Non-financial Success Factors – Sustainability at GEA

2016

Excerpt from Annual Report
Non-financial Success Factors – Sustainability at GEA

About sustainability reporting

For the first time, GEA’s sustainability reporting relative to the fiscal year 2016 is aligned with the international guidelines set by the Global Reporting Initiative (GRI). It observes the G4 Guidelines and is compiled in accordance with the “Core” option. Thus, GEA focuses on the key sustainability issues within the group that were identified on the basis of a materiality analysis (see page 111 ff.). The report profile, stakeholder engagement as well as the aspect boundaries are outlined on page 111 ff.

Unless otherwise specified, sustainability reporting embraces the worldwide activities of GEA Group Aktiengesellschaft. The information provided is based on an analysis of GEA’s management systems with the data being supplied by the operational entities as well as the competent departments at the Global Corporate Center. The GRI Content Index can be found at the end of the Annual Report (see page 225 ff.).

Sustainability reporting embraces the following subject areas:

- Responsibility for the economic performance of the company
- Responsibility for correct behavior
- Responsibility for employees
- Responsibility for quality, health and safety
- Responsibility for the environment
- Social responsibility
- Basic principles underlying the sustainability report
Responsibility for the economic performance of the Company

All GEA stakeholders expect the company to show economic strength. The latter guarantees jobs, efficient and innovative products, reasonable shareholder value, as well as sound investments, value creation – also outside of the company – and social engagement. Procurement and supply chain issues are addressed in GEA’s Management Report (see page 19 ff.).

Value creation

Being a listed company, GEA has a particular responsibility towards its investors. Its focus is placed on growth, operational efficiency as well as cash management. Accordingly, the group is mainly managed on the basis of revenue, operating result and the operating cash flow driver margin (for detailed information refer to the following chapters: ‘Basic Information on the Group’, ‘Report on Economic Position’ and ‘Outlook’).

Corporate structure

In the fiscal year 2016, GEA completed the implementation of the new OneGEA group structure (see page 14 ff.). GEA expects that the “Equipment” and “Solutions” Business Areas will harness more operational synergies across technologies and applications while promoting functional efficiency by means of standardized processes. Customer-focused sales and service activities were bundled in country organizations. Today, GEA has a much flatter hierarchical structure, operates closer to the customer while showing a united profile by presenting a single brand to customers all around the globe.

Service

Apart from the performance of a system or plant, the customer’s commercial success in production notably depends on machine uptime. Given the sophistication and high degree of automation of today’s production systems and plants, even minimal downtime usually has a major impact on productivity. Due to GEA’s former organizational structure, service activities were decentralized. Accordingly, customers had several points of contact with different service offerings. Meanwhile, the company’s service approach has been given a full makeover, turning a rather reactive into a proactive type of life cycle management. GEA Service Managers act as local contacts who are responsible for all product groups and services. Based on its new service concept, GEA acts as a value-add partner accompanying its customers through the entire lifecycle of a product: from plant dimensioning, commissioning, spare parts supply with shorter response times, repair after failure up to preventive and predictive maintenance. Moreover, GEA offers integrated performance management. Apart from smaller-scale machine modernization, GEA’s Service may also perform machine upgrades. The latter involve the replacement of entire subassemblies by new generation components and it is also possible to exchange control units. Upgrades do not only improve machine reliability, but also enhance efficiency while eventually bringing about higher levels of profitability.

In the year under review, GEA’s service business accounted for more than 30 percent of group revenue, with the company seeking to maintain this level in the long run.
Responsibility for correct behavior

Compliance as a group-wide basic principle designed to ensure adherence to the law as well as internal corporate policies represents an essential element of corporate governance that impacts each and every area of day-to-day business within the group. All GEA managers and employees are obliged to make sure that no breaches of compliance are committed in their respective areas of responsibility. A detailed description of GEA’s Compliance Management System can be found in the Corporate Governance Report (see page 50 ff.) and online on GEA’s website.

Human rights

In 2007, the Executive Board and the European Works Council of GEA Group Aktiengesellschaft as well as the European and International Metalworkers’ Federation signed the basic principles of social responsibility (“Codes of Conduct”). The latter apply to all group employees worldwide. In these Codes, GEA pledges to respect people’s inalienable human rights, equal opportunities and the principle of non-discrimination, the freedom of association for workers, the prohibition of child and forced labor as well as fair wages and working conditions.

Whistleblower system

A whistleblower system represents an effective tool for guaranteeing and monitoring compliance with the basic principles of social responsibility as well as compliance rules and regulations. Since 2014, GEA has offered its employees and third parties the possibility of using the Integrity System, a secure whistleblower portal, for reporting such violations.

The Integrity System does not constitute a general platform for voicing complaints. It merely embraces a few selected reporting categories that imply particular risks to the company, its employees or any other stakeholders. These categories include corruption, fraud and breach of trust, money-laundering, violations of anti-trust and competition law, export control regulations, data protection as well as accounting regulations. Breaches of the Codes of Conduct, i.e., the basic principles of social responsibility, come under a distinct reporting category. GEA’s Integrity System is available 24/7 in nine different languages and may be accessed from any PC connected to the Internet. The information technology used by the external provider ensures the protection of the whistleblower. Subject to their respective remits, only a very limited number of GEA employees from Compliance, Internal Audit and Human Resources have access to the reports submitted. For protecting both whistleblowers and accused individuals, all incoming reports are treated confidentially. Should the whistleblower prefer to submit his/her report anonymously, he or she may do so provided that this is permitted in their respective country.

Preventive processes

Processes designed to prevent compliance violations figure prominently in GEA’s compliance scheme. For this reason, individuals in close contact with the customer, such as sales agents, have to undergo strict risk vetting for the purpose of corruption prevention prior to entering into a contract with GEA. In countries with a higher level of risk exposure, a compliance officer must approve the conclusion of such a contract if commission rates exceed a certain limit or if other predefined risk criteria apply. Sponsoring and donations are subject to specific internal authorization schemes. For instance, all donations and sponsoring activities exceeding mid-four-digit Euro amounts have to be approved by a competent member of the group’s Executive Board; all amounts greater than EUR 10,000 require the approval of the joint Executive Board.
Training and consulting

Once again, the year under review saw the continuation of compliance training courses:

- Basic compliance training comprises extensive face-to-face courses; in 2016, such training was delivered to managers as well as purchasing and sales staff from Belgium, Chile, China, Germany, Dubai, Great Britain, Italy, Poland, South Africa and the USA. In addition, this training was also provided to GEA’s newly acquired companies.

- Face-to-face training for selected Local Export Managers and employees regularly doing business in countries that were subject to partial embargoes addressed the following topics: sanctions, embargoes and US Re-export Controls.

- Apart from that, an e-learning seminar on export control legislation for export managers in the EU and the USA was offered.

- Employees from the country organizations received specific online anti-trust training.

- Relevant target groups – IT staff, project managers – received training in the field of data protection.

Apart from the competent Compliance Officer, larger sites also have so-called Local Compliance Managers to ensure correct behavior in operational day-to-day business and offer a competent point of contact at all times; at regular intervals, they receive specific fraud prevention, anti-corruption, money-laundering, anti-trust and data protection training. They serve as first points of contact in relation to local compliance issues and are to offer some initial advice.

Audits

Within the framework of its standard, selective and special audits, Group Internal Audit also checks compliance aspects. 24 audits conducted in 2016 scrutinized GEA sites in relation to corruption risks. These reviews performed by Group Internal Audit are regularly supplemented by the group auditor’s focus on additional compliance-related key audit areas that have been defined.

Violations

Should employees violate compliance rules, such non-compliance is punished depending on the degree to which the individual can be blamed as well as the severity of the case. The sanctions imposed range from a reprimand to a warning letter and may ultimately lead to termination of employment. In very severe cases, GEA reserves the right to sue the person in question for damages and/or report the violation to the competent authority.

If there is a risk of investigative proceedings of fundamental importance being instituted by a prosecuting or regulatory agency against a group company or a GEA employee in connection with his or her service for company, this must be immediately reported to the Global Corporate Center.

GEA uses a risk matrix to ascertain whether fines may be significant (see page 77). A risk and, thus, a fine is deemed significant if it exceeds an amount of EUR 10 million. In the fiscal year 2016, no significant fines were imposed on GEA.
Supply chain compliance

GEA customers do not only consider quality, efficiency and safety as well as correct behavior in business to be important in connection with GEA’s products and services, but also with regard to the entire supply chain. Only by observing fundamental compliance standards and adhering to the basic principles of occupational health and safety while respecting the environment along the entire supply and value chain will we ensure the necessary trust that forms the bedrock of each and every business relationship, which is why this area is given highest priority. GEA practices a zero-tolerance policy with regard to unethical behavior in business transactions, in particular in connection with bribery, corruption or forced labor. GEA expects all its suppliers to abide by comparable standards and to demonstrate ethically correct behavior in the conduct of their business. As a technology group with a high level of materials expertise, GEA sources its raw materials, goods and services worldwide by relying solely on qualified suppliers to ensure sustained success for our customers by providing innovative product and service solutions.

The new group structure allowed GEA to establish a new OneGEA procurement organization. In this context, the company is currently putting in place a new procurement portal on GEA’s website at gea.com. The registration process requires that suppliers commit themselves to complying with the code of conduct established by the German Association of Materials Management, Purchasing and Logistics. The code also refers to the ten principles of the United Nations Global Compact on human rights, labor standards, the environment and anti-corruption.

GEA audits all suppliers at regular intervals. The audits embrace ecological aspects, working practices, respect for human rights as well as social impact. Key suppliers are inspected on a yearly basis. In the year under review, the company conducted a total of 300 supplier audits.

Responsibility for employees

The Executive Board of GEA Group Aktiengesellschaft thanks all group employees for their commitment and productive cooperation in the fiscal year 2016. These thanks expressly include the employee representative bodies at home and abroad; the company is grateful for their responsible and constructive contributions.

Detailed information about headcount figures is provided in the Management Report (see page 41).

Employee engagement survey

In the fourth quarter of the year under review, the company conducted “GEA Voices 2016”, its employee engagement survey. The previous survey had taken place in 2013. The response rate (proportion of all employees worldwide that participated in the survey) totaled 80 percent. In 2017, the results will undergo an in-depth analysis that will be followed by the definition of appropriate measures.

Co-determination

Labor relations at GEA are characterized by mutual respect and parity co-determination at corporate level. Half of the members of the Supervisory Board are shareholder representatives while the other half is composed of employee representatives. As the employee representatives serving on the Supervisory Board are elected by the entire German workforce, the interests of all German employees – blue
collar workers, white collar workers, and executives alike – are represented by means of this kind of corporate co-determination. Apart from numerous local works councils, GEA also has a Group Works Council established in accordance with the Works Constitution Act that governs co-determination rights and notification deadlines. In addition, GEA’s European Works Council has the right to be informed and consulted by the management. Its competence is limited to decisions and developments with a transnational impact on the company’s employees and comprises the EU member states, the countries of the European Economic Area as well as Switzerland. The basic principles of social responsibility (“Codes of Conduct”) apply worldwide. The latter include GEA’s pledge to respect human rights as well as the generally accepted core labor standards of the International Labor Organization (ILO). Furthermore, GEA fully abides by the OECD Guidelines for Multinational Enterprises. The corresponding whistleblower system for reporting violations is in place and available worldwide.

Diversity and equal opportunities

GEA operates in a challenging international market environment with a large number of players who influence the company in many different ways – ranging from customers, competitors and employees down to the government and society in general. GEA seeks to meet the numerous challenges associated with this extremely diverse cultural environment by adhering to the principle of diversity. GEA considers diversity to be a strategic success factor. In this context, diversity is defined as the composition of the workforce in terms of internationality, gender, age and qualification. GEA employs people from more than 70 different nations. In order to promote diversity on as many levels as possible and create an attractive working environment by doing so, GEA also takes into account aspects of modern work flexibilization while promoting mobility within the group.

To institutionalize and manage diversity within the company, the latter introduced a diversity management policy in tandem with a corresponding guideline for executives: This policy describes the overriding goals and the steady state of diversity management at GEA. The guideline provides managers with an instrument for implementing diversity management at all group levels while defining diversity on the basis of four personal criteria – origin, gender, age and qualification – as well as two organizational criteria, namely mobility and flexible working. The latter include both working time options and people’s place of work. GEA has implemented a mixture of measures that are designed to promote diversity. For instance, staffing processes place emphasis on including diversity criteria as standard practice. Despite the sector-specific challenges, GEA seeks to attract more women to join GEA while aiming at including more female talent in the company’s internal development programs. Moreover, diversity management sets the stage for a reliable identification of high potentials and talents.

<table>
<thead>
<tr>
<th>Members of executive bodies and employees by gender</th>
<th>12/31/2016</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>share of men</td>
<td>share of women</td>
</tr>
<tr>
<td>Supervisory Board</td>
<td>58.3</td>
<td>41.7</td>
</tr>
<tr>
<td>Executive Board</td>
<td>100.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Managers(^1)</td>
<td>91.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Total workforce(^2)</td>
<td>83.4</td>
<td>16.6</td>
</tr>
</tbody>
</table>

\(^1\) At GEA, the first three management levels below Executive Board level are defined as managers.

\(^2\) Database: 15,343 employees. Due to the change in software infrastructure resulting from One GEA, not all personnel records are available yet (2016 – 91 percent).

In 2017, a new personnel management system will remedy this situation.
For a number of years, the principles of diversity and equal opportunities have been integrated with a particular emphasis on human resources processes. In the fiscal year 2016, one topic had been the advancement of women, in particular in relation to human resources development. In general, when commissioning the services of external recruitment agencies, GEA makes sure that a minimum proportion of female candidates is included.

Besides, in 2016, the company decided to place more focus on promoting women in leadership positions in the future. For this reason, a specific program for female high potentials and executives scheduled to start in 2017 and involving 25 to 30 international female participants was developed. The program is aimed at allowing candidates to evaluate themselves, further develop their personalities and specifically plan the next steps in their careers.

**Leadership development**

Since mid-2016, GEA managers have been included and assessed within the framework of a unified global, cross-functional and connected OneGEA talent identification process designed to help meet the company’s current and future demand for managers. Together with Human Resources, the managers conduct so-called “talent days” during which they assess the potential and performance of individual candidates and draw up succession plans. This global process aims at identifying the capabilities and skills of GEA’s top performers for the purpose of efficiently further developing them to meet the current and future demands of the organization. Based on a set of shared beliefs, GEA seeks to shape a corporate culture that will be instrumental in safeguarding the future success of the group.

At regular intervals, managers worldwide are subjected to performance reviews. The respective results constitute a basis for planning the individual development of the managers.

GEA promotes young talents and executives by offering various programs. Talent development schemes like the “First Professional Program” and “Professionals on Stage” serve the purpose of identifying and developing employees with management potential. Furthermore, GEA is a member of the Global Business Consortium of the London Business School together with five other renowned international enterprises. The program is open to top managers and aims at enhancing their strategic skills. The global curriculum embraces modules for experienced managers like “Leading Others” and “Engaging Employees” that focus on the further development of leadership skills.

**Work-life balance**

GEA explicitly endorses a better reconciliation of work and family life and supports its employees in many different ways. Some sites offer experienced advice for expectant mothers and fathers as well as sponsorship programs for employees on parental leave, corporate child care or flexible working regimes. Apart from that, GEA cooperates with an international external service provider for supporting employees in their search for facilities that provide childcare and look after dependents in need of care. Moreover, this offering includes free social counseling.
Vocational training in Germany

<table>
<thead>
<tr>
<th></th>
<th>GEA 12/31/2016</th>
<th>GEA 12/31/2015</th>
<th>Mechanical Engineering 12/31/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprentices</td>
<td>381</td>
<td>427</td>
<td>66,476</td>
</tr>
<tr>
<td>Apprentice-employee ratio (in %)</td>
<td>6.5</td>
<td>6.9</td>
<td>6.5</td>
</tr>
</tbody>
</table>

*) Apprentice-employee ratio in Germany as of 12/31/2015. Source: VDMA 2017 www.vdma.org

In the year under review, GEA trained 381 young people at 17 sites in Germany in 21 different commercial and industrial/technical occupations. In this context, the company’s site in Oelde serves as the center of technical training that coordinates the respective training schedule for the whole of Germany. Moreover, a total of 15 combined vocational training and degree programs were realized in cooperation with polytechnics and universities. These combined training programs cover a period of six semesters and lead to bachelor degrees in various different fields.

An exchange of trainees between various sites would be desirable as such, but is not always practicable because frequently, trainees are still underage and, thus, subject to statutory restrictions. Nonetheless, GEA seeks to make training more international.

Learning and continuous education

Since late 2015, employees worldwide may avail themselves of GEA’s Learning Center Portal, a central learning and training platform. The latter currently offers management, sales and project management training, GEA product and application training courses as well as e-learning programs on technical and managerial topics. E-learning programs are available to all GEA employees and may be delivered anywhere irrespective of a person’s location. They aim at supporting employees in their further individual and occupational development. In the year under review, an overall number of 4,762 employees, i.e. 28 percent of GEA’s entire workforce, made use of these learning and training opportunities. Duration of e-learning is not recorded.

GEA Aid Commission

Employees, who suddenly get into difficulties, for instance after a severe accident or a sudden illness, require swift and unbureaucratic financial assistance. In a group-wide agreement concluded with the Works Council, GEA has pledged to unbureaucratically provide financial assistance under such circumstances. Employees affected in this way, but also the families of employees who suddenly passed away, may turn to the GEA Aid Commission for help.

Travel safety

GEA’s Safety Management provides a comprehensive and reliable service to employees who set off on worldwide business trips on behalf of GEA, even prior to their respective departure. This includes detailed travel and safety information for every region around the globe. Should an employee nonetheless get caught up in an emergency while he or she is away on business, they can contact the 24/7 GEA Security and Support Hotline. In the event of health-related issues, our Medical Support Service Hotline provides assistance and ensures appropriate medical care or even repatriation, if need be. Via a security app, GEA employees can also obtain medical and safety-related information on a group location at any time or directly contact the 24-hour hotline at the GEA Security Center. If employees make use of the so-called “travel tracker” while en route, GEA is informed about the planned itinerary and may respond quickly in the event of a crisis.
Responsibility for quality, safety and health

Certification

Management systems and their respective certification constitute an important bedrock for a production environment that is sustainable in each and every respect. 65 GEA sites embrace manufacturing facilities; 37 form part of the Equipment Business Area while 28 belong the Solutions Business Area. In addition, there are further sites in the country organizations as well as 40 sales offices. The group’s 2016 status quo with respect to certifications is as follows:

<table>
<thead>
<tr>
<th>Management system</th>
<th>Number of certified companies</th>
<th>Number of integrated sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN ISO 9001:2015</td>
<td>89</td>
<td>62</td>
</tr>
<tr>
<td>DIN ISO 14001:2015</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>BS OHSAS 18001:2007</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>DIN ISO 50001:2011</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

* Comprises manufacturing sites and sales offices.

ISO 9001 defines the minimum requirements to be met by the quality management system of an organization allowing the latter to provide products and services that fulfill customer expectations and comply with regulatory requirements. At the same time, the management system is to be subject to a continuous improvement process.

The international environmental standard ISO 14001 stipulates the requirements to be met by an environmental management system and forms part of the family of standards applicable to environmental management.

BS OHSAS 18001 (Occupational Health and Safety Assessment Series) is an internationally accepted basis for management systems in the field of occupational safety and health.

DIN EN ISO 50001 governs the establishment of a corporate energy management system for the purpose of increasing energy efficiency in the long run.

GEA’s major manufacturing sites hold all four certifications.

In the year under review, GEA already started clustering its sites with integrated management systems under the roof of a unified GEA matrix certification. Since June 2016, GEA Group Aktiengesellschaft, which is headquartered in Düsseldorf, has been assessed and certified as meeting the requirements of ISO 9001:2015, ISO 14001:2015, BS OHSAS 18001:2007 as well as ISO 50001:2011 and, thus, heads the group of certified sites. Now, the company seeks to gradually integrate all certified sites while obtaining certifications for further locations. In the future, GEA Group Aktiengesellschaft and 30 percent of the members of the above group will be audited every year. That way, GEA is going to save almost 40 percent of annual certification costs incurred by the group.

Customer satisfaction survey 2016

In the year under review, the high level of quality of the products and services provided by GEA was confirmed by its most important stakeholder group: Customers are highly satisfied with machine quality and performance as well as the technological innovations developed by the company. This represents one of the key preliminary results of the second global customer satisfaction survey that had been initiated by GEA and was conducted in the fourth quarter of 2016. A total of around 3,500 GEA customers from 41 countries participated in the survey.

For the first time, the poll also included non GEA customers in selected countries and customer industries. The relevant survey findings will be incorporated into improvement processes. This global survey is to be repeated on a regular basis in the future. In addition, GEA frequently organizes customer satisfaction surveys at a local level.
Management approach to quality, health, safety and the environment

In its “Quality, Health, Safety and Environment (QHSE) Policy”, the Executive Board of GEA Group Aktiengesellschaft has committed to a clear policy regarding quality, health, safety and the environment: GEA conducts all business in accordance with the values and ethical principles enshrined in the Global Business Conduct Policy as well as the Codes of Conduct that define the basic principles of social responsibility. In essence, the “QHSE Policy” embraces the following points:

- Identification, analysis and efficient management of all quality, health, safety and environmental (QHSE) risks that occur within the framework of business activities
- Creation of an accident- and incident-free workspace for preventing occupational diseases
- Environmental protection and reduction of energy consumption, waste and emissions
- Provision and maintenance of adequate technologies, tools and processes supporting the achievement of the set goals
- Integration of QHSE into the company’s business strategy and day-to-day processes

Each organizational unit is responsible for defining overall and specific targets with regard to quality, health, safety and the environment, and for developing and implementing sustainable programs for accomplishing these goals.

GEA communicates these corporate standards to all individuals acting for or on behalf of the company while actively integrating them in the implementation of this policy. The latter is promulgated at all sites and made publicly available on the corporate website (at gea.com, investors/corporate-governance/csr). QHSE is firmly established at all organizational levels of the company.

Handling serious adverse events, learning process

Serious incidents such as severe accidents, fire or environmental incidents are reported to the competent employees within the organization by means of the “Serious Events Reporting System”. This allows GEA to respond as quickly as possible to such events while minimizing their impact and promptly initiating a probe into the respective incident. Following this, a "lessons learned process" is started; its findings are also used proactively to prevent risks, identify improvement measures and communicate them to the organization.

To control substantial corporate risks to the best of its ability, GEA has established a comprehensive safety management system that sets out clear criteria for detecting, assessing and reporting critical developments well in advance.
Occupational health and safety

The formal concepts of occupational health and safety embrace vital interests of all people in employment. Staff do neither want to sustain an accident, nor do they want to develop a disease caused by unhealthy conditions or working practices – for instance, heavy lifting from an unfavorable position or non-ergonomic workstations. A safe and healthy workplace is attractive to the company: It guarantees satisfied staff and enhances the opportunity of attracting young talent. Moreover, the company seeks to avoid downtime and operational disruptions in its own economic interest. This is also entirely valid for the rest of the value chain: Safety and health are given highest priority in connection with the installation and operation of GEA systems and plants at the customer’s site. In this context, customers usually require compliance with a set of strict criteria that are met by GEA employees on the basis of good occupational and further training as well as regular technical training delivered in-house. GEA also offers a wide range of product-related training courses for customer employees.

Global data relating to occupational safety and the environment, such as monthly accident statistics, is recorded by means of a software. On the one hand, the data for the year under review – always based on one million working hours – confirms the positive trend towards a decline in accident frequency. On the other hand, however, the severity of accidents has increased, which is reflected in the higher number of working days lost. 2016 did not see any fatal injuries in the workplace.

### Key figures Safety at GEA 2016

**Lost Day Frequency Rate**

<table>
<thead>
<tr>
<th></th>
<th>2015 (year average)</th>
<th>2016 (year average)</th>
<th>Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEA2</td>
<td>7.27</td>
<td>6.69</td>
<td>-8.01%</td>
</tr>
<tr>
<td>BA Equipment</td>
<td>9.57</td>
<td>8.44</td>
<td>-11.7%</td>
</tr>
<tr>
<td>BA Solutions</td>
<td>5.24</td>
<td>5.18</td>
<td>-1.17%</td>
</tr>
</tbody>
</table>

1) number of lost day accidents based on 1 million working hours
2) including Global Corporate Center

In the future, GEA wants to take the quality of its processes in the fields of health, occupational safety and the environment to the next level and move from reactive reporting to a proactive approach. For this purpose, GEA develops action plans designed to analyze the root causes of accidents and incidents in order to identify potential hazards for the purpose of risk prevention. The information gleaned from these analyses is communicated to the organization in terms of preventive measures whose implementation is being tracked. This approach is in line with a comprehensive risk assessment conducted by GEA experts in the pre-project phase: Which potential hazards are associated with the sites? Which risks may be derived from that and how can they be avoided? While occupational safety is based on centralized, group-wide processes, measures relating to health at the workplace are identified and managed at a local level, respectively.
GEA Annual Report 2016

Non-financial Success Factors – Sustainability at GEA

Key figures Safety at GEA 2016

Lost Day Severity Rate

<table>
<thead>
<tr>
<th></th>
<th>GEA²</th>
<th>BA Equipment</th>
<th>BA Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.07</td>
<td></td>
<td>165.10</td>
<td>97.14</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td>165.10</td>
<td>195.30</td>
</tr>
</tbody>
</table>

Δ +24.8%   | Δ +18.3%  | Δ +34.9%

1) Accident severity: number of lost days due to accidents based on 1 million working hours, GEA counts lost time up to 365 days.
2) Including Global Corporate Center

GEA will continue its efforts to further enhance occupational safety and health while going the extra mile to reinforce and support safe conduct.

Products subject to specific regulatory requirements

GEA’s portfolio embraces two relevant product groups and/or substances required for operating products that are subject to specific regulations: chemical products in the farm technology segment and coolants for refrigeration systems. Undiluted chemicals for farm technology applications such as dipping agents for milking hygiene are processed at five GEA facilities worldwide – in Austria, New Zealand, Great Britain and at two US sites. In terms of coolants for GEA refrigeration systems, ammonia has become widely accepted as a natural and carbon-neutral cooling agent.

All GEA products meet the respective statutory requirements applicable to the markets, come with the necessary certifications and/or comply with the technical specifications and any further demands made by the customers.

Legal Compliance Audits

All local statutory rules and regulations applicable to health, safety and the environment are regularly scrutinized by means of audits that are conducted by external service providers. The reports are uniform and compiled on the basis of a set of 25 criteria. This approach reveals potential for improvement and allows for corrective action to be taken. The respective local organization is obliged to define sustainable action plans, the implementation of which is evaluated by the respective Business Area and/or country organization. The improvement process is completed as soon as the competent corporate governance function gives its approval. In 2016, such legal compliance audits were conducted in 21 GEA companies located in seven different countries on three continents.
Responsibility for the environment

Even though energy consumption and emission levels in production are relatively low in the mechanical engineering sector, GEA regularly checks all areas for potential improvements in efficiency. The specific targets and programs are defined by each individual site, respectively.

Carbon Disclosure Project – emissions and energy consumption

As in previous years, GEA took part in the 2016 survey conducted within the framework of the Carbon Disclosure Project (CDP). CDP is an independent, not-for-profit organization that currently represents more than 800 institutional investors. Each year, it gathers information on the greenhouse gas emissions of major listed corporations and their strategies to combat climate change. The results are then made available to current and potential investors. In this survey, GEA also provided information on the risks and opportunities related to climate change, as well as its action taken in the field of climate protection. From GEA’s perspective, any risks arising from potential shifts in demand will at the very least be offset by equally large opportunities to supply customers with energy-efficient solutions for their production processes from the company’s wide range of products. The collected information embraces data for the preceding year, i.e., 2015 figures in the year under review. The higher levels of emissions result from the 2015 increase in revenue as well as the inclusion of acquired companies.

Direct greenhouse gas emissions (scope 1) specifically include CO₂ emissions from fuel combustion, while indirect greenhouse gas emissions (scope 2) result from the generation of electricity, heat, cooling energy and steam by other companies for meeting GEA’s demand. Further indirect emissions (scope 3) derive from activities undertaken by the organization, but originate from sources it cannot control. At GEA, this primarily includes emissions from business travel that are shown below.

### Direct greenhouse gas emissions (scope 1), in tons of CO₂ equivalent

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2014*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Area Equipment</td>
<td>25,001</td>
<td>–</td>
</tr>
<tr>
<td>Business Area Solutions</td>
<td>14,703</td>
<td>–</td>
</tr>
<tr>
<td>Global Corporate Center &amp; Shared Service Center</td>
<td>614</td>
<td>–</td>
</tr>
<tr>
<td><strong>GEA’s total</strong></td>
<td>40,318</td>
<td>33,827</td>
</tr>
</tbody>
</table>

* for the year 2014, only GEA’s total is available

### Indirect energy-related greenhouse gas emissions (scope 2), in tons of CO₂ equivalent

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
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</thead>
<tbody>
<tr>
<td>Business Area Equipment</td>
<td>30,278</td>
<td>–</td>
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<tr>
<td>Business Area Solutions</td>
<td>11,794</td>
<td>–</td>
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<tr>
<td>Global Corporate Center &amp; Shared Service Center</td>
<td>285</td>
<td>–</td>
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<tr>
<td><strong>GEA’s total</strong></td>
<td>42,357</td>
<td>39,810</td>
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</tbody>
</table>

* for the year 2014, only GEA’s total is available

### Additional greenhouse gas emissions (scope 3), in tons of CO₂ equivalent

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2014*</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEA’s total</td>
<td>62,606</td>
<td>73,340</td>
</tr>
</tbody>
</table>

* for the year 2014, only GEA’s total is available
Best Practice: GEA’s site in Oelde, Germany

Relying on an energy management system that meets the requirements of DIN EN ISO 50001, GEA also puts emphasis on enhancing energy efficiency at its own production sites in order to conserve natural resources and optimize operating costs. The components of a systematic energy management system include the comprehensive analysis and evaluation of in-house energy fluxes based on which measures for improving the energy balance of an entity are formulated. For example, the energy strategy pursued by GEA’s largest global site in Oelde seeks to continuously improve energy efficiency levels by 1.5 percent per year while cutting CO₂ emissions in relation to production output by a minimum of 1.5 percent by the year 2020.

Within the framework of its energy strategy, GEA implemented two projects at its Oelde site in the year under review, with the projects being designed to make production even more sustainable. The company invested a six-figure sum to connect the heat supply system of two buildings to the company’s own cogeneration plant and renew the cooling systems operated in the IT center; in the future, the energy required for cooling these premises will also be provided by the new energy center.

At the heart of the local energy management system is the energy center of the cogeneration plant that was opened in 2013. GEA’s energy center combines the cogeneration plant with an absorption refrigerator to allow the use of trigeneration; as opposed to conventional power generation, this brings about a circa 60 percent reduction in primary energy consumption. Since last year, when two further buildings were connected to the plant for ensuring their required heat supply, the plant’s degree of capacity utilization has gone up even further. Due to this measure, the primary energy consumption of these buildings went down by 30 percent; this reduces the site’s carbon footprint by 180 tons per year. Apart from that, GEA realized further energy savings by replacing the conventional split air conditioning systems in the computer center; as a result, the center’s energy consumption went down by half, while CO₂ emissions were reduced by 305 tons per year. The required cooling energy can be provided via the hybrid heat exchangers of the cogeneration plant by means of free cooling, i.e. without requiring any additional energy; moreover, maintenance is less complex while plant operation is more reliable.

Ecological impact of products and services

"Engineering for a better world": GEA’s claim embraces the core value proposition of the group. Apart from responsibly shaping its own value creation processes, the company makes a contribution in terms of sustainable management and the protection of natural resources by offering its customers efficient products and process solutions. As a rule, the technologies and processes they employ are highly energy-intensive, which is why energy savings and reductions in emissions or waste have become increasingly important in connection with the investment decisions taken by these customers. This is why GEA has to come up with more and more sophisticated technology solutions. Today, it is imperative that new technologies or systems are significantly more efficient and usually smaller while offering the same level of performance as their predecessors. Lower consumption of resources, less floor space, harnessed energy recovery potential, ease of operation – these are the criteria currently applied by customers when making their purchasing decisions. For standing out amongst its peers and offering more customer benefits, a capital goods manufacturer has to gain technological leadership. At the end of the day, it is innovation that will give a manufacturer the technological edge.
GEA’s innovation process

GEA offers a wide range of components, systems as well as process equipment and never tires of improving them in terms of resource efficiency, flexibility, quality and costs. GEA has defined around 200 core technologies that offer tremendous potential for optimization, also when combined with other technologies. In order to gauge the success of the resources allocated to innovation across the entire company, GEA refers to specific key performance indicators along its “innovation pipeline”:

- number of ideas, projects or products in the various stages of innovation as well as the respective budgets allocated to research and development
- development costs
- anticipated sales volume or savings potential
- capex for enhancing existing products and processes
- optionally, the proportion of sales generated on the basis of products that are less than three years old, if this is relevant to the management of the innovation process

In connection with the realignment of its group structure, GEA is currently making considerable adjustments to this “innovation pipeline” as well as the above set of key parameters. For this reason, it would not make sense to provide a report including the relevant figures for the year 2016. In the year under review, GEA already made major efforts to define and roll out a unified, company-wide innovation process. In particular, the initial stages (“Front-End”) of the new innovation management scheme, i.e., systematic idea generation and feasibility test, are to be expanded. For instance, this includes advanced problem solving and idea generator tools, the systematic analysis of market- and technology-driven trends as well as the pre-selection and tests of a new IT-based idea platform. GEA intends to roll out this idea platform across the entire company by the end of 2017.

In the future, GEA’s innovation management process will once again include the respective underlying key performance indicators by referring to the following structure:

Innovation Management at GEA

For a more detailed report on GEA’s research and development activities see the section on “Research and Development” (see page 20 ff.)
Best Practice: Innovation project in Austria

An Austrian innovation project showcases how the ecological footprint of the customer can be improved by relying on GEA technology. In spring 2016, GEA installed and commissioned a distillation plant designed for the recovery of isopropyl alcohol utilized during xanthan gum production on behalf of a biotechnology company. GEA applied a globally unique, patented process that is second to none in terms of energy efficiency and sustainability: GEA made use of vapor compressors reducing the overall energy consumption to less than 10 percent in comparison with conventional, single-stage stream-heated systems. In this particular case, CO₂ emissions went down 50,000 tons per year. Compared with the most advanced plant that existed before, this new and highly-automated distillation technology allows the company to save another 40 percent of energy while enhancing economic efficiency and conserving resources.

GEA supported this project, which involved an interdisciplinary team of engineers from Chemicals, Separation Processes and Automation, by making available resources from the GEA innovation fund. Using a dedicated software, the engineers accurately simulated the thermodynamic behavior of the plant for the purpose of optimizing the process control system prior to plant commissioning. This is why, from day one of production, the plant has generated the required amount of distillate in line with the specifications set by the customer.

Social responsibility

As a global player, GEA participates in a multitude of regional and local projects and initiatives; in addition, it is a member of various industry associations, such as the Verband Deutscher Maschinen- und Anlagenbau (VDMA – German Engineering Association) as well as Eurovent, Europe’s Industry Association for Indoor Climate, Process Cooling, and Food Cold Chain Technologies. As a rule, the company’s sites independently steer their activities in this particular area.

Social and civic engagement (“corporate citizenship”) is an integral part of GEA’s identity and firmly embedded in GEA’s value system while reflecting GEA’s way of transacting business. GEA engages in projects involving children and supports young researchers or scientists in the hope of retaining them for the benefit of the group. The following examples illustrate some of the endeavors undertaken in the fiscal year 2016:

For the past 13 years, GEA has supported Future Farmers of America (FFA), a US organization that focuses on promoting scientific education in agricultural disciplines. Apart from that, corporate sites participated in numerous charity events that included a running event in Chicago, which took place in 2016. As one of the sponsors, GEA was instrumental in raising more than USD 120,000 for the “Feeding Tomorrow” research program.

In June 2016, GEA joined MassChallenge Switzerland as one of the founding partners together with other renowned companies. MassChallenge operates as a non-governmental organization and allows start-ups to gain access to a global network of mentors and venture capital investors without acquiring any shares in said start-ups. This way, the association assists young entrepreneurs with a promising future.

In the year under review, GEA donated EUR 25,000 to a project for the protection of Syrian refugee children in Jordan that was carried out by the UN Refugee Agency. This UNHCR (United Nations High Commissioner for Refugees) project is designed to cater for the primary needs of Syrian refugee families and to ensure that the children are given the possibility of attending school.
GEA’s ‘Southern and Eastern Africa’ country organization supported “Investing in Youth of Botlokwa”, a non-profit organization in South Africa. Amongst other things, the organization provided young people with information on career opportunities and acquainted them with the field of technology.

The integration of HLW (Hinterländer Werkstätten, Dautphetal, a sheltered workshop) employees into the production process at GEA’s Biedenkopf-Wallau site in Germany serves as a successful example of ensuring the inclusion of predominantly mentally-handicapped people. The site manufactures state-of-the-art food processing and packaging plants and equipment. While the group of HLW employees was initially working in a separate section of GEA’s manufacturing operations, its members are now assigned to various activities across the whole facility and fully integrated members of the workforce.

In Germany, GEA is engaged in a multitude of cooperation schemes involving many schools and universities. By joining forces and working together, educational facilities and companies ease students’ transition to work and help them make the right career choice in order to ensure the availability of sufficient young talents willing to take up jobs in the fields of technology and natural sciences. For this reason, GEA’s largest site in Oelde participates in a cooperation network involving schools and businesses (“Kooperationsnetz Schule-Wirtschaft”); amongst other things, this network includes information events held in the participating schools, job application training for students as well as joint projects comprising students and apprentices.

At its site in Niederahr, GEA established an education partnership with a nearby vocational college. Together, they joined the XarXa project that embraces more than 20 European towns and cities; since 1999, the latter have given young people the possibility of spending some time abroad or gaining work experience in various companies across Europe. Within the framework of the XarXa project, trainees from other European countries come to GEA for doing an internship. In the year under review, one of the participants came from Finland, to name but one example.

Another event serving the purpose of promoting qualified young talent is the Industry Contact Forum that was organized for the ninth time at GEA’s site in Büchen in 2016. For the very first time, it was jointly hosted by brewery and dairy experts. 50 students from HAW Hamburg (University of Applied Sciences) as well as the universities of Flensburg, Hannover and Fulda were given an insight into the work of a project engineer.
Basic principles underlying the sustainability report

This sustainability report was submitted to the GRI Materiality Disclosures Service. GRI has confirmed the accuracy of the G4 Materiality Disclosures (G4-17 to G4-27).

The sustainability report has not been externally assured for the year under review. GEA is seeking external assurance for its report in fiscal year 2017.

Unless indicated otherwise, the disclosures comprise the worldwide activities of the overall group, i.e., GEA Group Aktiengesellschaft including all companies over which GEA can exercise significant influence or control. A list of the subsidiaries, associated companies and joint ventures that comply with this definition can be found in the list of shareholdings included in chapter 12.4 of the Notes to the Consolidated Financial Statements.

Since this represents the first time report in line with the GRI Guidelines, there are no changes from previous reporting periods.

In mid-2016, GEA started the process for defining the report content by holding two full-day workshops in which the economic, ecological, social and management-related performance of the group and its impact were intensely discussed with a multitude of internal experts. The overall process was steered by the Global Corporate Center. The following functional departments were involved, sometimes with several experts focusing on the respective disciplines they had been assigned: Legal, Human Resources, Sales, Purchasing, Service and Complaints Management, Controlling, Accounting, Quality, Health, Safety and Environment, Strategy, Investor Relations, Communication and Marketing, Compliance, Research and Development as well as Innovation Management. The findings of both workshops were summarized in a comprehensive list of sustainability issues; the list also included an initial assessment of relevance that provided some guidance in terms of stakeholder engagement. For performing this assessment, the above experts relied on the experience gained during their exchange with stakeholder groups closely related to them as well as their personal industry and competition-related expertise and knowledge.

Moreover, the internal experts were an important source for identifying and engaging external stakeholder groups. In GEA’s business-to-business model, the functional departments are the day-to-day contact points for their respective stakeholder groups, which is why they must be regarded as a primary source. For the purpose of the materiality analysis, interviews with internal experts were conducted. In parallel, several hundred documents were evaluated, including results of employee engagement surveys (from 2013 and 2016) as well as customer satisfaction surveys (from 2014 and 2016). Every year, GEA participates in the Climate Change Information Request of the Carbon Disclosure Project (CDP), a non-governmental organization. The relevant documents were also taken into consideration. Detailed discussions were held with the members of the Group Works Council and further employee representatives on the Supervisory Board. Apart from the sustainability reports compiled by key customers and competitors, the analysis placed particular emphasis on customers’ supplier guidelines and audits as well as investor queries relating to sustainability issues.
As a listed company with a shareholder structure characterized by the presence of institutional investors – without a major shareholder – GEA defined the classic “shareholders” group of stakeholders as “capital market”. Besides shareholders, this group also includes (potential) investors, analysts, investment firms as well as rating agencies. All in all, GEA identified the following stakeholder groups:

- Capital market
- Customers
- Suppliers/sub-contractors
- Local communities
- Employees
- General public/media
- Regulators/public authorities
- Schools/universities
- Competitors

In conclusion, it can be said that the initial assessments and results of the materiality analysis conducted by engaging the relevant stakeholder groups have yielded very similar results. Regardless of the result of the materiality analysis, GEA already bases the contents of its 2016 documentation on the principle of non-financial reporting that is expected to be legally required from 2017 onwards (“CSR Directive” 2014/95/EU of the European Parliament and of the Council of October 22, 2014 as well as the corresponding German draft bill for reinforcing non-financial reporting by companies in their combined management and group management reports, “CSR Directive Implementation Act”). The Executive Board of GEA Group Aktiengesellschaft deliberated and adopted this approach.

Reporting addresses the key aspects derived from the most important issues. They include:

- Labor/management relations
- Occupational health and safety
- Training and education
- Procurement practices
- Supplier Assessment
- Compliance
- Emissions (including indirect, energy-related emissions)
- Anti-corruption
- Human rights (assessment)
- Products and services
- Diversity and equal opportunity
- Economic performance
In principle, the material aspects that have been ascertained are of group-wide relevance.

On aspect boundaries outside the organization:

- Relevant emissions are also produced by external suppliers that provide GEA with electricity, heat, cooling energy as well as steam
- Products and services: ecological impact of GEA equipment operated at the customer’s site
- The assessment of external suppliers in line with ecological criteria, working practices, impact on human rights and society is not only relevant in terms of the company’s own procurement decisions, but also to GEA’s customers and their assessment of the entire supply chain
- Occupational health and safety are relevant to assignments performed by GEA employees at the customer’s site as well as external staff under GEA contracts
- Compliance and anti-corruption – outside of the organization, they are of particular relevance to the supply chain as well as individuals like commercial and sales agents, who are working in close proximity to the customer
- The respect for human rights is also of essential importance in GEA’s supply chain

This overview outlines the aspects that were given high priority by specific stakeholder groups:

<table>
<thead>
<tr>
<th>Assessment of material aspects by stakeholders*</th>
<th>Capital market</th>
<th>Customers</th>
<th>Suppliers/sub-contractors</th>
<th>Local communities</th>
<th>Employees</th>
<th>General public/media</th>
<th>Regulators/public authorities</th>
<th>Schools/universities</th>
<th>Competitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic performance</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Procurement practices</td>
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<td>✓</td>
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</tr>
<tr>
<td>Emissions</td>
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<td>✓</td>
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</tr>
<tr>
<td>Products and services</td>
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<tr>
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<td>Labor/management relations</td>
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*) according to order of GRI guidelines