

An aerial photograph of a large industrial complex, likely a paper mill, featuring several large buildings, a vast parking lot filled with cars, and surrounding forested areas. A large, stylized yellow circular arrow with a textured pattern is superimposed over the image, pointing downwards and to the right. The text "Our Clean Commitments" is centered over the image in a large, white, sans-serif font.

Our Clean Commitments



Content

About Mirka	3
Global Mirka	4
An overview by our CEO	5
The Mirka Way	6
Success Driven by People	8
Clean Partner	10
Clean Proactivity	12
Clean Production	14
Clean Performance	23
Content Index	26





Mirka Ltd is a global company and part of the family owned KWH Group Ltd. Mirka's business idea is to offer world leading comprehensive surface finishing solutions. Our business focuses on our customers' needs. Continuous improvements of our operations, our expertise and our work with our customers help us to offer tailored systems and commercial comprehensive solutions that are supported by a wide range of technically superior abrasives and polishing products as well as innovatively designed tools.

Approximately 96% of Mirka's production is exported, with products being sold in over 100 countries. Mirka's business areas are focused on the automotive, wood and boat industry, and the company's typical customers include manufacturers of wood products, car body shops and repair shops and automotive manufacturers and sub-contractors. Mirka's products and services also serve the construction and renovation industry and the composite industry. Mirka's latest innovations also include glass sanding and microfinishing solutions.

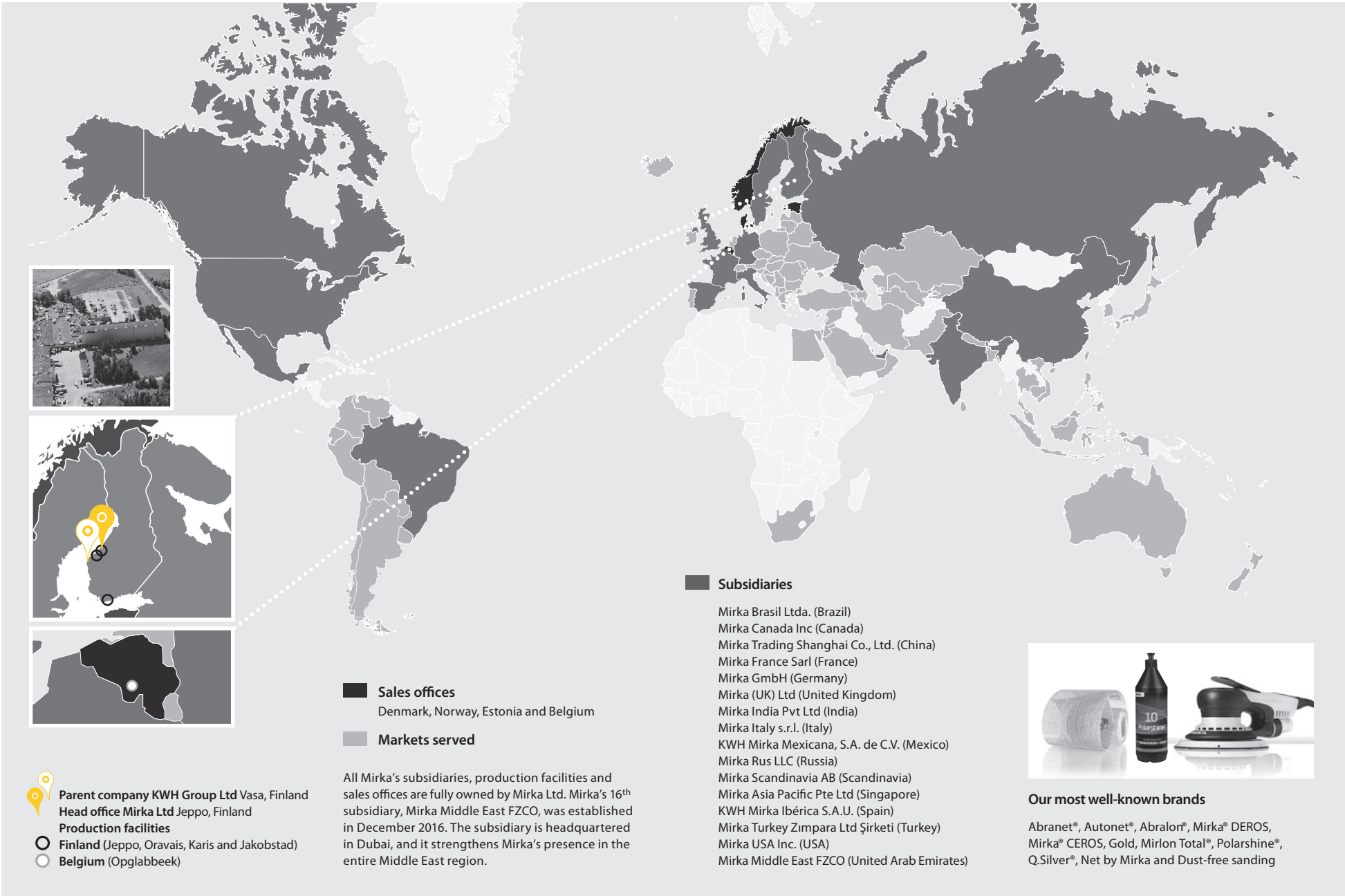
Clean commitments

For more than 70 years, our brand has paved the way for technical breakthroughs in surface finishing, and we continue shaping the industry with our expertise. We follow our company values by being responsible, committed, innovative and respectful. We offer our customers sustainable solutions that consider the financial, health, technical and environmental aspects.



Our Clean Commitments

In this Sustainability Report, we have compiled our economic, environmental and social initiatives and achievements under "Our Clean Commitments". Under these topics, we describe the development of our corporate sustainability transparently with various KPIs.





AN OVERVIEW BY OUR CEO

Responsibility is part of Mirka's identity and a natural part of our business operations. Through ongoing development of our operations we are able to offer our customers innovative and comprehensive solutions for surface finishing, taking into consideration the environment, social responsibility and economic viability. Our mission states that we want to give people the opportunity to perform better.

The objective of Mirka's business strategy is long-term, profitable growth, which will also allow us to ensure sustainable development. Our vision is to achieve a market position where customers and stakeholders see us as a market leader and the most responsible company, driving innovation in our core business sectors.

In recent years, Mirka's operations have been characterised by strong international growth. However, rapid growth and geographically concentrated production also bring about their own business challenges. Despite the challenging and unstable global market situation, Mirka expanded its market share

during 2016. Growth is rapid, particularly in the EMEA area (Europe, the Middle East and Africa), which accounts of almost 65% of Mirka's global turnover. In other market areas Mirka's turnover has remained stable. In addition to the EMEA area, in the coming years we are set to invest in growth in the Middle East in particular, where we opened a new subsidiary in late 2016.

As markets globalise further, responsibility is growing in importance. It is particularly notable that working environment and occupational safety perspectives, alongside the significance of environmental responsibility, are being emphasised to a growing extent in all collaboration with stakeholders. Corporate responsibility is a competitive advantage for us at Mirka, and due to this, we want to work proactively on corporate responsibility and stand out as a pioneer of sustainable development in our sector. In recent years we have invested particularly in further development of occupational health and safety, and we are aiming for zero workplace accidents throughout all of our units. We also want to

be involved in developing our customers' working environments, by offering innovative and comprehensive dust-free sanding solutions and ergonomically designed sanders. Our expanding range of electric sanders offers new opportunities in this area, with both efficiency and customers' occupational wellbeing being key factors in the design of the products.

We also aim to continually enhance our environmental responsibility by shifting to more environmentally friendly forms of energy and raw materials. More details about these and other projects that contributed to our responsible operations during 2015–2016 are provided in this Sustainability Report.

Stefan Sjöberg
Mirka Ltd

THE MIRKA WAY

Our Company Culture

At Mirka we understand that every job has its own unique requirements, which is why we work closely with customers to provide tailored solutions that precisely meet their needs.

After gaining a clear understanding of exactly what each customer requires, our technical customer support specialists recommend high-quality products, processes, and training that ensure that successful results can be achieved at every step of the operation.

Sustainability is built into The Mirka Way. When the system is set up with all of the right parts and customers have all the information needed to get great results, then their work is more sustainable.



Our Vision

"We wish to reach a market position, where customers and interested parties see us as a market leader and the most responsible company who drives innovation in our core business sectors."

Our Mission

"We want to give people the opportunity to perform better."

Our Values

Responsible

For all results & resources.
Ethical business practice.
Structured and well organised.
Cost-aware.

Committed

Keep our promises.
Close to the customer.
Dedicated to high performance.
Passionate people.

Innovative

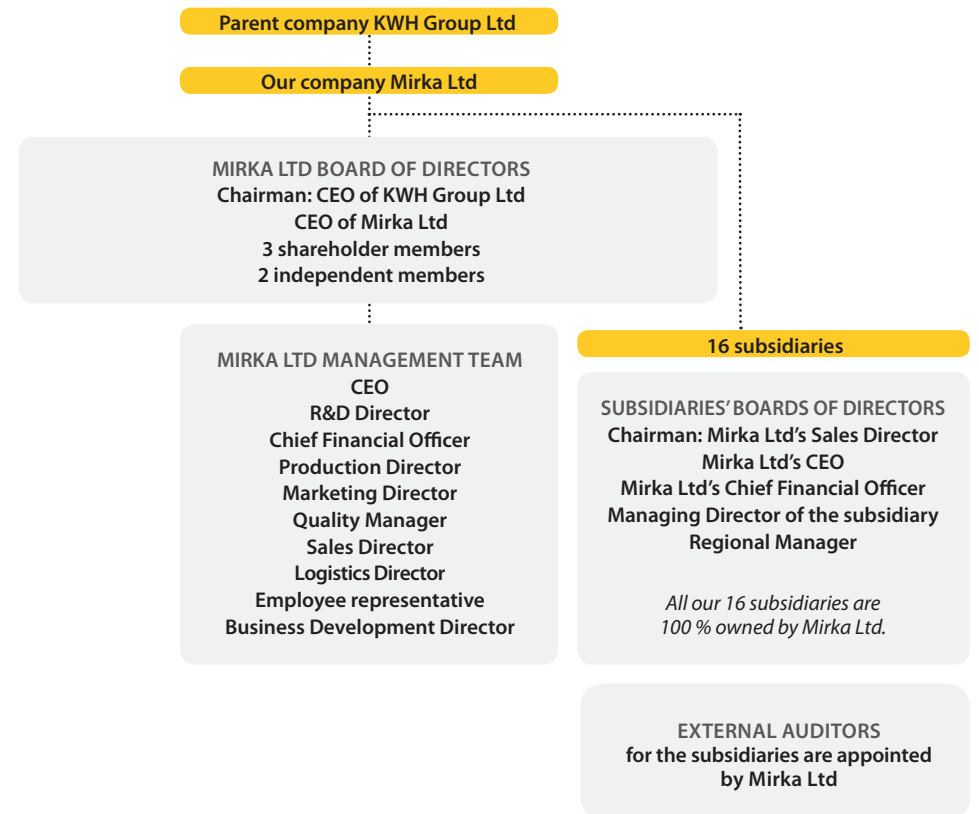
Open to new ideas.
Continuously seeks to improve.
We create solutions that are good for us, our customers and society as a whole.

Respectful

Every individual is valuable and can contribute.
Open work environment.
Warm and genuine.
Fair.

Our organisation

Mirka's long-term group strategy serves as the basis for the group's comprehensive business plan, which is drawn up annually and approved by Mirka's Management Team and the Board of Directors. All business and factory units are involved in drawing up the business plan. Department-level goals are set based on the business plan.



THE MIRKA WAY



SUCCESS DRIVEN BY PEOPLE

Committed, motivated and professional personnel have enabled Mirka to expand its operations and grow strongly in the market. Low staff turnover is characteristic of Mirka, and creates a competitive advantage in the market and provides a solid foundation for future development. That is why we want to make comprehensive investments in personnel well-being and training.

Participatory HR policy

Mirka's HR programme "Success Driven by People" comprises Mirka's HR policy and its practical implementation. The Success Driven by People programme was certified according to the Investors in People standard for the first time in 2009. Since then, we have renewed the certificate in 2012 and 2016. The Investors in People standard aims to improve the organisation's performance by working on leadership, investing in the personnel and involving all employees in the development efforts. Mirka addresses the requirements of Investors in People with the Success Driven by People programme, which focuses on participation, determination and understanding targets, leadership, competence and personal development,

motivation and maintaining a safe and comfortable working environment. The Success Driven by People programme currently applies to Mirka's personnel in Finland, but the company is planning to extend the programme to the subsidiaries as well.

Developing operations and skills

Open communication and listening to the employees are key to the company's successful growth. Every two years, Mirka organises a comprehensive employee satisfaction survey. It provides a way for employees to influence job satisfaction and the planning and development of their department's activities. The response rate for the 2015 satisfaction survey remained on a good level at 85%. The results indicate that

the job satisfaction is high and the employees are proud to work at Mirka. The survey has served as the basis for department-specific action and follow up plans.

Employee competence and expertise are significant when the business is expanding. Accordingly, we provide our employees with various opportunities for developing their own competence. Furthermore, our annual individual performance reviews support professional development and improve activities across the company.



The Investors in People certification was conducted at Mirka in 2016, and it identified the following strengths:

- Supervisory work principles are put into practice well at Mirka
- The employees are proud of their work at Mirka and feel appreciated
- Mirka's employees demonstrate working community skills through taking responsibility and through their ability to make decisions
- Mirka provides its employees diverse opportunities for developing their skills
- The employees are actively involved in the planning processes

MIRKA EMPLOYEES / 31.12.2016	MALE	FEMALE	TOTAL
Worldwide workforce (All Employees and Supervised Workers)			
Total Group, employees	827	287	1114
Workforce, Finland	480	188	668
Workforce, Subsidiaries	346	99	445
Full-time Employees	811	256	1067
Part-time Employees	15	31	46
Board of Directors for Mirka Ltd	5	1	6
Management Group for Mirka Ltd	8	1	9
Board of Directors for Subsidiaries of Mirka Ltd	8	0	8
Europe, Middle East and Africa	666	247	913
North- and South America	88	26	114
Asia and the Pacific Region	73	14	87



Mikael Vikström
HR Manager

“Open communication and listening to our personnel are key to the successful growth of the company. At Mirka, we want to involve our personnel in the planning of operations.”

Building the company culture

Our strong international growth has created a need for determining, strengthening and further developing our company culture. In 2016, we initiated a large-scale brand project and carried out an extensive cultural survey in connection with it. Based on this work, we will organise brand and culture workshops for all personnel in all of our subsidiaries during 2017.

In 2015–2016, we also carried out a global leadership training, which aimed at strengthening Mirka’s culture, values and leadership according to the HR policy and to create a solid foundation for future leadership in a globally expanding company.

Comprehensive occupational well-being

In the past few years, Mirka has made investments in comprehensively addressing occupational health and well-being. We want to improve employees’ well-being at work, taking physical and mental aspects into account. In 2016, we introduced practical tools for fatigue prevention to managers and workers.

We have also completed various campaigns for promoting physical well-being and health. Mirka offers employees a wide range of exercise opportunities and gym services. For the fourth year now, we have also supported our employees’ health by being a non-smoking workplace.



Workforce Training

Average number of training hours per employee group and gender 2016:

WORKFORCE FINLAND	
TRAINING HOURS / EMPLOYEE GROUP	[h]
Managers	62
White-collar	57
Blue-collar	17
WORKFORCE WORLDWIDE	
TRAINING HOURS / GENDER	[h]
Female (Finland)	30
Male (Finland)	28
Female (Subsidiaries)	18
Male (Subsidiaries)	20
A total of 27,591 training hours were given	

Performance Reviews

In 2016, performance reviews were conducted among 350 male and 125 female employees at Mirka Finland and among 346 male and 99 female employees at our subsidiaries.

Finland	73 % Male
Finland	66 % Female
Subsidiaries	100 % Male
Subsidiaries	100 % Female



CLEAN PARTNER



Joachim Rännar,
Logistics Director

“We believe strongly in having a global presence, which helps us to better ensure responsible supplier conditions. We also regularly carry out supplier audits to ensure transparent operations and good quality.”

Transparent purchasing

We at Mirka want to nurture strong, open and long-term collaboration with our suppliers and external partners. This helps us create added value for everyone throughout the value chain and ensure that the end product we offer our customers is of high quality and meets customer expectations.

The collaboration in the value chain is guided by Mirka’s internal purchasing policy and our subcontracting guidelines for external suppliers. In addition, we make written contracts with all transport companies before starting to work with them.

We regularly carry out supplier audits in order to ensure transparent operations and good quality. When working with our suppliers we particularly emphasise environmental responsibility, occupational safety, social and economic responsibility, maintenance of management systems, quality tracking and risk management. We document any shortcomings with supplier partnerships and track the implementation of corrective actions; if the corrective actions are not

implemented, the contract with the supplier will be terminated.

Local presence creates sustainable collaboration

We at Mirka believe strongly in having a global presence, since it helps us to better ensure responsible supplier conditions and also respect and understand local cultures. Furthermore, it enables us to respond faster to changes in the market and ensure sustainable supplier partnerships. In 2016, Mirka expanded its local purchasing in Asia, when a new purchasing representative was appointed in China. The presence of a Mirka purchaser in China also significantly reduces the number of remote business trips, as we now can maintain partnerships locally.

Having a presence near the market is also a way for Mirka to support local production. This also helps us to minimise long-haul material transports and environmental impacts.

Optimised warehouse operations

Having a local presence has also been a focus area in warehouse and transport operations. Mirka has ten central warehouses around the world for stocking its products as close to the end market as possible. In 2016, Mirka’s warehouse in Oravais, Finland, was moved to a new central warehouse in Vanda in order to bring goods transports as close to the customer as possible. This helps us to become more efficient in transport operations and to minimise emissions that affect the environment. In the past year, we implemented another significant warehouse optimisation project when Mirka’s Canadian warehouse was merged with Mirka’s warehouse in US. This reduced the need for intermediate storage in North America.





Simon Bloxham
Sales Director

"A foundation of our lasting and genuine cooperation with stakeholders is a constant and active dialogue with all cooperation partners. This allows us to react quickly and effectively to needs arising within the customer base."

Sustainable product management

In the past few years, Mirka has focused on improving product management by streamlining the product portfolio and clarifying the sales operations. These actions have had a direct effect on reducing the carbon footprint. The streamlined product range has reduced the number of production outages and made our production processes more efficient. This has resulted in fewer restarts of manufacturing processes, thus considerably reducing our loss and waste volumes. The refined product range has also enabled us to reduce bulk goods transport volumes and optimise our warehouse facilities.

Introducing a company-wide warehouse management software in all Mirka's central warehouses has also strongly contributed to more efficient product management. The common management software improves transparency throughout the process and guarantees more efficient warehouse operations and more open partnerships with our subcontractors.

Stakeholder engagement

We believe in sustainable and honest stakeholder engagement, and our objective is to keep a continuous and active dialogue with our partners. All our new employees receive induction training concerning our anti-corruption policy and procedures. In the reporting period, we received no notice of corruption involving our personnel or our business operations.

In stakeholder engagement, we utilise our Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems. Our CRM system enables a customer-oriented approach where sales operations and sales planning are managed using the system. This helps us to better develop our customer relationships and respond more quickly to any customer needs. Systematic planning of our sales operations also optimises our travel, which enables us to reduce our environmental impact.

Significant stakeholders

Our stakeholders are defined based on how our business operations affect them and how their operations impact on the development of our business operations. Mirka's most significant stakeholders are the owners, employees, customers, suppliers and service providers.



The Keppo Mansion, located in Jeppo, provides meeting and training facilities for the KWH Group. Thanks to the Mansion, our guests are able to stay close to the production facilities and Mirka's head office in Jeppo.

The CRM system is also essential in terms of quality management. The system enables us to work systematically on any notices related to quality, the environment, health and safety and record customer-specific, special requirements.

Digital systems also enable increasingly paperless office work. The Mirka intranet, for example, plays an important role here. It makes all internal information and instructions available in digital form to personnel, regardless of where their workstation is located.



CLEAN PROACTIVITY



Mats Sundell,
R&D Director

"It is characteristic of Mirka's product development work that the customer is taken into consideration right from the early stages of the development work. The aim of all such work is always to find an optimal comprehensive solution for the customer."

In order to be a pioneering company in our industry and to continue offering our customers innovative and high-quality sanding technology solutions, product development has a key role in our operations. The focus of product development is to create comprehensive solutions that not only solve the customer's everyday challenges but also address occupational safety and working environment concerns.

Dust-free sanding

In 2016, Mirka continued to grow its market share as a result of a strong focus on comprehensive solutions rather than individual products. Mirka was the world's first abrasive manufacturer to bring dust-free sanding to the market. The dust-free sanding system and the Abranet net technology continue growing their market share. In 2016, we implemented the "Dust-free perfection" campaign with the aim of raising awareness of the health and safety benefits provided by net sanding products. The Abranet net sanding technology has another benefit in addition to the dust-free results: the durability of the product provides clear cost savings to the customer while reducing the amount of abrasive product waste.

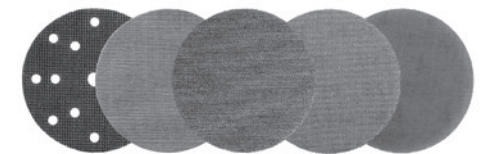
The textile materials used in our dust-free net sanding products are manufactured in our factory in Karjaa, Finland, which has a product development unit dedicated to textiles. We have made large investments in the development of textile technology. In 2016, we finished building the second building of the Karjaa facility for the warping and storage of yarn, doubling the floor area of the factory. In textile technology, Mirka has invested in backward integration, which means that the raw materials for textile production are purchased with as low a processing degree as possible. As a result, the supply chain is highly energy-efficient, with most of the production stages taking place geographically close to each other.

We continued to develop dust-free sanding in 2016 by launching several new dust extractor models with improved ergonomic

features. Mirka's dust extractors can be fitted with a HEPA filter that stops even the smallest dust particles. In 2016, we also introduced a dust bag for the Mirka® DEROS sander, which enables dust-free sanding in circumstances where a dust extractor cannot be used. The material of the dust bag is the result of extensive research and testing in order to find the best possible fibre that stops the dust particles.



Abranet®
Dust-free perfection



The Abranet net sanding technology, which allows dust-free sanding, is constantly increasing its foothold in the market.



The ergonomically shaped Mirka® AOS-B is the smallest battery-powered sander on the market

Focusing on ergonomics

The market share of Mirka's electric sanders has seen strong growth in recent years, and the convenience of compact electric sanders compared to pneumatic tools has further driven their popularity. Electric sanders are faster to commission, easier to adjust and more flexible to use, and the brushless electric motor provides consistent power at all times. The product development of sanders has focused on convenience and better occupational safety through ergonomics and lightweight structures.

One example is the Mirka® AOS-B, launched in 2016, which is the smallest battery-driven sander on the market. The ergonomic design has been a priority in the development of the product. This enables the convenient and well-managed sander to be used for long

periods without fatigue. The product has been developed together with customers as well as experts in ergonomics. The small and light tool is powered by a strong lithium-ion battery, which makes it economical and effective to use. Lithium-ion batteries provide numerous advantages over traditional batteries. Lithium-ion batteries are a more eco-friendly choice because they contain no acid. They have a more lightweight structure and, due to their long service life, they are a more sustainable solution.

Digitalisation enables new innovations

In order to continue offering our customers innovative solutions that generate added value, our product development has in recent years also focused on the possibilities of digitalisation. Digitalisation opens new

Product development built around customer needs

Recently, glass surfaces have become increasingly more common in the technology and construction industries. In 2015, Mirka launched a unique solution for sanding various glass materials. The method makes it simple to remove scratches from glass surfaces. Hence, the entire glass element does not need to be replaced which saves time, resources and the environment.

doors in production, services and product features. In 2016, Mirka launched a mobile application that connects to sanders. Powered by Bluetooth technology, the myMirka app can measure the sanding speed, vibration and user's daily vibration exposure. The application is still under development and, in the future, it will offer versatile features for tracking occupational safety and productivity.

Sustainable development efforts

Mirka has a clear strategy for reducing the use of chemicals. In recent years, we have invested heavily in raw material product development and process improvements. We are continuously researching alternative raw materials with the aim of finding the most durable and efficient raw material solutions and production processes that address environmental, as well as health concerns. We are also actively working to find new hardening processes that consume less energy.

In 2016, we appointed a dedicated Life Cycle expert working group that focuses on the continuous improvements of product development. Last year, we also established a clear action plan for the group's work which follows the LEAN principles. Regular monitoring

and documentation enable us to further improve our existing products and processes, thus also allowing for the use of the most modern technology. Due to new manufacturing technologies, Mirka can already tailor product-specific features.

One characteristic of Mirka's product development is involving the customer in the development work at an early stage. This allows us to test the product in authentic environments and do improvements according to feedback. We are a global partner of various higher education institutions and researchers. Mirka also participates in several of the EU's Horizon 2020 research and innovation projects. We value our investments in research because we want to work for sustainable solutions in the long term.

CLEAN PRODUCTION



Jan Torrkulla,
Production Director

“Above all, we are investing in proactive and preventative occupational safety in order to achieve our goal of zero occupational accidents across all of our units. Awareness of occupational safety amongst personnel has increased and workstation as well as machinery safety has been developed.”

Preventive occupational safety

Mirka aims for zero occupational accidents across all locations. Occupational safety is affected by attitudes and work practices as well as the working environment. We therefore emphasise preventive occupational safety measures by increasing safety awareness among personnel and improving the safety of workstations and equipment.

We started improving machinery safety in 2013. Since then, we have continued our focused efforts and appointed a dedicated working group for the task. We carry out periodic risk assessments in production and use them as the basis for action plans. In 2015, we implemented more than 400 machinery safety improvements and in 2016 over 600. These included investments in new safety devices such as safety switches, protective walls, working platforms, electrical cabinets and remote controls. When purchasing machinery safety equipments, we have emphasised the usability and durability of the equipments in addition to safety.

Today, repair and maintenance work on the production lines requires a work permit

that includes a risk assessment of the task in question. When we plan new production lines, we also carry out a risk assessment as a preventive measure, and we only introduce new lines in production after correcting any risks that we have identified.

We are also promoting occupational safety with periodic Safety Walks by supervisors and managers. In 2016, the Safety Walks focused on personal protective equipment. As a result of this work, we replaced for example compressed air respirators, compressed air cylinders and supplied air respirators at specific workstations.

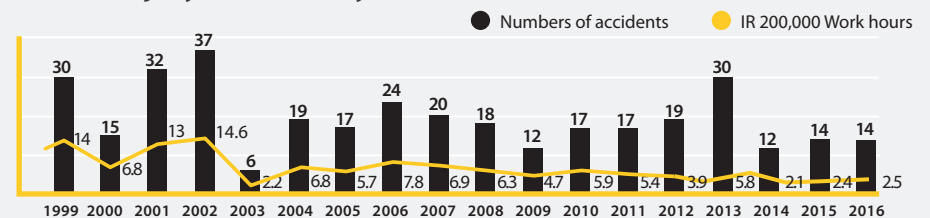
The preventive occupational safety measures have also resulted in our personnel having a more positive attitude toward occupational safety, taking responsibility and being more aware of safety issues. In practice, this shows in an increased number of nearby reports, which aim to record occupational safety risks and implement the necessary corrective actions.

In 2016, our employees filed more than 1,000 nearby reports, and approximately 95% of production and maintenance personnel filed at least one report. The number of reports

Mirka Workplace Safety Evolution 1997–2016

Year	Action
1997	Started nearby reporting process for accidents
1998	ISO 14001 certification achieved
1999	Began system for managing inspections
2000	Introduced OHSAS 18001 into our facilities (Occupational Health & Safety)
2001	Developed change management risk analysis
2002	Formed first safety group
2003	Introduced Zero Accident thinking
2004	Began new machinery acceptance inspection
2005	Started using Occupational Safety Card
2006	Established safety walks
2007	Developed root cause analysis
2008	Introduced Japanese 5S efficiency and effectiveness organisation system
2009	Initiated machinery risk analysis
2010	Oravais factory sets Zero Accident target
2011	Began systematic work of eliminating hazards
2012	Company-wide Zero Accident programme launched; achieved in Karis factory
2013	All factories have equal Occupational Health & Safety plans and metrics
2014	Full-time machine safety group initiated in Jeppo factory
2015	Improving warehousing and handling of chemicals
2016	Safetymoments and Environmental Safety Card training in the factory of Karis

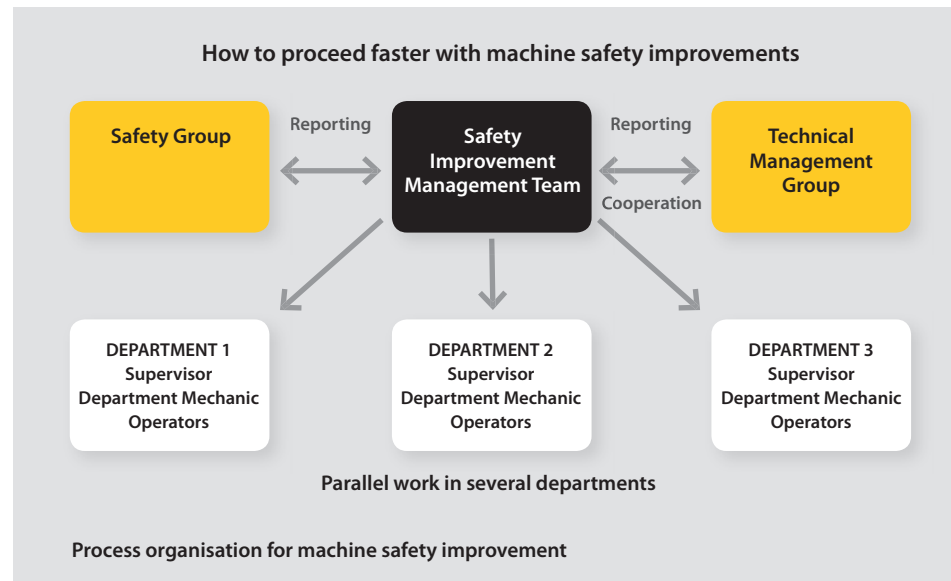
Mirka's Injury Rate history (IR) in Finland 1999 – 2016



During the reporting period (1999–2016) no fatal accidents occurred.

$$IR = \frac{\text{Total number of injuries}}{\text{Total hours worked}} \times 200,000$$

The factor 200,000 is derived from 50 work weeks at 40 hours per week per 100 employees.



has grown annually, together with employee participation in reporting and implementing corrective actions. We have also focused on ensuring that our preventive measures really are sufficient and can actually prevent the reported risks from developing into accidents at a later stage.

We attempt to raise awareness and improve employees' attitudes by keeping occupational health and safety visible in everyday work through active leadership and various training. For example, in 2016, we arranged training, concerning the safe handling of chemicals, for coating equipment operators. Adequate and systematic induction of new employees also plays an important role in promoting occupational safety.

Focused work towards zero accidents produces results. As of mid-2016, no

occupational accidents had occurred in five years at our factory in Karis. At the end of the year the factory in Jakobstad had been without accidents for 18 months. Our factory in Belgium has had just one accident in three years.

Occupational safety vision

In 2016, the managers of our Jeppo and Karis factories completed an 18-month safety management training programme. Within this programme, Mirka's safety vision for 2020 was created together with the process owners. Based on this general vision, we have created a three-year action plan for occupational safety,



which aims to further improve the aspects of a safe working environment. One relevant part of implementing this safety vision is personnel engagement and training.

Ergonomic work practices

Mirka's focus on occupational safety and a safe working environment is also reflected in the various investments in ergonomics in 2016. The handling of yarn rolls at the Karis factory has been a hard and demanding manual work stage. To address this issue, the factory implemented automation technology in the past year. The system is globally unique in the textile industry. The Jakobstad factory also improved ergonomics by streamlining the positioning of the assembly lines and by increasing job rotation. The Oravais factory introduced four robots for automating the bundling and picking of abrasives.



Over the last year automation has been implemented in the handling of yarn rolls at the Karis factory. This automation technology is globally unique in the textile industry.

Different areas of Mirka's general safety vision:

- Risk management
- Safety communication
- Personnel safety
- Information security
- Facility safety
- Environmental safety
- Rescue operations
- Production and operations safety
- Occupational security

During 2015–2016 there were no instances of environmental damage or negligence of environmental regulations, and as such Mirka did not receive any related fines or sanctions.



The proportion of biogas used at the Jeppo factory has grown significantly during 2015–2016.

Automatic measurements of indoor air quality

Good and healthy indoor air is one part of a safe working environment. In 2016, the Jeppo factory implemented automatic measurements of indoor air quality, and the measurement results are visible to production employees in real time. Furthermore, the development of the production processes has included investments in various solutions for keeping the process gases inside the process without affecting indoor air quality.

Environmental safety

Environmental safety has become an important topic in addition to occupational safety. In 2016, we piloted Environmental Safety Card training in the Karis factory, and offered the training to administrative personnel and key production personnel. The participatory training involved group

activities and practical exercises and encouraged group discussion.

Sustainable energy solutions

In 2016, Mirka reached its goal of transitioning from fossil fuels to ecofriendlier alternatives. Most of the energy consumed by the Jeppo factory comes from the Adven bioenergy plant. The bioenergy plant is adjacent to the factory site and uses factory waste from Jeppo and Oravais for producing bioenergy.

Mirka's own landfill is closed and the landscaping process of the landfill will begin in 2017. The landscaping process of the landfill is scheduled to be completed in 2018. We are currently actively looking for ways to utilise the ash from the combustion process. Production waste not fit for combustion, or classified as hazardous is delivered to a Finnish specialist company for disposal according to the statutory requirements.

During the past year, the heavy fuel oil boilers in Jeppo were modified to use biogas and, today, part of the energy is generated with biogas. The biogas plant that is located near the Jeppo factory site receives Mirka's kitchen waste. The biogas from the plant is supplied to Mirka's factory directly via a biogas pipeline, which reduces the transportation needs and environmental impact. In 2015–2016, Mirka's biogas consumption grew by approx. 45%.

In 2016, the Oravais factory also replaced fuel oil with pellets. Transitioning to bioenergy has considerably reduced Mirka's carbon emissions.

In early 2016, the Karis factory phased out the old heating system that used liquefied gas and replaced it with municipal district heat generated by woodchips. Karis also yields energy savings by using LED light fixtures

for some of the production and outdoor lighting. Not only is LED lighting an eco-friendlier option but it also provides better lighting for the workspaces. The aim is to gradually transition to using LED lighting in all of Mirka's production facilities.

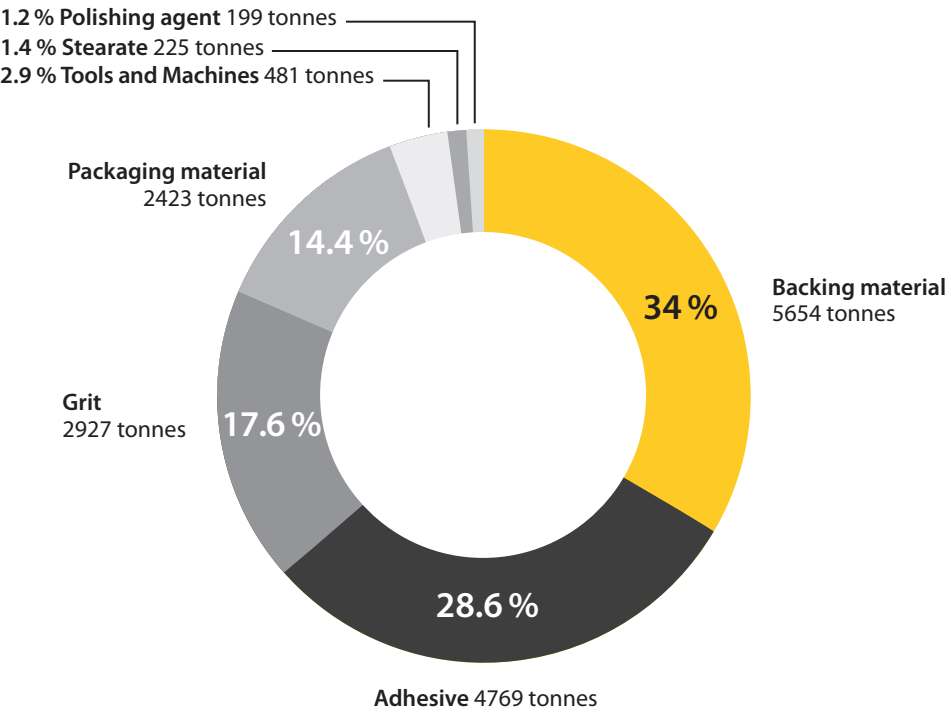
Mirka has created a specific energy strategy for electricity consumption. The strategy aims at finding sustainable energy solutions that increase the use of renewable energy and green electricity. In 2016, the electricity contract of the Jeppo factory was put out to tender. As a result of this, the factory changed from a 20 kV to a 110 kV distribution system in order to ensure energy supply and continuity also in the future as the operations grow.





Materials We Use in Our Products and Packaging

We continuously seek for alternative packaging materials in order to maximise our use of renewable materials. We are also working to always optimise packaging choices where possible. Furthermore, we always reuse packaging if possible. For example, we reuse wooden pallets in our warehouses.



MATERIALS USED		
Total Direct Materials including Packaging	16678	tonnes
Non-Renewable Materials including Packaging	10655	tonnes
Non-Renewable Packaging Materials	142	tonnes
Renewable Materials in Products	3741	tonnes
Renewable Packaging Materials	2282	tonnes





Johan Palmroos,
Quality Manager

“Our management systems enable us to identify any significant factors related to occupational health, safety, quality and environment and to find sustainable solutions that benefit our business as well as our stakeholders.”

Management systems provide transparency

Mirka's all factory sites use certified management systems: ISO 9001 Quality management system, ISO 14001 Environmental management system and OHSAS 18001 Occupational health and safety management system. In 2016, we organised a comprehensive training programme for our personnel

regarding the revisions of standards ISO 9001 and ISO 14001. Due to the revision of the standards, we also carried out a large-scale internal audit in 2016. Each year, Mirka conducts department-level risk and opportunity assessments, which are based on the requirements set in the management systems.

Management approach to health, safety & environment

For several years, Mirka has worked systematically and with determination regarding environmental responsibility, quality and occupational health and safety. Our efforts result in functional processes that enable us to offer sustainable solutions according to high standards of quality and conduct sustainable business.

The OHSAS and ISO certifications help us ensure the systematic management and development of our internal processes, comply with the legislation and anticipate regulatory changes. Our management systems also enable us to identify any significant factors related to occupational health, safety, quality and environment and to find sustainable solutions that benefit our

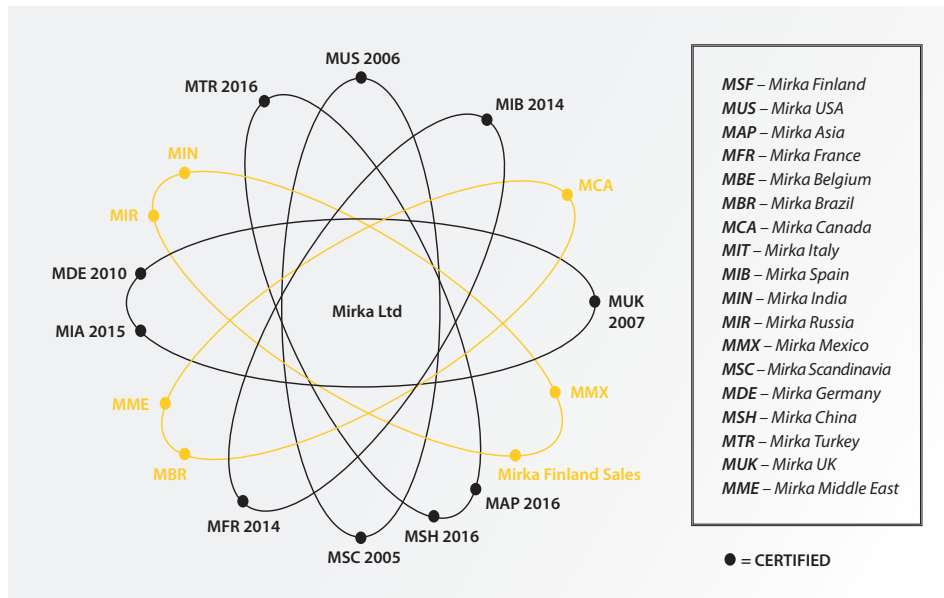
business as well as our stakeholders.

In addition to our own business and personnel, our work concerning occupational health, safety and environmental responsibility affects also in particular our subcontractors, external workers and raw material suppliers. Our aim is also to support our customers with occupational well-being and environmental aspects.



The revised standards further emphasise the role of managers in the management of the operating environment and life cycle thinking.





Certification of Subsidiaries

Most of Mirka's subsidiaries have the ISO 9001 certification. Our goal is to have all the subsidiaries certified in 2018. The work on certifications is advancing as planned, and in 2016 we received certifications for our subsidiaries in China, Singapore and Turkey. Common management systems streamline operations, harmonise practices and support reliable business operations and open partnerships.

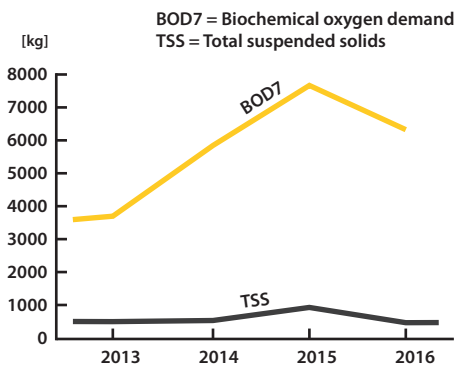
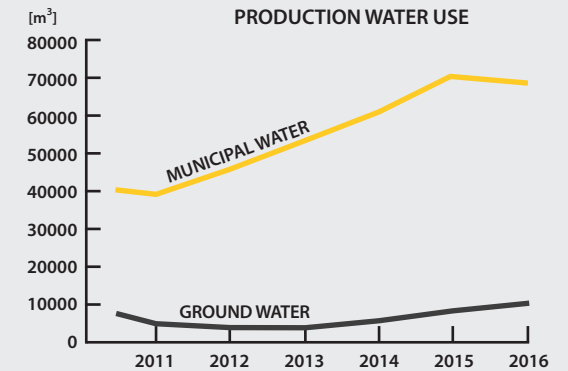
Wastewater treatment

In connection with the Jeppo factory, Mirka has its own wastewater treatment plant. The plant treats all wastewater generated by Mirka's factory sites before the water is rerouted to the sewer network. When we have developed our production processes, we have also sought for new washing practices in order to minimise the quantity of chemical detergents in process water.

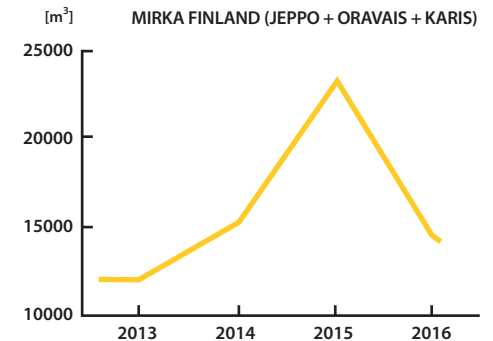


Production Water Use

The increase in municipal water use in 2014-2016 is due to new and modified processes in our factories and to increased production volumes.



The increase is related to the waste water flow, not due to an increased load. Production waste water flow is included.

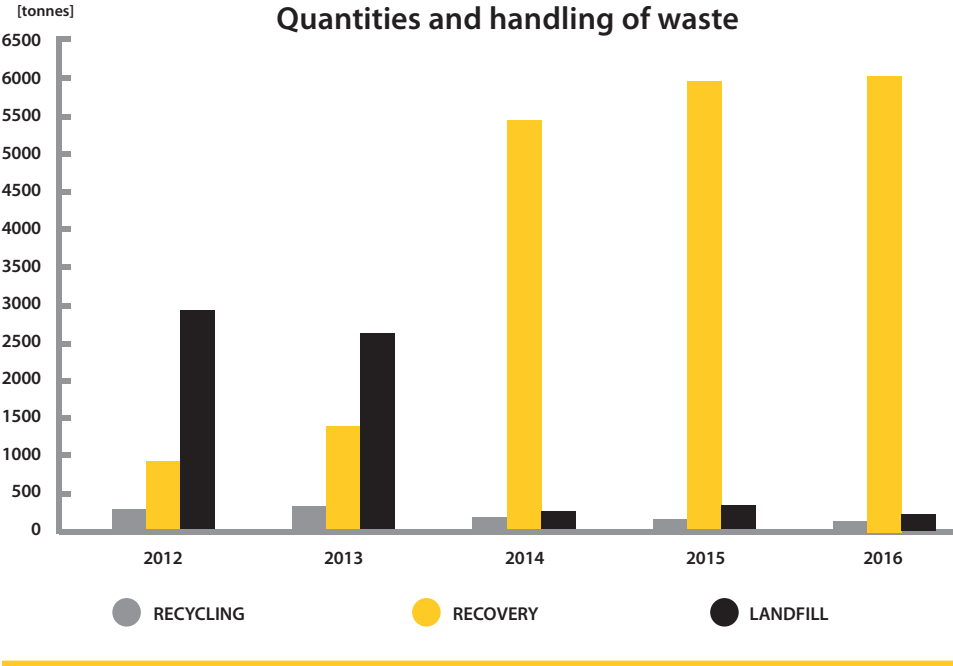


WASTEWATER 2013-2016
Rainwater and domestic sewage are excluded.

New wastewater treatment plant

We are continuously improving our water-usage.

As we have commissioned new production lines, we have started the construction of a new, parallel wastewater plant. This new plant will receive batches of process water that require different pH levels for treatment. The new wastewater plant will replace the currently used evaporation method.

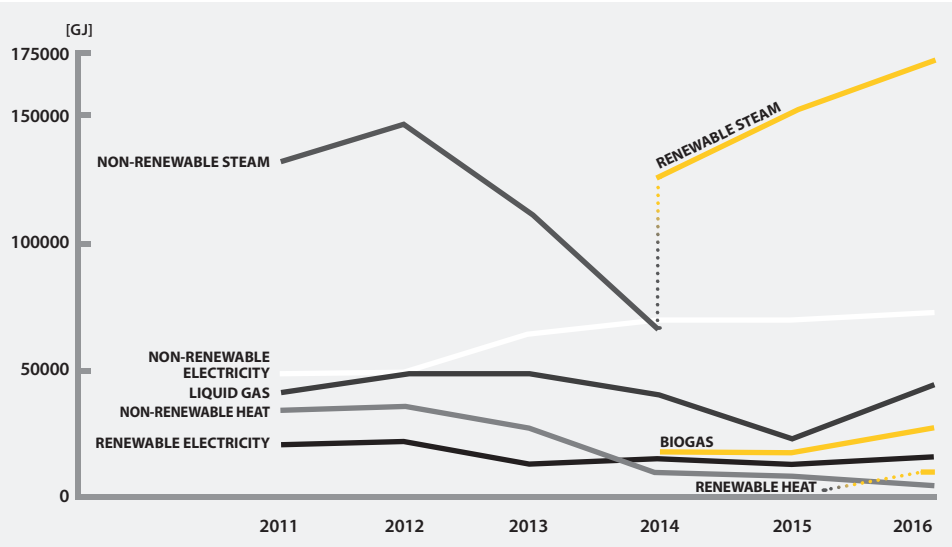


HOW THE METHOD OF DISPOSAL HAS BEEN DETERMINED:

- Disposed directly by reporting organisation or otherwise directly confirmed.
- Information provided by the waste disposal contracts.
- Organisational defaults of the waste disposal contractor.

Indirect and Direct Energy Consumption in Finland 2016

Excluding our manufacturing site in Jakobstad and our converting unit in Belgium.
Energy use is included in the rental costs of the premises.



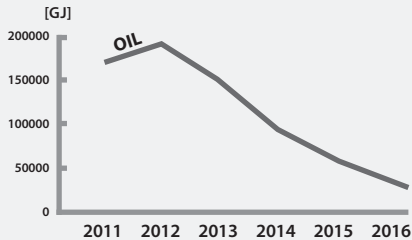
Indirect Energy Consumption		[GJ]	Direct Energy Consumption		[GJ]
Renewable Electricity		13888	Liquid gas		43949
Non-Renewable Electricity		72375	Biogas		24026
Renewable Heat		9666			
Non-Renewable Heat		5159			
Renewable Steam		172949			
Non-Renewable Steam		34116			
TOTAL 2016 >		308153	TOTAL 2016 >		67975

Our gas and oil usage has decreased due to usage of bioenergy and biogas supplied by our energy-partners. Currently 16 % of our electricity comes from renewable sources. Our reporting for 2016 does not include energy use in our warehouses outside Finland.

Energy consumption by energy source

RENEWABLE TOTAL	220530	GJ
NON-RENEWABLE TOTAL	155599	GJ

Mirka has gradually transferred to more environmentally friendly forms of energy: biogas and bioenergy are used at the Jeppo factory, pellets at the Oravais factory and in the Karis factory district heat generated by woodchips.



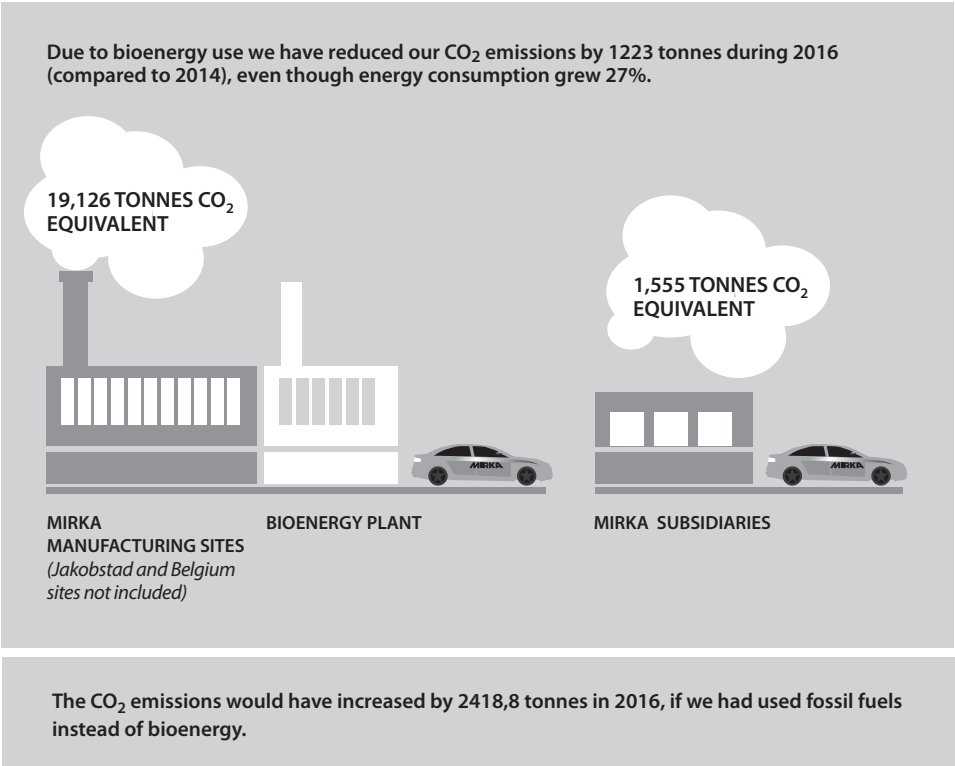
Greenhouse Gas Emissions

We measure our greenhouse gas emissions in accordance with the Greenhouse Gas Protocol (GHG) framework. Our GHG inventory includes Scope 1 and 2 emissions. (www.ghgprotocol.org)

Our CO₂ equivalent is based on most relevant direct and indirect energy consumptions. Energy consumption for

factories, facilities and use of business cars are included for our manufacturing sites, headquarters and branches. Jakobstad factory and Belgium branch office where we operate in rented facilities are not included.

Consumption for facilities and use of business cars are reported for our subsidiaries.



CLEAN PERFORMANCE



Olav Hellman,
Chief Financial Officer

“Good financial performance provides a stable basis for our social and economic responsibility, as well as for realising and further developing our environmental responsibility. Our objective is self-sufficient, sustainable development of operations.”

Mirka Ltd is part of the KWH Group and is an independent, internationally competitive, family-owned group, whose business strategy aims to ensure stable long term profitability. Mirka's objective is self-sufficient, sustainable development of operations. This is made possible by a solid financial foundation based on the positive development of the company result and strong solidity.



Profitable business ensures sustainable development

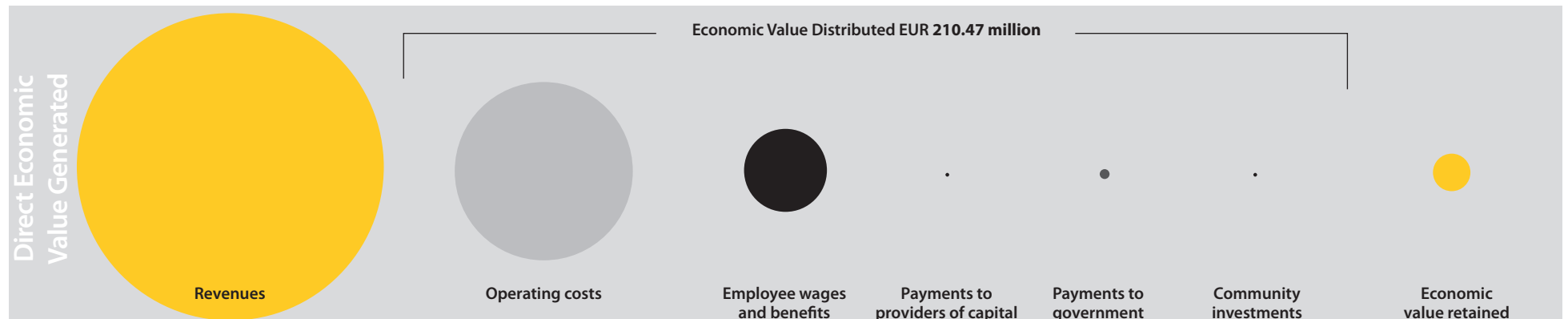
Mirka's financial operations are based on openness, honesty, trustworthiness, legitimacy, fairness and foresight. We have created a clear, transparent structure for financial administration, supported by reliable and comprehensive reporting. We track and analyse the financial

development periodically with the annual budget and key indicators. In the past few years, we have especially focused on further developing the performance indicators and the ERP system. These investments have provided us with access to a larger quantity of more comprehensive information, which in turn supports profitable and sustainable business development.

In the past few years, we have improved our internal audits in order to ensure safe and sustainable business operations also in the future. The systematic development of our internal audits has also improved our employees' awareness of the matter.

Good financial performance provides a solid foundation for the company's social responsibility in the long term.

Mirka honours its social responsibility in all the countries where it operates. The company meets all its obligations to society and the state according to the local legislation. In addition to statutory corporate financial responsibility, we support local communities through community investments. We especially want to support work that promotes recreational activities for children and young people.



CLEAN PERFORMANCE

Mirka's Commitments to the Environment 2014–2016		EXPENDITURES
Type of Environmental Protection (in EUR)	2014	2016
Waste Disposal, Emissions Treatment and Remediation Costs	1,025,508	1,156,466
Prevention and Environmental Management	954,386	870,908
SUBTOTAL	1,979,894	2,027,374
Type of Environmental Protection		INVESTMENTS
Combined Waste Disposal, Emissions Treatment, Prevention and Environmental Management	3,030,257	3,126,333
TOTAL Expenditures and Investments	5,010,151	5,153,707

Corporate governance

We continuously aim to improve our work with stakeholders and maintain a good level of ethics in all of our operations. These efforts are supported by Mirka's corporate governance and the ethical guidelines for all group personnel. Mirka's corporate governance creates a consistent framework for the entire group's global operations, thereby enabling open and reliable local operations. The Board of Directors reviews and updates the corporate governance materials on a regular basis.

In addition, the company's ethical guidelines instruct our employees to work in a way that does not create personal obligations to outsiders. The ethical guidelines are part of the induction process for new employees and trainings are arranged regularly.

A modern technology platform

The growth of our international business operations in the past few years has created a need to modernise Mirka's IT platform and communication technology. In 2016, we invested in various digital tools that now enable us to conduct teleconferences more effectively and communicate digitally regardless of the location. Moreover, we have invested in virtual servers, which have saved energy, reduced environmental impacts and improved the level of data security.



Reporting principles

Mirka publishes its Sustainability Report every two years. This report is for corporate sustainability in 2015–2016 and the information in the report is collected from all units that are under direct control of Mirka Ltd, unless otherwise specified. In addition to the Sustainability Report, Mirka publishes its annual review including the most significant financial indicators as part of the KWH Group Ltd's Annual Report.

Mirka's Sustainability Report 2016 is a GRI Standards 2016 referenced report (for more details see Content index). The reported topics and indicators have been selected based on their business significance, impact and stakeholder expectations and needs. The Sustainability Report for 2013–2014 was published in

June 2015 and prepared in reference to the GRI G3.1 reporting guidelines.

The reported indicators and topics provide our stakeholders extensive and reliable information for assessment and a transparent picture of Mirka's economic, social and environmental responsibility. We want to present our information in a comprehensive, clear and understandable way. Our goal is to provide an objective overview about our operations rather than only focus on positive developments. Where possible, we have reported the information from the current and previous periods for comparison purposes. Our Board of Directors has approved this publication and confirmed that the presented information is accurate and verifiable.



This report has been created in collaboration with Ecobio, www.ecobio.fi

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For more information about GRI, go to:
www.globalreporting.org



Mirka's Sustainability Report 2016 is printed on eco-labeled uncoated paper using plantbased colours.

CONTENT INDEX

Disclosure	GRI Reference	Location	Omissions
GRI 102: General Disclosures 2016			
1. Organizational profile			
Name of the organization	102-1	About Mirka p. 3	
Activities, brands, products, and services	102-2	About Mirka p. 3, Global Mirka p. 4	
Location of headquarters	102-3	Global Mirka p. 4	
Location of operations	102-4	Global Mirka p. 4	
Ownership and legal form	102-5	About Mirka p. 3, Global Mirka p. 4	
Markets served	102-6	Global Mirka p. 4	
Scale of the organization	102-7	About Mirka p. 3, An overview by our CEO p. 5, Our organisation p. 6, Economic Value Distribution p. 23	Net sales, total capitalization broken down in terms of debt and equity
Information on employees and other workers	102-8	Mirka Employees p. 8	Total number of employees by employment contract, by gender and by region
Significant changes to the organization and its supply chain	102-10	Global Mirka p. 4, Optimised Warehouse operations p. 10	
2. Strategy			
Statement from senior decision-maker	102-14	An overview by our CEO p. 5	
3. Ethics and integrity			
Values, principles, standards, and norms of behavior	102-16	Clean Commitments p. 3, The Mirka Way p. 6, Corporate Governance p. 24	
4. Governance			
Governance structure	102-18	Global Mirka p. 4, Our Organisation p. 6	
5. Stakeholder engagement			
List of stakeholder groups	102-40	Significant stakeholders p. 11	
Identifying and selecting stakeholders	102-42	Significant stakeholders p. 11	
6. Reporting practice			
Entities included in the consolidated financial statements	102-45	Global Mirka p. 4	
Defining report content and topic Boundaries	102-46	Reporting Principles p. 25	
Restatements of information	102-48	No re-statements made	
Changes in reporting	102-49	Reporting Principles p. 25	
Reporting period	102-50	Reporting Principles p. 25	
Date of most recent report	102-51	Reporting Principles p. 25	
Reporting cycle	102-52	Reporting Principles p. 25	
Contact point for questions regarding the report	102-53	Reporting Principles p. 25	
Claims of reporting in accordance with the GRI Standards	102-54	Reporting Principles p. 25	
GRI content index	102-55	Content Index p. 26	

CONTENT INDEX

Disclosure	GRI Reference	Location	Omissions
GRI 201: Economic Performance 2016			
Direct economic value generated and distributed	201-1	Economic Value Distribution p. 23	
GRI 204: Procurement Practices 2016			
Proportion of spending on local suppliers	204-1	Our Support of Local Suppliers p. 10	
GRI 205: Anti-corruption			
Communication and training about anti-corruption policies and procedures	205-2	Stakeholder engagement p. 11	Categorisation by region and employee category
Confirmed incidents of corruption and actions taken	205-3	Stakeholder engagement p. 11	
GRI 301: Materials 2016			
Materials used by weight or volume	301-1	Materials We Use in Our Products and Packaging p. 17	Associated process materials not included
GRI 302: Energy 2016			
Energy consumption within the organization	302-1	Energy Consumption p. 21	
GRI 303: Water 2016			
Water withdrawal by source	303-1	Production Water Use p. 19	
GRI 305: Emissions 2016			
Direct (Scope 1) GHG emissions	305-1	Greenhouse Gas Emissions p. 22	
GRI 306: Effluents and Waste 2016			
Water discharge by quality and destination	306-1	Production Wastewater p. 19	
Waste by type and disposal method	306-2	Production Wastewater p. 19	
Workenvironment and environmental protection expenditures and investments by type	Mirka's own indicator	Mirka's Commitments to the environment p. 24	
GRI 307: Environmental Compliance 2016			
Non-compliance with environmental laws and regulations	307-1	Mirka's general safety vision p. 15	
GRI 403: Occupational Health and Safety 2016			
Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	403-2	Mirka's Injury Rate p. 14	ODR, LDR and AR not reported. IR not splitted by gender or region. First aid level injuries are excluded from the InjuryRate (IR).
GRI 404: Training and Education 2016			
Average hours of training per year per employee	404-1	Workforce Training p. 9	
Percentage of employees receiving regular performance and career development reviews	404-3	Performance Reviews p. 9	
GRI 103: Management Approach 2016			
Management approach to economic performance, procurement practices and anti-corruption	103-1, 103-2, 103-3	Clean Performance p. 23-24	
Management approach to materials, energy, water, emissions, effluents, waste and environmental compliance	103-1, 103-2, 103-3	Management approach health, safety & environment p. 18	
Management approach to occupational health and safety, training and education	103-1, 103-2, 103-3	Success Driven by People p. 9-8, Clean Production p. 14-16, Management approach to health, safety & environment p. 18	

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Dedicated to the finish