ENVIRONMENTAL INFORMATION FOR OUR CUSTOMERS

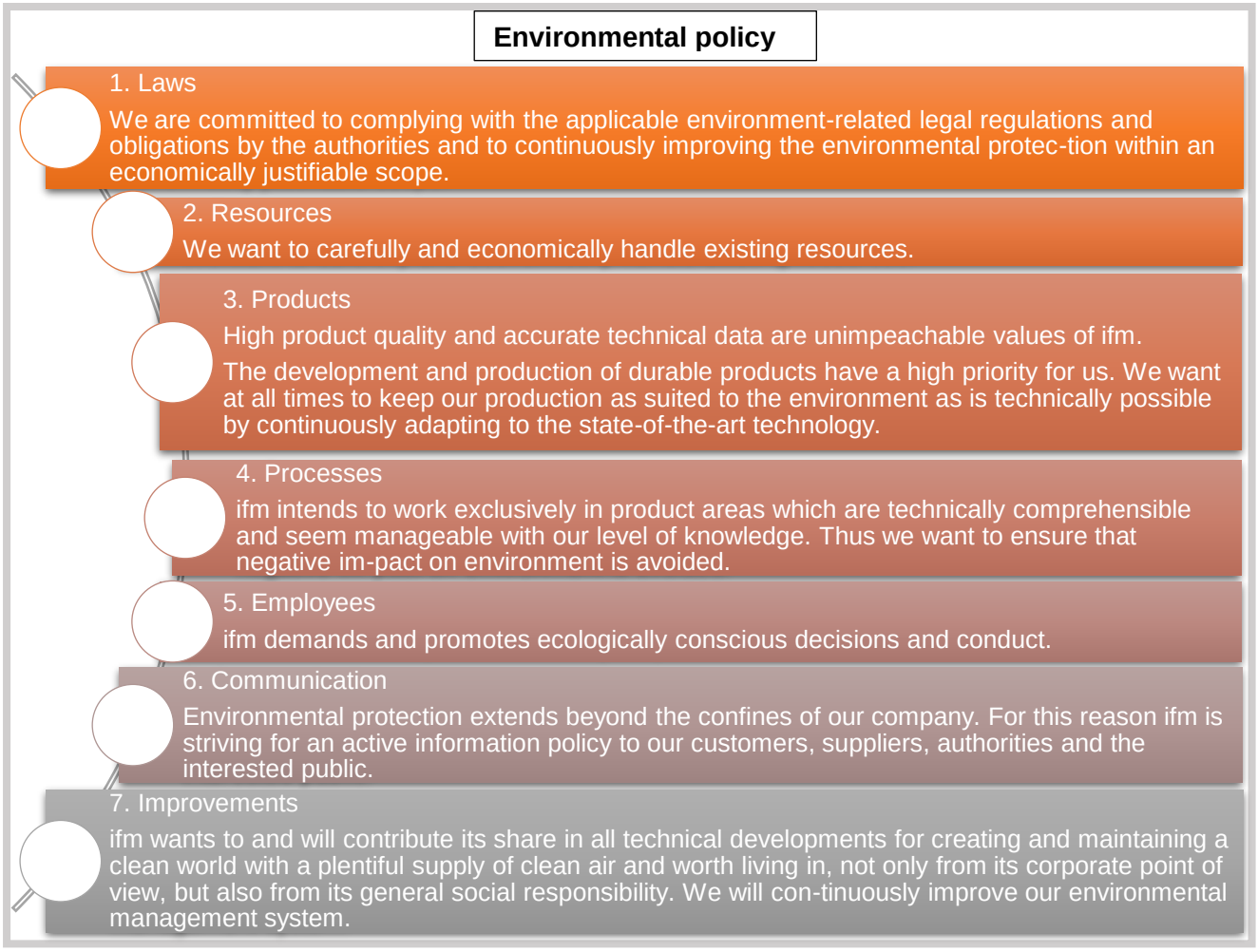
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Environmental Protection at ifm

As early as 1990, the founders of ifm outlined the vision for all employees and business partners that even if the world population were to rise to 15 billion people, every single person should be able to expect an environment worth living in. Against this background, we pursue the goal of not producing at the expense of the environment. ifm's philosophy clearly defines our approach of managing natural resources as carefully as possible. We demand and promote environmentally conscious decisions and behaviour both within the company and with our business partners.

Our actions are not only determined by legal regulations but also by the ecological awareness to assume responsibility for the consequences of our actions. According to our corporate principles, we are seeking a qualitative growth, i.e. achieving increases in production without an intensified utilization of environment. The set-up and implementation of a comprehensive environment management system defined as "THINK GLOBALLY, ACT LOCALLY" is part of securing the future of our company. We want to produce environmentally friendly and be successful with this approach. Therefore, we certified our long-standing internal environmental management system at four German locations to EMAS and ISO 14001 in 2020. Information on environment and sustainability can be found in our sustainability report.



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Environmentally friendly products

The durability of our products is a high priority for us and is the most important element to reduce resource consumption and avoid waste. Already at the stage of product development, we pay special attention to the economical and sustainable use of resources – both in the product and in its production. As early as developing ideas for new products, we consider possible environmental challenges and check the applicability of relevant regulations and standards.
Many of our products contribute directly to preventing or reducing negative environmental impacts. Our sensors are mainly used to stabilize production processes and thus contribute to reducing rejects, higher availability and the conservation of resources. For example, with the help of flow monitoring of the thermal compressed air meter, the loss in compressed air supply systems can be identified and reduced, which also enables significant reduction of energy consumption. Moreover, the integrated measurement makes it possible to monitor the pressure drop in clogged filter systems and general pressure fluctuations. Environmental protection has not only been lately in the centre of our endeavours but has been practised for years.

Corporate principle:

High product quality and accurate technical data are unimpeachable values of ifm.

For ifm's manufacture process **no**

- carcinogenic substances, category 1A and 1B
- substances which cause genetic changes, category 1A and 1B
- very toxic substances, category 1

are used.

Since March 1, 2018, category 1A of reproductive toxic substances also include substances containing lead. These are used in small quantities and are gradually being substituted.

The following chemicals are **not** used either in our production:

- asbestos
- formaldehyde
- PBB, PCB, PCT
- CFC, CKW, halons

According to state-of-the-art technology the use of certain substances - which have a minor impact on environment - cannot be excluded for the manufacture of electronic units. For their production ifm electronic only uses common electronic components obtained world-wide.

It is known that the following substances can be used for electronic components:

- Lead and lead compounds (in solder paste, electronic components). Already within the course of the implementation of RoHS1 (2002/95/EC), we had changed over to lead-free solder materials and components. The implementation of the RoHS2 (2011/65/EU) was successfully completed on 22/07/2017 for the equipment category 9 (majority of the ifm products) and for the equipment category 11 on 22/07/2019. All lead compounds that still in use have been covered by approved RoHS exceptions.
- Nickel and nickel compounds (coatings, outside parts made of brass)

- Zinc, tin, silicon, beryllium, cadmium, arsenic, cobalt oxide, manganese dioxide can be part of electronic components.
- Traces of vinyl chloride in PVC cables (max. 10 ppm)
- Brominated epoxide resins (tetrabromobisphenol A) and antimony trioxide were specified as flame retardant agents by some manufacturers of semiconductor elements, printed circuit boards and granules. They are necessary to adhere to the regulations for flame inhibition.
- Unavoidable traces of formaldehyde in phenolic resins. Phenolic resins contain polycondensated formaldehyde and are the basic material for the manufacture of printed circuit boards and laminated materials. In case of correct use the maximum concentration values for formaldehyde are complied with with great certainty.

If our products are used correctly, the above-mentioned substances which can be contained in very low quantities per unit are immobile and thus harmless.

Because of the high requirements for technology and quality it is at present not yet possible to do without certain substances which present a potential risk for the manufacture of electronic units.
As a result of intensive efforts in research and development hazardous substances in electronic components can be reduced or even eliminated. ifm's objective is to always ensure a production which is as environmentally friendly as technically possible by constantly adapting to state-of-the art technology.

Environmental protection measures since 1984

Waste

1984 Waste separation in industrial and special waste
1993 Setting up a hazardous materials store and disposal centre by taking strict environmental regulations into account
Appointment of an authorised person for waste
1998 The polyimide and plastic wastes from film technology are no longer disposed of as domestic refuse, but are recycled.

Water

1995 Installation of a valve in the waste water drain at the point of transition between ifm and the public sewer system which in case of danger prevents contaminated waste water from getting into the public sewer system
1997 Commissioning of a waste water treatment system for the contaminated waste water of film technology

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Energy

1993 Setting up the building services control system with the goal of monitoring and controlling environment-relevant processes
1995 Elimination of the energy source fuel oil and complete changeover of the heating system to environmentally friendly natural gas
Since 1997 Regular heat recovery measures for ventilation, workstation extraction, compressed air compressors with energy savings
2007, 2011 to achieve a higher energy efficiency the uncontrolled pumps of the heating system in Tettnang were replaced by frequency-controlled pumps
2012 Installation of a geothermal system > renewable energies
2014 ifm wins Innovation Award 2014 of "EnBW Netzwerk Energieeffizienz"
Since 2014 use of and replacement by LEDs
Since 2015 Perform an energy audit to DIN EN 16247-1 at all German locations
2018 Checking the compressed air network for leakages at the location TT-Bechlingen Leakages of approx. 80 l/min were immediately eliminated.

Chemicals and other measures

1987 General changeover to cadmium-free plastics
1992 Replacement of CFC and chlorinated hydrocarbons including halon fire extinguishers
1993 Setting up a hazardous materials store and disposal centre by taking strict environmental regulations into account
1994 Appointment of an authorised person for hazardous goods
1998 Complete substitution of nickeliferous coatings of brass turned parts by the new material Optalloy
2006 Implementation of the RoHS1 requirements although our products were exempted
2017, 2019 Implementation of RoHS2 for major part of products (equipment category 9 and 11)

Organisation

1991 Creation of the department "Occupational safety and environmental protection"
1993 Preparing the first ecological report for the main production site Tettnang to be annually updated
2000 The management decides on the introduction of an ifm-internal environmental management system

Measures in 2020

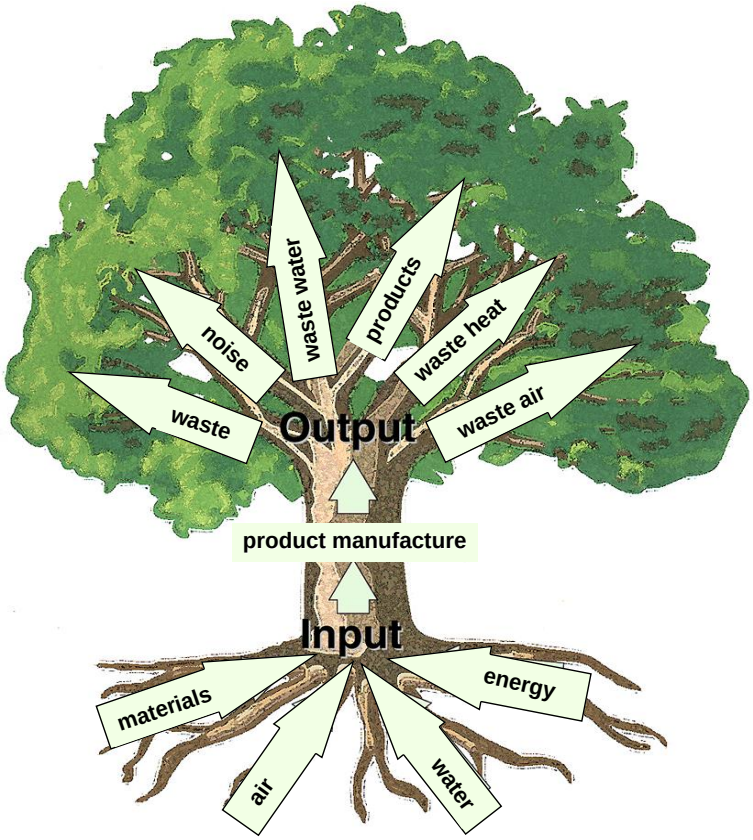
- Changeover to 100 % green electricity at all locations in Germany and the production sites in Europe. Savings: approx. 10,000 tCO_2/a
- Initial validation of the environmental management system (EMAS and ISO 14001) at four German sites, covering all significant business activities
- Implementation of environmental check list in innovation process
- Provision of hybrid company cars and charching infrastructure
- Changeover to environmentally friendly transport packaging (carton, recyceled plastic, bioplastics)

Ecological Report

In 1992 the first ecological report was written for the production site Tettnang. Since then it has been updated every year.

The purpose of the ecological report is a comprehensive and systematic analysis and assessment of the weak points of a company with the goal to achieve a lasting reduction of environmental impact. The ecological report provides an overall picture of the company (see figure). It is an input/output analysis with the manufacturing process itself not being considered.

All substances and energies which go into the company as well as the products, waste and emission which go out of the operation are looked at by means of the criteria "quantities" and "cost".



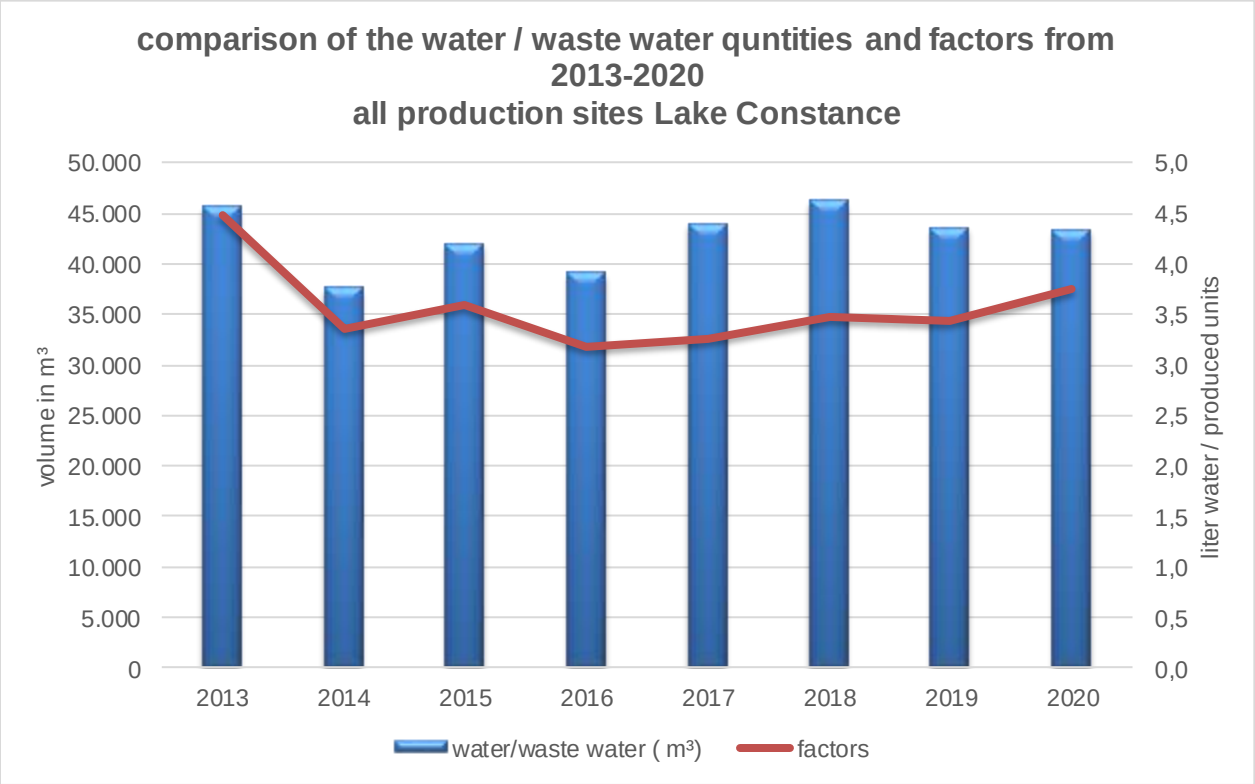
OVERVIEW ECOLOGY

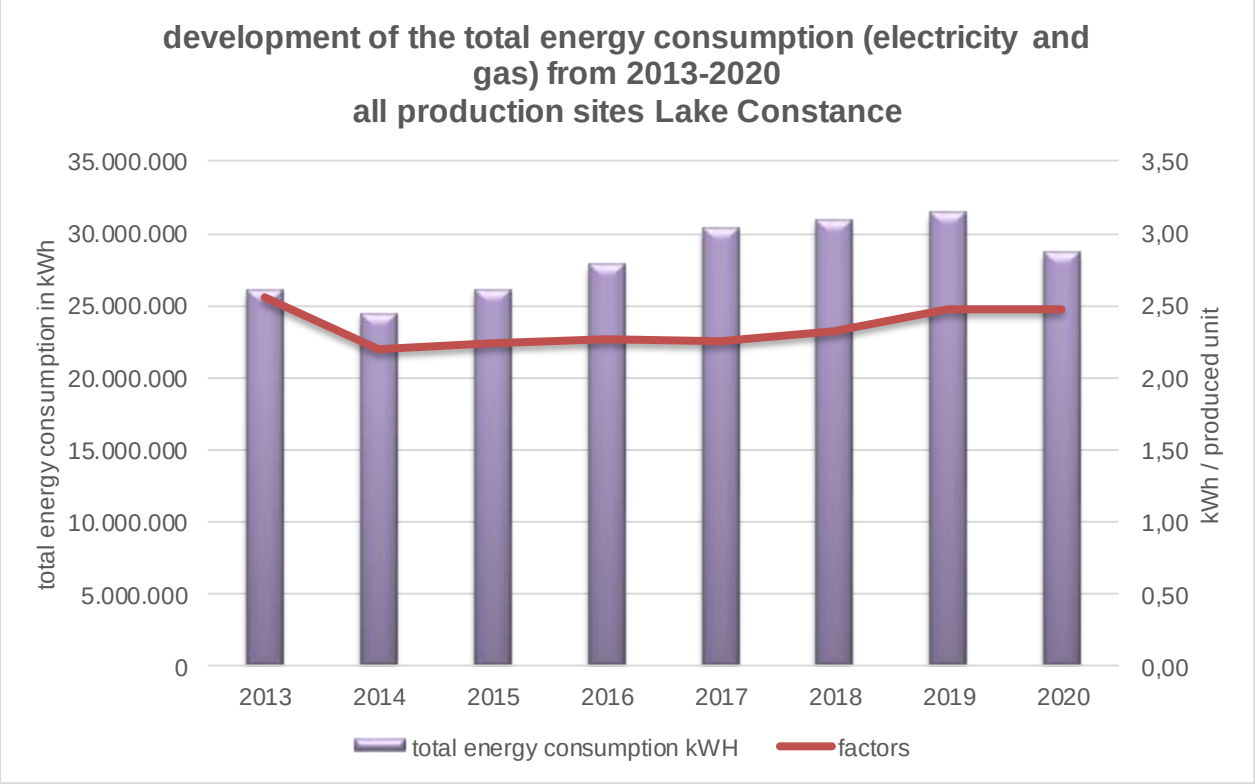
The environmental importance of the input/output substances is assessed by means of an ABC/XYZ classification. With this method important and less important environmental data are separated. The following five criteria are assessed.

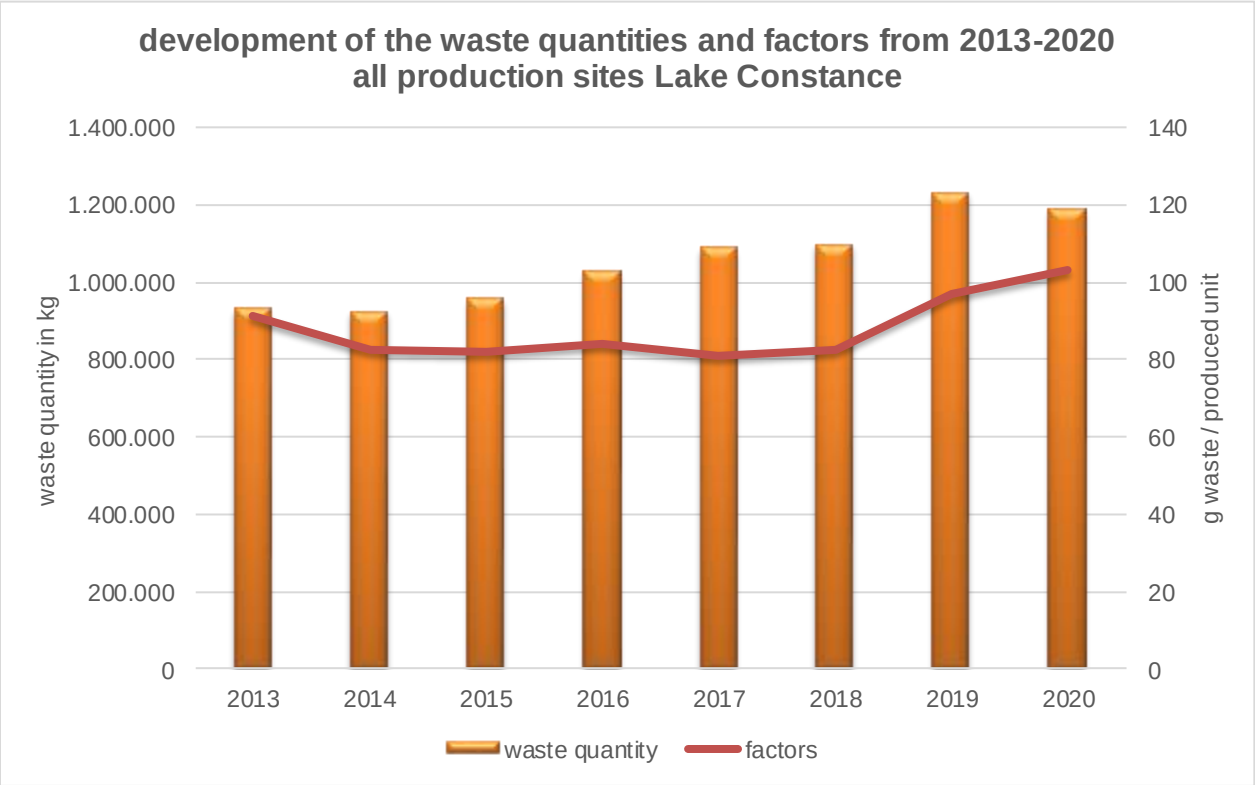
1. Legal requirements for environment (compliance with laws, regulations)
2. Acceptance by society (requirements of ecological groups, goal: avoidance of image loss)
3. Potential of hazards and accidents (classification of the ecological risk potential by normal risk and risk of accidents)
4. Additional environmental cost (determination of additional cost)
5. Exhaustion of regenerative resources (consideration of how long raw material reserves last)

This evaluation shows for which substances alternatives are needed most urgently and which substances can be used without problem. Input substances which cause high additional cost (because of measures in the warehouse and production area or expensive disposal) can be seen at first glance. Looking for substitutes for the used hazardous materials in good time avoids to act under pressure as a result of stricter legislation.
The goal and purpose of an ecological report is not only to show and assess ecological weak points but also to eliminate them efficiently. The ecological report also serves as a current source of information. To accomplish these functions in the long term the ecological report must be completed and updated every year.

The absolute quantities and the key figures for the material flows water/wastewater, energy (electricity and heat) and waste for the ifm sites on Lake Constance are shown below.







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