, higher employee engagement, improved reputation, more innovation, and future resilience for the company. Interface introduced metrics to measure the material and energy flows in and out of the company and to measure the company's impact on people and their communities (EcoMetrics[™] and SocioMetrics[™]). By 2017, Interface had made significant progress towards *Mission Zero* (Exhibit 4).



Exhibit 4: An overview of Interface's reductions up to 2017

Source: Notice of 2018 Annual Meeting of Shareholders

Sustainability Leadership

After Ray Anderson passed away in 2011, Interface needed new inspiring leadership to continue Anderson's sustainable aspirations for the company. In 2015, the new CEO Jay Gould joined Interface and found the company to be "less of a leader it once was".²⁶ Also, the field had become crowded with Interface's large competitors who were also introducing sustainability oriented innovations.

Before Anderson had passed away, he had already been speaking about a new, even further reaching sustainability strategy that needed to come into place when *Mission Zero* was reached. This would give Interface a new goal to work towards; a new sustainability mountain to climb. Talks about a new strategy were picked up again after Gould joined the company in 2015, and Gould was keen to create the next steps and frameworks needed for Interface to keep thriving and make sure that Interface remained to be innovative.

By 2018, Interface claimed great achievements towards *Mission Zero*, and the company had worked hard to keep improving its programmes, products and efficiency.²⁷ In July 2018, Interface even announced that all of its product lines were carbon neutral and that therefore *Mission Zero* was accomplished, two years before its deadline.²⁸

On a critical note, a report by Zero Waste France and Changing Markets released in 2017, showed that Interface had made progress in being a more circular and environmentally friendly company in its products and processes, but that the volume of its ReEntry take back programme needed to be increased to reach full potential.²⁹

Nevertheless, since Interface stated to be right on track to reach its goal and 2020 was also approaching soon, a new strategy, *Climate Take Back*, was introduced ahead of schedule. This new strategy was inspired and triggered by environmentalist, entrepreneur and author Paul Hawken, who challenged the company to combat climate change based on his insights working on Project Drawdown, a large research project that resulted in a comprehensive plan consisting of 100 substantive solutions to reverse global warming.³⁰

In early 2017, Gould led Interface into new breeding waters of motivation, toward moving beyond simply reducing climate impact. With the organisation's available tools and ingenuity, Interface decided to expand its mission from climate neutrality and becoming restorative through learning from nature, to becoming a carbon negative company that would be regenerative for the world's systems and its people, a goal it aimed to reach by 2040.³¹

Post 2020 Strategy: Climate Take Back

Climate Take Back entailed a mission with which Interface would contribute to reverse global warming adding on its goal of having a positive effect on the environment and reducing its negative environmental impact. Although damage to climate systems may have been caused unintentionally, Interface believed that it could go further than *Mission Zero* and had the power to positively affect climate change intentionally. For that, the company wanted to drive a collaborative 'green push' in the private sector³² and Interface's operations would need to absorb carbon throughout the supply chain instead of emitting carbon into the air in order to create a 'climate fit for life'.³³

Erin Meezan, Interface's global chief sustainability officer, emphasised that Interface could not reach its mission on its own, and would thus aim for a collaborative approach. "This is the first time in which we are declaring something which is way beyond the boundaries of our company", Meezan says. "We are going to need a lot of help [...]. We can encourage others to not just create their own plans but change their thinking and their attitude about this and declare this as their goal as well". The *Climate Take Back* mission was much bigger than only a corporate mission and in order to reach it, Interface needed all the help it could get.

The *Climate Take Back* mission included four principles, namely 'Live zero', 'Love carbon', 'Let nature cool' and 'Lead the industrial re-revolution' (**Exhibit 5** and **Appendix I**). Some concepts, products and programmes related to *Climate Take Back* had already been developed during *Mission Zero*, such as biomimicry and Net-Works.



Exhibit 5: Climate Take Back 4 principles

Source: Interface

The first principle, 'Live zero', was already captured in *Mission Zero*, in which everything taken from the earth should be given back to the earth.³⁴ With this principle, Interface focused on efficient use of resources, reduced CO2 emissions, switching to recycled and bio-based alternative materials, and working towards circular solutions (see previous chapter '**Mission Zero**') addition, the internal monetary resources available for research on capturing carbon expanded in 2018, with Interface donating US\$25,000 to Project Drawdown in April 2018 to continue research on climate solutions for business.³⁵

The second principle, 'Love carbon', entailed storing carbon from the atmosphere through processes of industrial chemistry in ways similar to that in which nature would do that through photosynthesis. In June 2017, for instance, a prototype for a carbon-negative carpet tile, Proof Positive™, was introduced as being part of the 'love carbon' principle. In October 2018, this prototype was still in the process of developing towards full production in 2019.³⁶ The Proof Positive™ carpet tile captured carbon by turning plants that had naturally absorbed carbon through photosynthesis into durable materials for carpet tiles. These durable carpet tiles could store the absorbed carbon for about a century, and then the carpet tile could be recycled, closing the loop for a circular supply chain. For instance, Interface also became inspired by partners like Carbon8 and New Sky to change the company's

relationship to carbon, now seeing carbon as a resource rather than as a problem.³⁷

The third principle of Climate Take Back, 'Let nature cool', entailed simply letting nature do its work. The pilot programme *Factories As A Forest* was one of the main ideas for this pillar, in which biomimicry played a large role and factories would run as ecosystems (**Appendix D**). *Factories As a Forest* would contribute positively to the outdoor climate of the factories, in which execution of the programme was boiled down to a four-step process:

- Identifying a local reference ecosystem
- Quantifying performance
- Creating design strategies, and
- Implementing design recommendations.

The programme could be used as a side-project for a company or a "vehicle to help achieve goals such as net positive building or contributing to the sustainable development goals (SDGs)".³⁸

The fourth principle, 'Lead the industrial re-revolution', included forming new partnerships and creating new business models similar to the Net-Works concept, but also supporting legislation in line with Interface's mission. Additionally, Interface collaborated with Net Impact in 2017 to motivate and assemble young business leaders to brainstorm new solutions fitting to *Climate Take Back*.³⁹ Interface joined NextWave, a partnership initiated by Dell and the NGO Lonely Whale, which was focusing on preventing plastics getting into the ocean in the first place, while opening up supply chains for various types of plastics. Afterwards, also HP and Ikea joined.

The Unprecedented Challenge

Geanne van Arkel was awakened from her thoughts when an employee of the sustainability department walked into her office and asked if she already read the IPCC report that day. She had, and she had seen Interface making progress especially in the past few years. From 1994 onwards, Interface had changed its identity from a highly polluting carpet tile company into a company that claimed carbon neutrality in 2018. With increased resource efficiency and smart use of resources, for instance through recycling and the use of biomaterials, Interface achieved closed loop material flows and a sustainable supply chain during *Mission Zero* (Exhibit 6). So far, Interface counted as a leading example for the rest of the private sector, but there were great climate challenges ahead in the future.

Interface introduced a climate change strategy that sought to move the company beyond carbon neutrality to being carbon positive: a strategy focused on it becoming regenerative for the world's climatic systems. Interface developed the strategy with its four key principles and had already initiated projects for the new mission, such as developing a prototype of a carpet tile that stored carbon and thus had a negative carbon footprint, and developing ecological performance standards to move its factories towards functioning as a forest (e.g. contributing positively to the outdoor climate, just as Interface carpet tiles contribute positively to the indoor climate).



However, the IPCC report and its call for immediate, deep decarbonisation remained in the thoughts of Van Arkel and during her next meeting with the sustainability department. Interface needed to take even more systematic action toward achieving *Climate Take Back* and start developing ways to pursue this new mission, and she felt increased motivation seep in now with the IPCC report in mind. Van Arkel wanted to think pro-actively about what she could do for EMEA to let that region remain an inspiring example for other regions in the world.

How could the strategy of *Climate Take Back* be pursued? How should Van Arkel keep enabling Interface and its stakeholders to capture value while pursuing this strategy? What could be done in the four areas identified as key principles of *Climate Take Back*? What were the challenges and considerations within the *Climate Take Back* strategy? What steps would Van Arkel need to take to improve and innovate existing projects and products, and what steps would she need to take to pursue new ones?

Appendix A: Example of Interface's carpet tiles



Source: Interface

Appendix B: The 7 fronts of Mission Zero

Front 1	Eliminate Waste	Eliminate all forms of waste in every area of business
Front 2	Benign Emissions	Eliminate toxic substances from products, vehicles and facilities
Front 3	Renewable Energy	Eliminate toxic substances from products, vehicles and facilities, and operate facilities with 100% renewable energy.
Front 4	Close The Loop	Redesign processes and products to close the technical loop using recovered and bio-based materials
Front 5	Resource Efficient Transportation	Transport people and products efficiently to eliminate waste and emissions
Front 6	Sensitise Stakeholders	Create a culture that uses sustainability principles to improve the lives and livelihoods of all of our stakeholders – employees, partners, suppliers, customers, investors and communities.
Front 7	Redesign Commerce	Create a new business model that demonstrates and supports the value of sustainability-based commerce

Appendix C: The 'Eco Dream Team'

The original team included⁴⁰:

Name	Function					
David Browner	Executive director Sierra Club					
Bill Browning	Buckminster Fuller devotee, Rocky Mountain Institute (RMI)					
Bernadette Cozart	Community and social activist					
Paul Hawken	Author of "The Ecology of Commerce" and entrepreneur					
Amory Lovins	RMI co-founder and chief scientist					
L. Hunter Lovins	RMI co-founder					
William McDonough	Architect and designer					
John Picard	Pioneering consultant in green building and sustainability					
Jonathan Porritt	Co-founder of Forum for the Future					
Daniel Quinn	Author of "Ishmael"					
Karl-Henrik Robèrt	Founder of The Natural Step, a sustainability framework					
Walter Stahel	Resource efficiency expert					

Additional members would be added over the years, including Biomimicry author Janine Benyus, whose insights proved invaluable for the company.





Source: Interface

Appendix E: Examples of biophilic design



Source: Interface

Appendix F: TacTiles®



Source: Interface

Appendix G: Recycling Car Window Lamination for PVB



Source: Interface



Source: Interface

Appendix I: The four principles of *Climate Take Back* and example projects

'Live Zero'

Radically reducing carbon emissions, former Mission Zero. Working with renewable energy and developing circular solutions.

- Ecometrics: 96% CO2 reduction in global production, 66% CO reduction of average carpet tile footprint, compared to a 1996 baseline⁴¹
- Project Drawdown: <u>https://www.youtube.com/watch?v=RlowjpqY8QQ</u> <u>www.projectdrawdown.org</u>

'Love Carbon'

Storing carbon from the atmosphere

 Proof Positive[™] carpet tile, part of this prototype is already through CircuitBac⁴² Green - a backing in which the 15% fossil fuel has been replace by a bioplastic⁴³

'Let Nature Cool'

Get inspired by nature and let nature prevail

 Factories as a Forest: Measuring your factory against a good performing ecosystem and work to achieve the same performance (e.g. air purification, water absorption, cooling, habitat/biodiversity) <u>https://youtu.be/S3jJIz8cPKo/ https://www.greenbiz.com/video/erinmeezan-interface</u> <u>https://sustainablebrands.com/read/new-metrics/interface-moving-fromnet-zero-to-climate-positive-by-rethinking-factories-as-forests</u>

'Lead the Industrial Revolution'

Include others in order to reach the mission

- Net Impact collaboration
- Supporting recycling legislation⁴⁴
- Net-Works, creating business models supporting the Sustainable Development Goals <u>https://goexplorer.org/making-carpet-tiles-from-old-fishing-nets/</u>
- NextWave, sharing the Net-Works learning also in other plastic sectors https://www.nextwaveplastics.org/

Appendix J: Selected financial data

	 2017	_	2016	_	2015	_	2014	_	2013
Net sales Cost of sales	\$ 996,443 610,422	\$	958,617 589,973	\$1	,001,863 618,974	\$1	1,003,903 663,876	\$	959,989 618,880
Operating income ⁽¹⁾	109,844		84,937		113,593		70,295		95,630
Net income ⁽²⁾	53,246		54,162		72,418		24,808		48,255
Income from continuing operations per common share attributable to Interface, Inc.									
Basic	\$ 0.86	\$	0.83	\$	1.10	\$	0.37	\$	0.73
Diluted	\$ 0.86	\$	0.83	\$	1.10	\$	0.37	\$	0.73
Average Shares Outstanding									
Basic	61,996		65,098		66,027		66,389		66,194
Diluted	62,040		65,136		66,075		66,448		66,297
Cash dividends per common share	\$ 0.25	\$	0.22	\$	0.18	\$	0.14	\$	0.11
Property additions	30,474		28,071		27,188		38,922		91,851
Depreciation and amortization ⁽³⁾	37,508		36,505		44,751		34,675		32,605
Working capital	\$ 254,221	\$	311,799	\$	245,391	\$	240,881	\$	257,918
Total assets	800,600		835,439		756,549		774,914		796,335
Total long-term debt	229,928		270,347		213,531		263,338		273,826
Shareholders' equity	330,091		340,729		342,366		306,639		340,787
Current ratio ⁽⁴⁾	2.4		3.0		2.6		2.7		3.0

Source: Interface Annual Report 2017

Appendix K: Ray Anderson

- Video about Anderson's epiphany moment:
 R. Anderson, "Ray Anderson The Way of the Plunderer", 20 December 2007, https://www.youtube.com/watch?v=1uoRe9vOzec
- Video about Anderson talking about sustainability as business case: R. Anderson, "The Business Case for Sustainability – Ray Anderson, InterfaceFLOR", 7 July 2011,_ <u>https://www.youtube.com/watch?v=9qrQKA0xMko</u>

Endnotes

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