



# Thinking and Acting Sustainably – Quality and Environmental Management at ifm

Quality management  
ifm electronic gmbh  
Group of companies

ISO 9001  
certified

[www.ifm.com](http://www.ifm.com)

Stand  
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2016





### **Quality and environmental management**

We have implemented a quality management system certified to ISO 9001 that represents our modern processes with the aim of maximising customer benefit. Our environmental management is based on the ISO 14001 standard and forms an integral part of our corporate management approach. So, all products from ifm set standards for highest reliability, precision and sustainability.

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## Foreword



*Martin Buck,  
Chairman of the  
ifm group of companies*

*"Sensing, networking, and control technology for the automation of a wide variety of processes to humanise society is the corporate mandate given to ifm electronic by the partners."*

*Extract from ifm's corporate philosophy*



*Michael Marhofer,  
Chairman of the  
ifm group of companies*

### Dear Readers

With more than 5,200 employees and subsidiaries as well as representative offices in over 70 countries, the family-run company ifm is among the world-wide leaders in the automation industry. We owe our impressive development not only to our commitment to continuous improvement and flexibility, but also to our principles relating to quality and environmental protection.

#### Close customer contact

True to the corporate mandate stated above, our commitment to these principles benefits our customers, just as it forms the backbone of our company. Thus, our claim "ifm – close to you" is also a performance challenge to ourselves. This means: ifm not only offers outstanding products, but also provides a service that requires consistently customer-focused processes. The aim is to create a basis of trust between company and customer by providing comprehensive information and fostering a fruitful dialogue. This is what forms the basis for success – ours and yours.

#### Transparency

For this reason, this handout will not only focus on our quality and environmental management system, it will also give you an insight into our company and our philosophy.

Our goal is to leave you with the assurance that you have chosen the right partner. We mean what we say and we act accordingly: We develop solutions for you that follow a long-term strategy.

Looking forward to a successful cooperation,

ifm group  
Board of Directors

*Martin Buck*

*Michael Marhofer*



## The ifm group of companies



*Glückaufhaus, Essen*

### Quality and products "designed by ifm"

Since its foundation in 1969, ifm has been closely connected to Germany as a location for industry. High product quality and accurate technical data are unimpeachable values of ifm. Moreover, the automation company is committed to producing top-quality and long-lasting products, applying ecologically sound production processes to the greatest possible extent. Therefore, ifm's production always reflects the state of the art and the applicable environmental regulations. All ifm production sites are certified according to ISO 9001.

Resource-saving and efficient production – opposites that attract: In 2014, ifm received the award for successful energy efficiency commitment as one of the most successful participants in the project "EnBW Netzwerk Energieeffizienz".

### Corporate headquarters and central warehouse

The ifm head office, which houses the sales and service departments, is located in the historic Glückaufhaus in Essen at the heart of the Ruhr region. From the logistics centre in Essen, products are supplied directly to ifm customers within the EU and to the ifm logistics centres worldwide.



*ifm electronic, ifm efector, Tett nang*

### Development and production

About 80 per cent of all ifm products are manufactured at the 5 production sites in the Lake Constance region. The majority of the research and development work is carried out there. Production processes in the plants are constantly optimised and do of course comply with the relevant provisions.

ifm maintains additional development and production facilities in Pennsylvania/USA, Singapore, Opole/Poland and Sibiu/Romania.

### ifm efector gmbh

ifm efector develops and manufactures inductive, capacitive and photoelectric sensors.



*ifm efector, Tett nang*



# ifm ecomatic gmbh



*ifm ecomatic, Kressbronn*

## ifm ecomatic gmbh

ifm ecomatic manufactures and develops control and evaluation electronics as well as industrial communication systems for automation. Since 2002, ifm ecomatic has been certified in accordance with ATEX and KBA (Federal Motor Transport Authority).



*ifm flexpro, Wasserburg*

## ifm flexpro gmbh

ifm flexpro in Wasserburg on Lake Constance, which is part of the ifm group of companies, produces electronic circuits on a flexible base material (flexible PCBs) for the production of sensors.

## ifm prover gmbh

ifm prover, a subsidiary of ifm, develops and produces flow, pressure and temperature sensors for the process industry.



*ifm prover, Tett nang*

## ifm syntron gmbh

The subsidiary ifm syntron specialises in 2D and 3D vision sensors, camera-based identification systems and RFID products for automation.



*ifm syntron, Tett nang*



# ifm ecomatic gmbh



*ifm ecolink, Opole*

## **ifm ecolink sp. z o.o, Poland**

Certified to ISO 9001 and ISO 14001, the independent subsidiary develops and produces connection technology.



*ifm prover, Malvern, PA*

## **ifm prover inc., USA**

Among other products, the American subsidiary of ifm prover on Lake Constance develops and produces temperature sensors.

## **ifm electronic Asia Pte. Ltd., Singapore**

The regional plant houses an R&D department as well as product management and production facilities for photoelectric sensors to serve the fast-growing markets in Asia.



*ifm electronic, Singapur*

## **ifm efector srl, Sibiu**

ifm efector srl in Sibiu, Romania, develops and produces position sensors for industrial automation applications.



*ifm efector, Sibiu*



# In dialogue



**"ifm's claim of being a special company can only be fulfilled if we are better prepared for the future than others."**

*Extract from ifm's corporate philosophy*

## Dialogue partner

One of the strongest sales teams within the industry, more than 2,500 customer visits per day, branches in over 70 countries and service centres that provide free and direct assistance worldwide: We maintain an ongoing dialogue with our customers and place great emphasis on delivering proactive support. At the same time, we can only develop innovative products for our customers if we conduct basic research in cooperation with specialised research institutions. This is why ifm also maintains an active dialogue with external institutes and universities, carrying out joint research and development. The mutual benefit: Continuous high expenditure for R&D together with a high level of commitment consolidates our technological lead as compared to our competitors.

## Customers

- ifm service centres: support via chat and phone, latest literature, help with unit selection, application solutions
- Direct sales: active customer support through 70 branches worldwide
- Advertising in dialogue: fairs and fora as platforms for direct customer contact
- Workshops and seminars: when introducing new products or technologies, training is provided at the ifm training centres or at the customer's site

## Employees

- Training measures, staff meetings, company network, staff magazine, health and safety management, alumni meetings

## Suppliers

- ifm maintains long-term partnerships with its suppliers. Prerequisites for supplier contracts: potential analysis, supplier assessment and QAAs must pass initial sample inspection

## Education & research

- Cooperation with educational institutes: special discounts and free units for educational institutes, promotion of youth initiatives such as Robocup and TectoYou, support for final theses
- ifm lecture hall and endowed chair at Ravensburg-Weingarten University; partner of Opole University of Technology in Poland
- Teaching assignments and guest lectures at universities
- Development alliances with research institutes and other companies
- Standardisation and association work



# Sustaining growth

**“Each growing company has to take risks to work successfully. Partners and management will only take such risks that are in the interest of normal business activities and the size of which is suitable to ifm.”**

*Extract from ifm's corporate philosophy*

## Assessing risks

All branches and production sites are at locations where no risks of environmental/natural disasters are known.

For critical components a specific stock management is applied to ensure the supply for a longer period. An automatic stock monitoring is used as early warning system for the material supply.

Ensuring the procurement (risk strategy) includes safety stocks and a 'second source' policy. There are clearly defined and documented processes for ensuring the procurement and product availability.

The business processes are secured by means of redundant systems and production facilities at different locations.

Alarm and emergency plans are available in all branches and production sites.

An IT security concept to ISO 27001 was introduced.

Risk assessments are performed in different organisation units using suitable tools (e.g. FMEA in the product development).





# Building brand identity



## ifm – close to you!

The ifm brand carries with it a promise of quality and performance: It is synonymous with high-quality products, close customer contact and innovation. A promise that becomes a reality through internationality, qualified consulting and service and a high product quality 'designed by ifm'.

## The three pillars of our activities

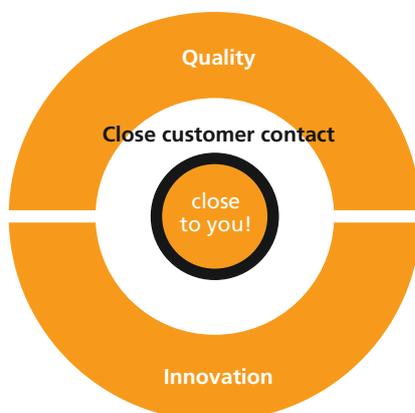
The ifm philosophy reflects the three supporting pillars of our corporate activities – employees, customer/market and product. The corporate principles establish standards for the conduct of the company and its employees. They are shared by all ifm employees and form the basis for our day-to-day undertakings and interaction with each other. An open communication, both internally and externally, flat organisational structures and the promotion of a culture of dialogue are bringing the principles to life.

**"ifm wants to offer outstanding product quality, service, and reliability."**

*Principle from ifm's corporate philosophy*

## Living the corporate identity

While our corporate design consistently conveys our quality claim to the outside world, it is people who communicate and create quality. In this spirit, ifm employees all over the world represent our company and live the quality our brand promises.





# Internalising quality

**“Quality and performance of ifm products are exemplary.”**

*Principle from ifm's corporate philosophy*



*Peter Lerchen,  
Quality Officer  
Essen*



*Michael Wohlgemut,  
Quality Officer  
Tett nang*

## Quality management

ifm is permanently working on innovative products and solutions for the global markets. Strategic and quality goals arise, which are communicated by the managing directors through our quality management. The corporate sectors deduce objectives and key indicators from these goals.

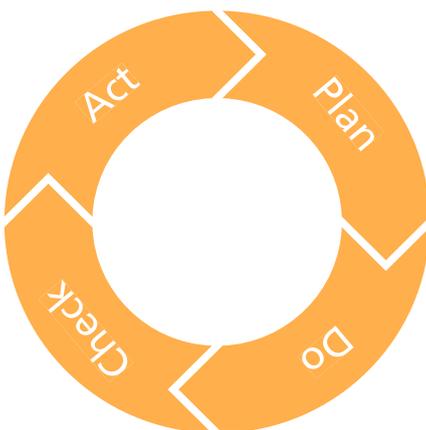
## Policy

- Demanding and encouraging the qualification of employees and personal responsibility
- Awareness of the employee being supplier and customer in the processes
- Employees' ability to reliably implement quality-related and efficiency-related thinking
- Continuous high expenditure for research and development ensures a technological advantage over the competition and results in benefits for customers
- Team spirit within the team and between the teams
- High product quality and accurate technical data are unimpeachable values of ifm
- Compliance with laws and regulations
- Continuous improvement

## Control cycle

In addition to regular planning meetings of the executives, a large management review takes place once a year. The management review is assessed by the managing directors and the definitions of the goals are adjusted or complemented. Assessed are the results and efficiency of the audits carried out, figures on customer satisfaction, figures from the processes and measures taken after the last quality management assessment. Our tools include Data Warehouse, BaaN / SAP, RQM (CAQ), Customer Service e.g. Lotus Notes.

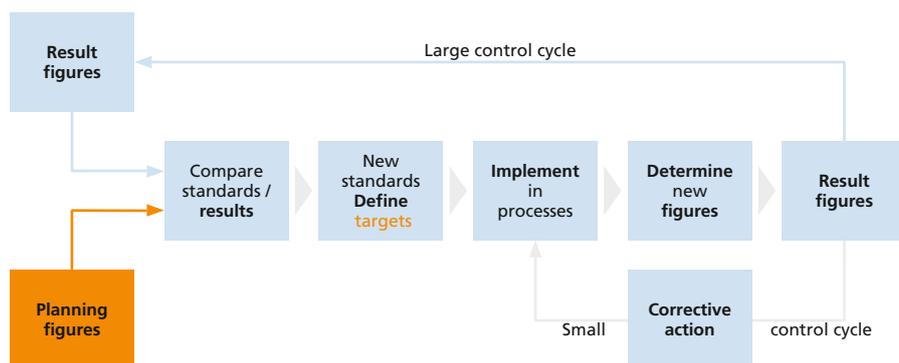
The employee is the key to our continuous improvement activities. Process results as well as customer feedback are analysed on a daily basis and suitable optimisation measures are initiated in small and large control cycles.



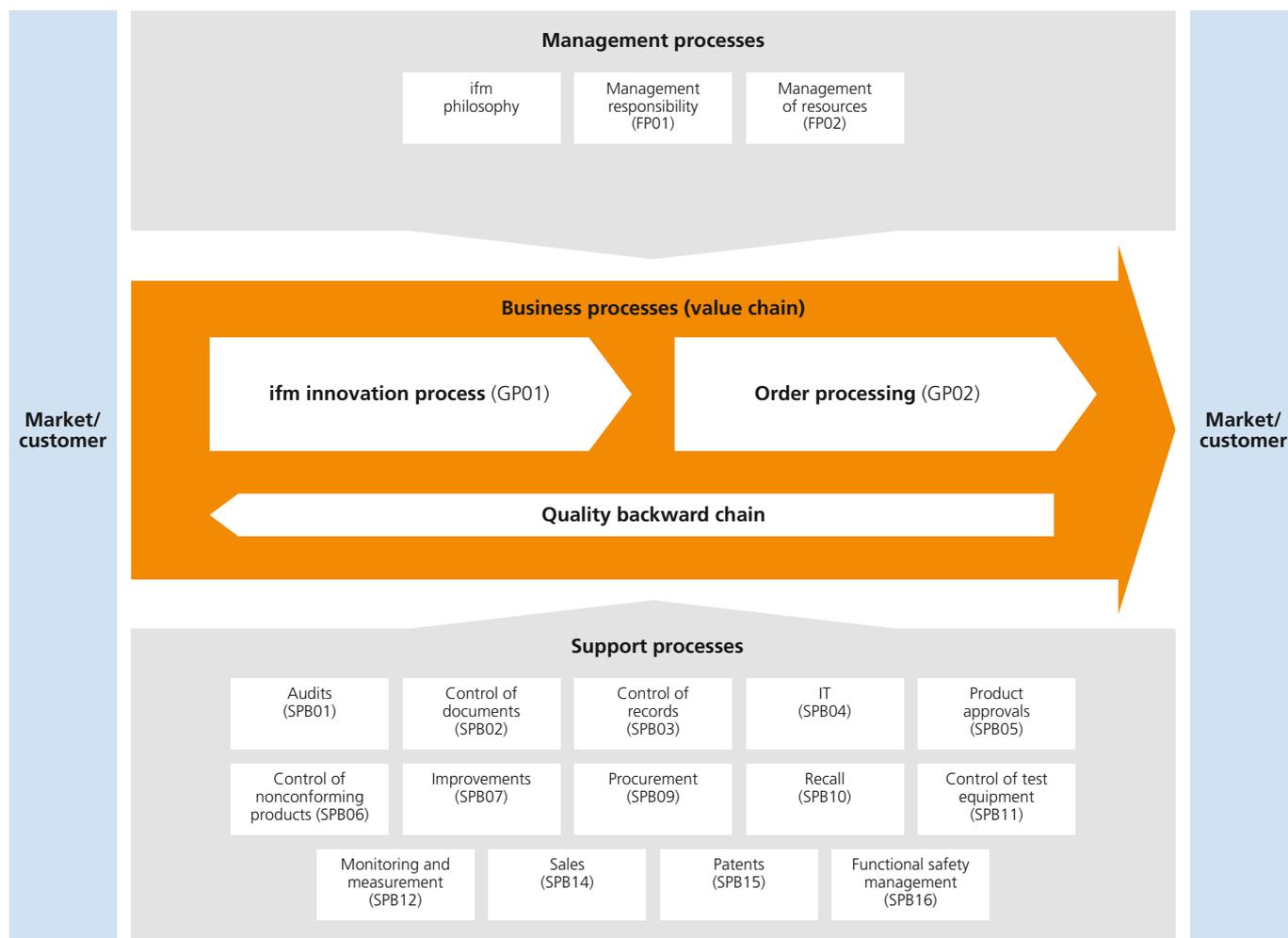


# Internalising quality

## The quality management control cycle in detail



## ifm process landscape





# Promoting innovation



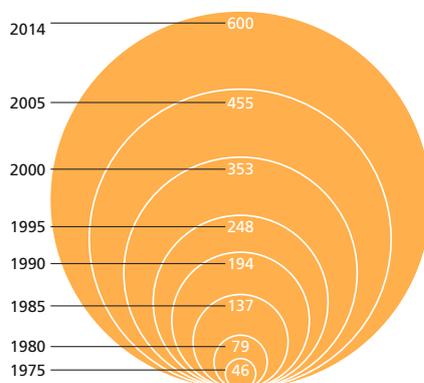
## The ifm innovation process

“Continuous high expenditure for research and development together with a high level of commitment is to consolidate our technological lead as compared to our competitors and strengthen our position in the market.”

This principle of our corporate philosophy is an incentive and a challenge. Innovation is a core competence of our company. It is also essential to ensure our future. For this reason, we have implemented the ifm innovation process.

## Goals

- Harmonisation of the new products' development approach across the entire company
- Smooth integration of all necessary partial performances in the process
- Sustained optimisation of the effectiveness and efficiency of product development and creation of synergies

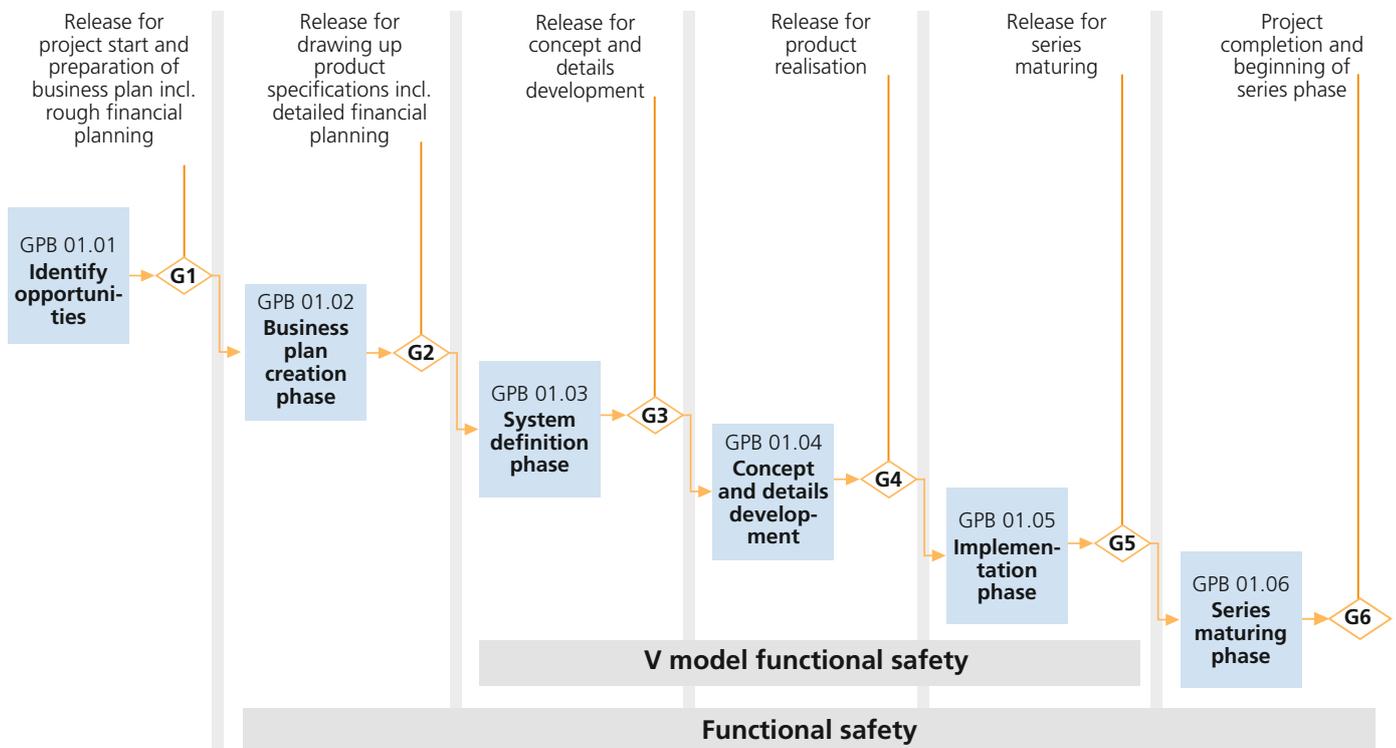


*Development of patents, patent applications and utility models of the ifm group of companies*



# Promoting innovation

## The ifm innovation process



### Start

We consider all reasonable solution options before precisely planning a project. New technological approaches and processes must be technologically and ecologically manageable prior to implementation. Furthermore the markets and applicable laws, standards and regulations are already included in this phase.

### Planning and implementation

Quality planning includes the processes which are required to fulfil the customers' requirements and monitors them by means of defined quality gates and controls.

In addition to state-of-the-art 3D CAD systems and rapid prototyping we are in close contact with our process-experienced partners in the fields of production equipment and production.

Databases allow access to the knowledge from the daily learning processes at any time, e.g. from corrective action, customer feedback or FMEAs.

### Launching the product

During the development of the product in defined stages we are in close contact with representative users who are willing to test new developments or product optimisations at their facilities – e.g. in the field of mechanical engineering, in the food industry or in other areas of automation. These simultaneous validation measures help us to develop high-quality and robust products with a customer-friendly "time to market".



# Assuming responsibility



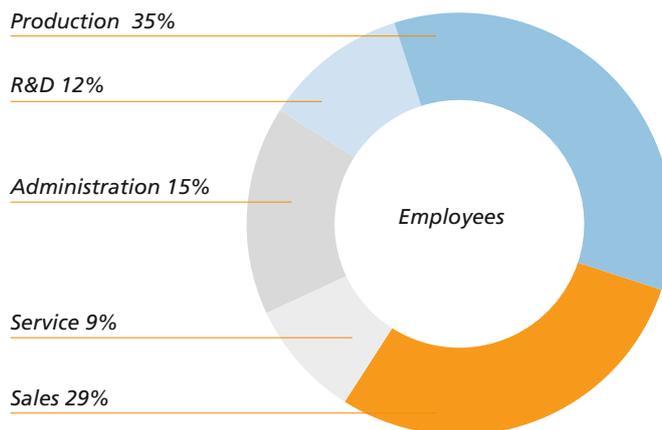
Steffen Fischer  
Central Managing  
Director HR

## Our employees drive the success of ifm

The potential of ifm's employees determines the success of the company. Ongoing training, the targeted qualification of our employees and career advancement characterise the personnel development of the ifm corporate group. An open and honest dialogue is cultivated in mutual respect. This results in important positive energy, contributing to high motivation.

"We are firmly convinced that the employees represent the biggest asset of any company. The potential of this asset also determines ifm's power and thus determines our success or failure."

*Extract from ifm's corporate philosophy*



ifm's personnel structure



# Acting sustainably



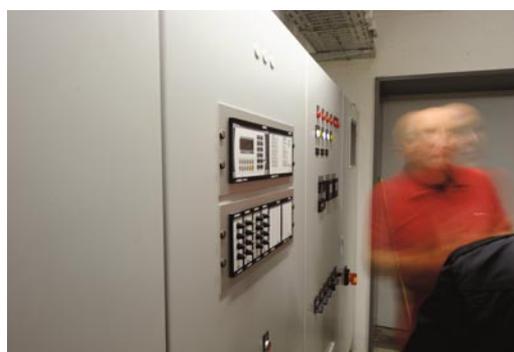
*Brigitte Hubert,  
Environmental  
protection*

## Environmental management

“Growing successfully in security” – this ifm principle has also been influenced by our attitude towards the environment. Successful growth is only possible in the long term if we assume responsibility for the consequences of our actions: Think globally – act locally! For ifm an increase in productivity does not at the same time mean an increasing consumption of environmental resources. And the fact that we have good ideas pays off for ifm. An example: Despite a doubling of the production quantities over the last years, our water consumption remained constant.

## Environmental policy

- Promotion of decisions and conduct which are wise with respect to the environment and occupational safety
- Careful and economical handling of resources
- Long-lasting products
- Only use of manageable know-how to avoid environmental and health risks
- Adjustment of the technological development and production to the state of the art, environmental regulations and occupational safety regulations
- Active information policy towards customers, suppliers, authorities, the public
- Compliance with laws and regulations
- Continuous improvement





## Acting sustainably



*Circulation system for cooling water, Tettngang*

**“ifm wants to and will contribute its share in all technical developments for creating and maintaining a clean world with a plentiful supply of clean air and worth living in, not only from its corporate point of view, but also from its general social responsibility.”**

*Extract from ifm's corporate philosophy*

The chronology of our environmental activities stretches over two decades. We have acted on the basis of our attitude and did not only react when legal provisions did not let us have the choice anyway.

### **Environmental management milestones**

- 1984** Waste separation into industrial and special waste
- 1987** Changeover to cadmium-free plastics
- 1989** Use of cables and housing parts made without CFC and cables without brominated flameproofing agents
- 1991** Creation of the department “Occupational safety and environmental protection”
- 1992** Replacement of cleaning agents containing CFC and CHC
- 1993** Creation of a hazardous materials store and disposal centre
- 1993** Creation of a building services control system to monitor and control the use of resources
- 1993** Installation of state-of-the-art circulation systems for cooling water
- 1993** Creation of our first ecological balance sheet for the location Tettngang (corresponds to the environmental test to DIN EN ISO 14001)
- 1994** Appointment of an authorised person for waste and dangerous goods
- 1997** Commissioning of a waste water treatment system
- 2000** Introduction of an ifm-internal environmental management system
- 2006** Implementation of the RoHS requirements for more environmentally friendly products (even though our products are exempt from Directive 2002/95/EC)
- 2008** ifm receives the award “energy-efficient company” (project “EnBW Netzwerk Energieeffizienz Ravensburg”)
- 2003-2015** Various measures introduced to improve energy efficiency



## Acting sustainably



*"ifm intends to be a moral company."*

*Principle from ifm's corporate philosophy*

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### **Environmentally conscious**

At ifm we are aware of our economic, environmental and social responsibility. This is reflected in our production processes as well as in our commitment to our customers:

Since 1999, we have been able to reduce our amounts of water and waste water per manufactured unit by 50%.

On a per unit basis, the amount of waste has been reduced by 10% since 1999 and the energy consumption by 12% in the last 10 years.

The examples show that ifm's entire quality and environmental management concept is based on the search for energy-efficient and ecologically sensible solutions for employees, partners and customers. We intend to be a moral company and strive to maintain sustainable and mutually beneficial relationships.

We help to save the valuable resources of our planet in our production processes and with our products in their applications.

### **Water – extraction, treatment, distribution, protection**

We are pleased to be able to offer you products which help to turn these sensible processes into safe processes.

You as the customer benefit from our more than 45 years of experience with the development and production of sensors, control systems and evaluation units – because applications in fluid media have special requirements towards tightness, mechanical stability, long-term stability and temperature fluctuations.

Due to the increasing demand for these products ifm has established the environmental technology and building automation department. There you will quickly find the answers to all your questions. Our acquired application know-how from many countries is available to you in this department.





# Acting sustainably



*Sarah Brühl,  
Compliance  
Officer*

## Compliance

“ifm intends to be a moral company” – this principle of the ifm philosophy forms the basis of our daily activities. The philosophy with the established principles, available since 1990, shows that ifm is aware of its social responsibility as a worldwide operating company.

As a result of the social change of the last years, acting ethically has been given special importance worldwide. Against this backdrop, ifm decided in 2013 to include a code of conduct as part of the philosophy. With this code, ifm fulfils its moral and ethical obligations towards its employees, customers and suppliers.

The focus of ifm's actions is “to grow successfully in security”. This also means to behave in accordance with applicable laws and regulations, thus preventing criminal and civil penalties. Similarly, ifm wants to fulfil its moral obligations.

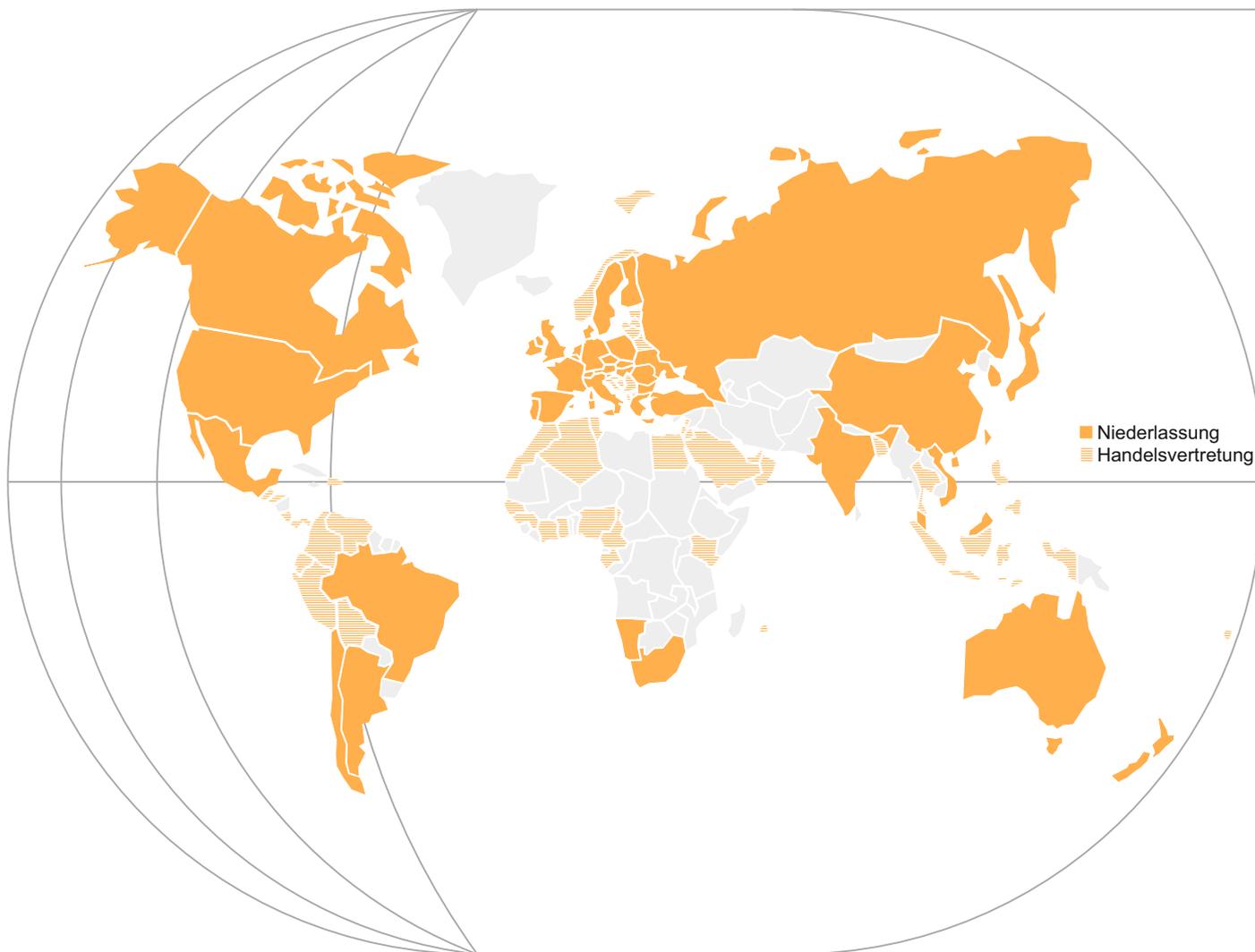
The ifm Code of Conduct serves as a guide for how we want to behave in the event of legal and ethical issues. At the same time, we require all our employees to comply with these rules.



*ifm philosophy, available  
in 15 languages*



ifm – close to you





## ifm – close to you



### Quickly and safely to the customer

Branches and representations in over 70 countries worldwide (7 branches in Germany) ensure constant proximity to our customers, via the internet even around the clock.

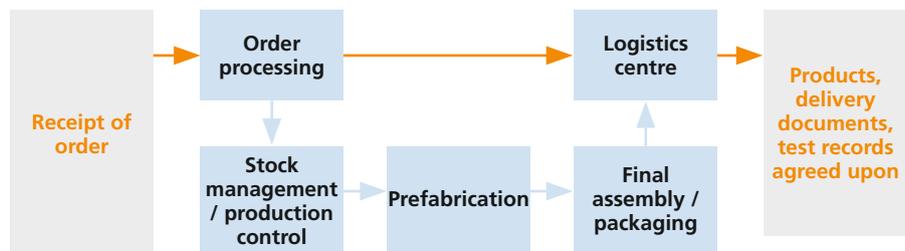
The central warehouse in Essen, one of the most modern warehouse systems in Europe, ensures that your order is promptly and suitably packed for transport so that the product reaches you in the quality it had when it passed our final tests.

Each ordered product which is available ex stock leaves our central warehouse on the same day – provided that the order is placed before 2 pm. Spread over an area of 9,000 sqm, the logistics processes from goods receipt through to shipping are closely coordinated with one another – thanks to a largely standardised process for all types of incoming and outgoing orders. A warehouse management system allows us to trace and optimise quantity movements, positions of load carriers and utilisation capacities of individual stations at any time.



Logistics Centre, Essen

### Order processing in detail



### Reliable control of production processes

A constantly optimised production process consisting of automation and manual assembly allows us to have a high production capacity while remaining flexible for small batches and customer-specific variants. The production documents ensure that the processes can be reproduced at any time. They can be accessed online and are always up to date. Position monitoring during SMD placement based on trendsetting image processing technology ensures a consistently high product quality. State-of-the-art "flying probe" in-process tests are part of a consistent, integrated test structure.



ifm – close to you



### **Support processes**

We call them “support processes” because they comprehensively support our “value-added chain”: Internal audits, control of data and documents, tests, approvals – all these support processes have been part of our quality management system right from the beginning. We regularly check that they are precisely linked with the value-adding processes. Also, each process is linked with the corresponding documents in databases which can be accessed from every PC at any time.

### **Procurement**

We maintain longstanding and reliable partnerships with the majority of our suppliers. As a prerequisite for a first delivery every supplier needs to successfully pass the initial sample inspection. During this inspection the environmental sustainability of the used materials is also taken into account. A permanently high product quality and adherence to delivery dates and quantity stipulations are decisive for a long-term cooperation. Other decision criteria are flexibility and the ability to improve. Depending on the target product and customer we have precise agreements with our suppliers as to which management system is to be used. All our suppliers have introduced a quality management system which corresponds to the requirements.

### **Approvals and certifications**

While the product is developed or modified, the approval procedures to be taken into account are initiated so that at the time of marking, the approval of the corresponding approval body is available (e.g. CCC, cULus, CSA, KBA, ATEX, FM, IEC-Ex, etc.). The conditions of the approval agency concerning production are implemented in the production work schedule so that compliance with the requirements is ensured for the corresponding marking.

Visit our website:

[www.ifm.com](http://www.ifm.com)

Over 70 locations worldwide –  
at a glance at [www.ifm.com](http://www.ifm.com)

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**ifm – close to you!**

Overview  
ifm product range:



**Position sensors**



**Sensors for  
motion control**



**Industrial imaging**



**Safety technology**



**Process sensors**



**Industrial  
communication**



**Identification systems**



**Condition monitoring  
systems**



**Systems for  
mobile machines**



**Connection  
technology**



**Accessories**