GRAPHIC PACKAGING

We turn industrial buildings into your competitive advantage.
Using clever solutions specially developed for the packaging sector.

The expert for industrial buildings.

**You offer high-quality packaging –
we provide the industrial building to match**

An industrial building could be so beautiful. The material and personnel flows within the factory are designed to be junction-free: raw materials and products move around the ground floor, people one level higher. The factory is designed to be so forward-looking that the building can be flexibly extended and the plot developed in phases. The warehouse zones are directly connected to the production areas and, given continued growth, can not only be easily enlarged, but also suitably automated.

You would also like to have a factory like this? Then take this to heart: forget run-of-the-mill, off-the-peg industrial buildings. Instead, regard the building as a component of your production process, requiring just as careful planning as your production and manufacturing facilities. Because if you own a building that is not in tune with your production processes, you will find yourself counteracting this daily with work-intensive measures.

In the highly competitive packaging industry, in particular – with its high cost and quality pressures – such losses in efficiency are very difficult to compensate for. Here at IE Graphic, we plan and execute industrial building projects for the printing and packaging industry, in which production processes, building services engineering and architecture are optimally coordinated. We guarantee that, even on plots with unfavourable configurations and for structures organically matured over decades, enormous leaps in efficiency are possible. Because we employ architects and engineers with a wealth of experience in the printing and packaging industry. This allows us to closely interweave operational and construction planning and to compile a long-term master plan.

Don't rely on just any old shed, but on an industrial building that really earns the title: a building that is optimally coordinated with your production processes – and thus becomes a machine in its own right.

Holger Ochel
Manager Packaging Division

Clever industrial buildings solutions: competitive advantages engineered by IE

We will give you more than just a shell for your production facility: we enhance the efficiency of your processes – with industrial buildings perfectly matched to your production processes. The optimal process is reflected in a clear architectural language. How we do it? With a lot of brainwork. We are not satisfied with mere run-of-the-mill solutions. Clear competitive advantages await our clients at the end of the process. Here are a few project examples:

1

Buildings and processes in harmony

Plan correctly from the start – save costs daily

Together with a local architect, a packaging printer plans the site extension for a warehouse and production shed. When planning is complete, the client has their doubts and seeks out a third opinion. IE Graphic examines the proposals and performs an integrated study of the production processes and the buildings. Possible future scenarios are taken into consideration and a variety of production process options simulated. The result is clear: the dimensioning of the originally planned building is insufficient; processes are hampered, as is any future expansion. IE Graphic plans the building anew and integrates a linear process chain. Compared to the original planning, IE increases the shed size by 360 square metres to a total of 11,000. This additional space allows three production lines to be optimally positioned. Efficiency increases substantially, in particular in the material flux. All materials and semi-finished products need now only be touched once. The enhanced transparency and speed and the quality improvement in the semi-finished products warehouse have a positive impact on business – day for day. Searching and redistribution are a thing of the past – space creates quality. Our client's conclusion: 'In just a few weeks, employing IE Graphic has brought in more money than it cost me overall.'

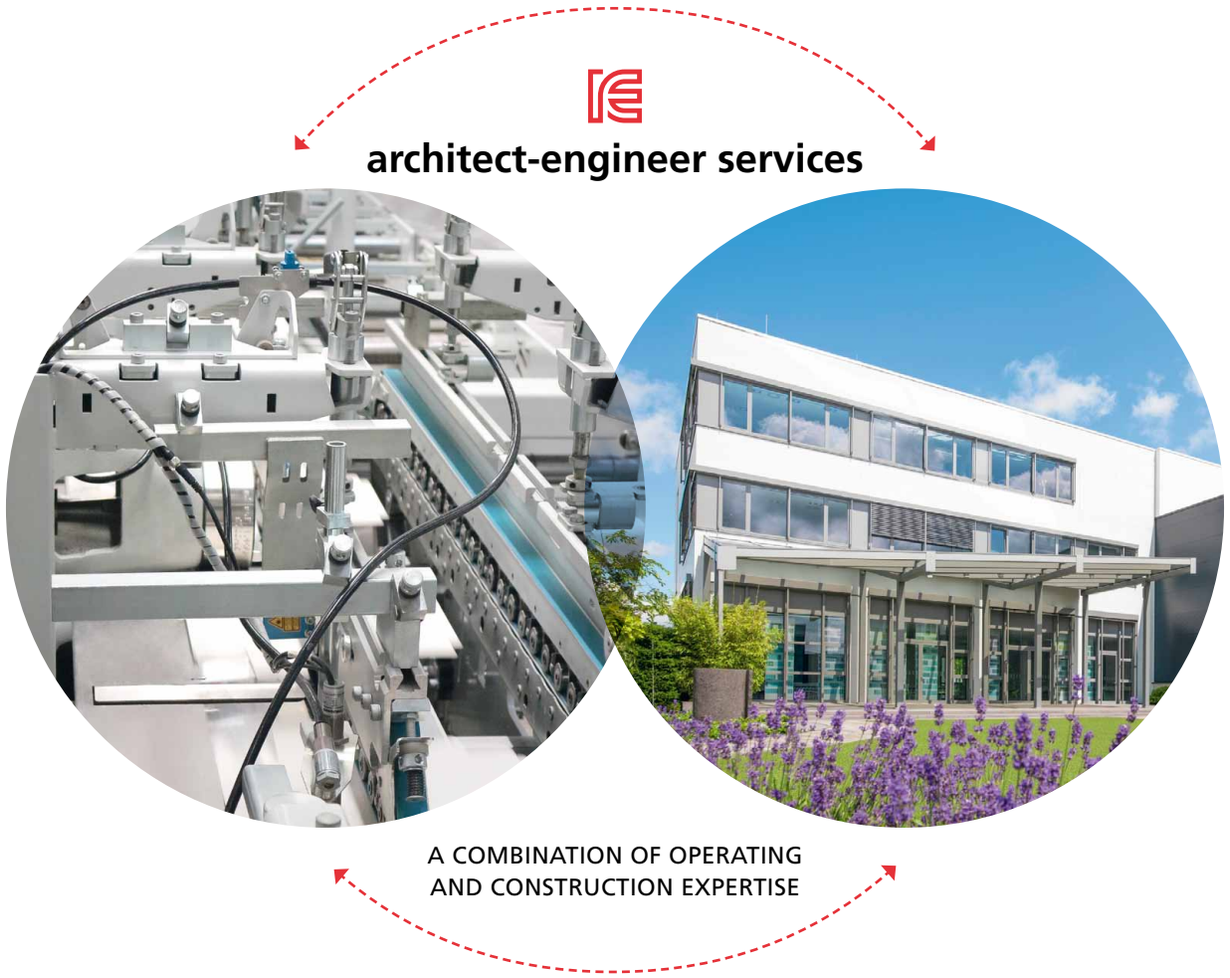
2

Master plan for site expansion

The complexity doesn't grow – the efficiency does

An company produces top-quality packaging for the foodstuffs industry at a site developed over decades. Five printing machines and seven punches in both medium and large formats are used. The company management faced the challenge of expanding production capacity and required a concept for further site development. The difficulty was the enormous dimensions of the new machine. At the same time, an increase in efficiency at the site was required, in particular in intra-logistics. Moreover, building services engineering required refurbishment and modern fire safety requirements had to be met.

In several workshops and in cooperation with the client's responsible staff, the IE team worked on a solution for defragmenting the site, which was split into numerous buildings. This master plan comprises several flexible development phases and, as a first step, includes an extension to a printing shed. After only four months, the client received a detailed time and activity plan from IE for phased implementation of the individual measures during the coming five to ten years – applicable to both the processes and the building. The master plan is designed such that production can be continued without interruption during all conversion and expansion measures. The company's CEO says: 'The advantage for us in cooperating with IE Graphic is the security in knowing we can continue to grow at this site – in such a way that we increase efficiency step by step, until we reach the final objective and achieve the "perfect factory".'



3

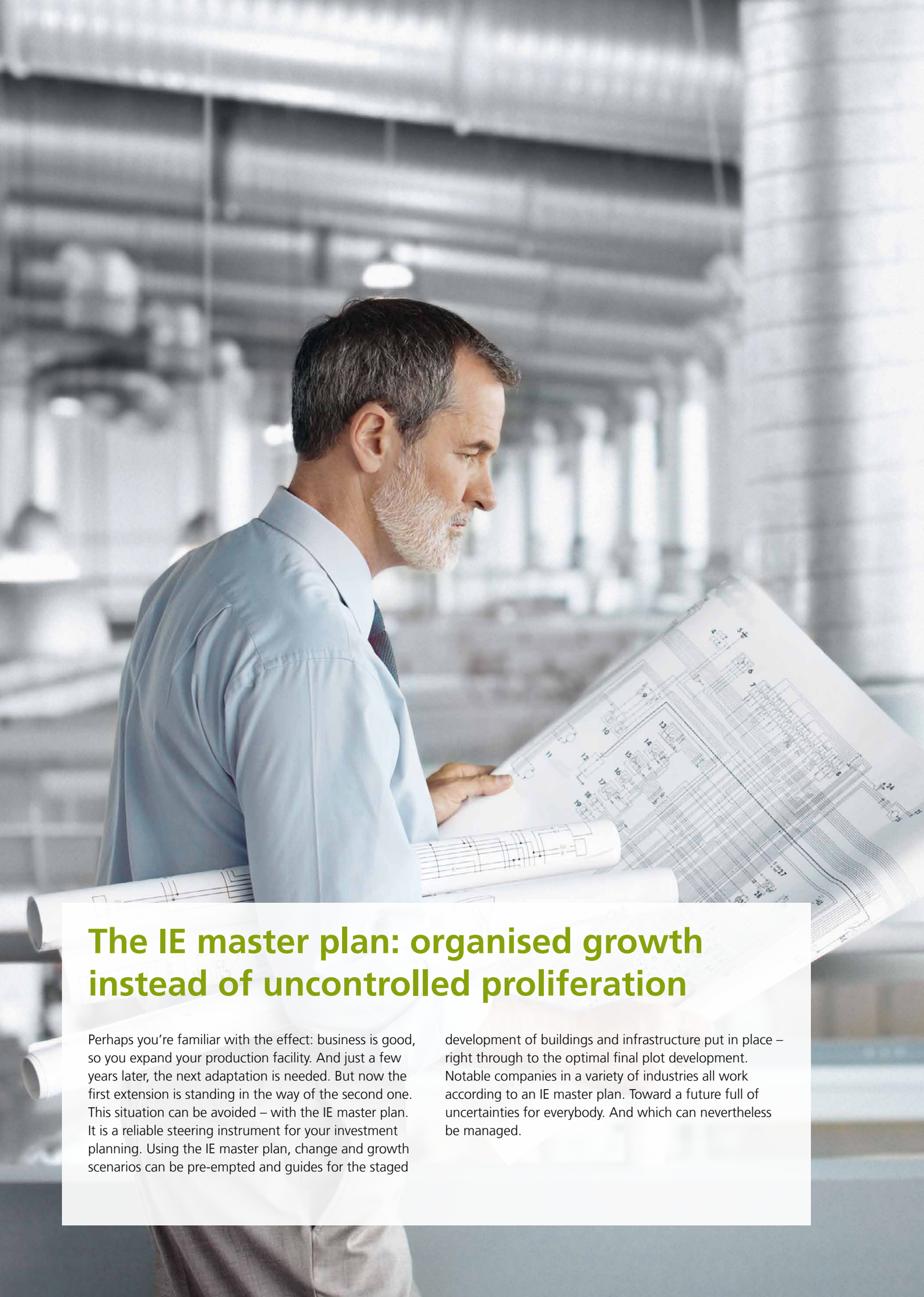
Market dynamics and planning in harmony

Guide rails for flexible growth

A corrugated cardboard producer wants to double production capacity over the medium term by building a new site. Offset sheet technology using several machines is employed for laminated corrugated cardboard, plus corrugated cardboard machines using inline lamination for a variety of corrugation types, punching machines and bonding units.

Together with the client, the IE Graphic engineers compile numerous scenarios, using individual solutions to suit the product portfolio, which incorporate future development opportunities for the site – all within three months. Both optimum machine configurations and material flux concepts, as well as the extensive HACCP requirements for packaging in the foodstuffs industry, are integrated. The process and construction execution was planned such that product and process changes within the building remain possible even over the medium term. This means the company can continue to grow at the new site, including past the 30,000 square metres planned in the first stage.

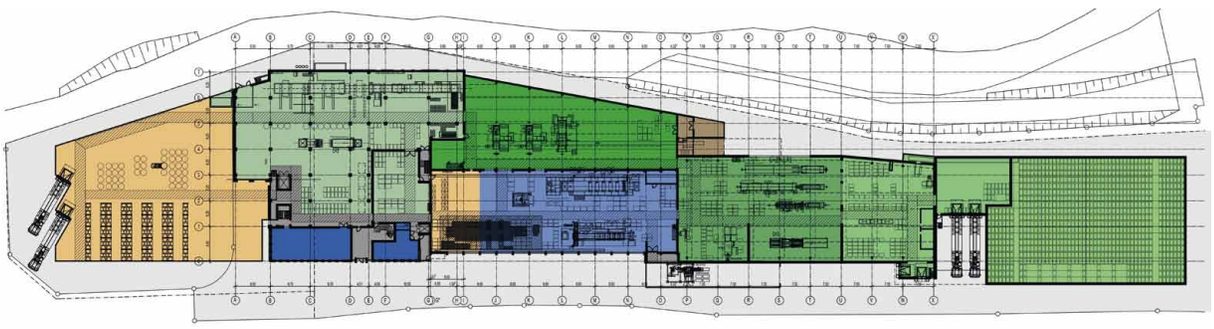
From the client's perspective, cooperation with IE paid off: 'Thanks to IE's planning, we have all the options available to flexibly react to market developments in the future. The proposed production process does not block any future developments, but can be flexibly adapted within specified guides. This is extremely important to us in the dynamic packaging market, and IE Graphic implemented this in an exemplary manner when planning the process configuration and the building structure. A true gain on our part.'



The IE master plan: organised growth instead of uncontrolled proliferation

Perhaps you're familiar with the effect: business is good, so you expand your production facility. And just a few years later, the next adaptation is needed. But now the first extension is standing in the way of the second one. This situation can be avoided – with the IE master plan. It is a reliable steering instrument for your investment planning. Using the IE master plan, change and growth scenarios can be pre-empted and guides for the staged development of buildings and infrastructure put in place – right through to the optimal final plot development. Notable companies in a variety of industries all work according to an IE master plan. Toward a future full of uncertainties for everybody. And which can nevertheless be managed.

The space miracle: same plot, more area, more efficiency



Organically grown site with production process optimised in phases and successive investments.

A company's production facilities had grown over many years. As the available area at the headquarters slowly grew scarce, management faced a fundamental decision: should they stick to the existing location, the plot of which could not be extended? Or would it make more sense to move to an additional site and gradually expand production there? The company commissioned IE to compile an expert report on the expansion potential at the existing company premises. With surprising results.

As early as the first site inspection, IE Graphic experts noticed that the different functional areas were apparently located around the plot without any recognisable system: production areas, as well as warehouse and administration buildings, were spread across the property in a number of small units. This led to an extremely complex flow of material and personnel, and to duplicate structures. In short, the company's uncoordinated growth had led to inefficient structures and processes, and the site's potential in terms of floor area was not exhausted – not by a long shot.

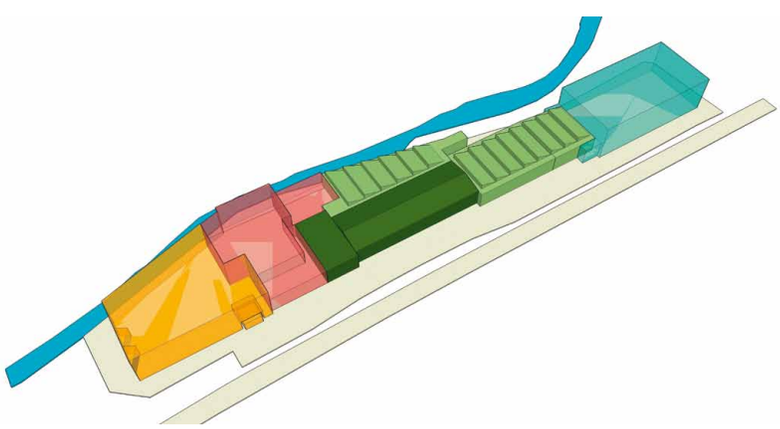
Separate and centralise functions

IE's solution envisaged a phased conversion and development of the complete factory plot with the end product being that areas are separated into different functional areas. Rooms belonging to one and the same functional area, previously strewn across the entire plot, are brought together in one location. The new buildings fully utilised the cubage allowed by building regulations – where this was operationally possible and useful. This allows the available space to grow as work proceeds from one master plan implementation stage to the next; at the same time, processes become ever more efficient.

Metamorphosis during ongoing operations

It is exactly this increasing efficiency that demonstrates the potential that comes with having a master plan: it turns the normal logic of organic growth on its head. A clear pattern for continued expansion, aimed at an optimal end product, takes the place of increasing complexity and rampant structures. In this way, the company can continuously 'grow into' increasing efficiency. And all this without major obstacles to production. In the case described here, the master plan was designed such that all construction measures could be executed during ongoing operations.

And how much additional space is now available to the company? If the master plan is implemented completely, the floor space will increase by a good 20 per cent – despite having the same plot size. It was certainly not necessary to relocate the production facilities.



The final master plan development stage: the cubage allowed by building regulations is utilised to its optimum.

IE Group: the expert for industrial buildings

We plan, design and execute industrial building projects. Our aim is the greatest possible efficiency for your production – with the aid of industrial buildings perfectly matched to your production processes. This is why the building as such is not the focal point at the beginning of a project, but instead factors such as the production process, goods and personnel fluxes, hygiene and clean room requirements, and the expansion potential. You thus get operations and construction planning from a single source, regardless of whether it is a new build or the expansion of an existing system. At the end of the process are sustainable industrial buildings: efficient, low emission and flexible.

We work in small and powerful teams of industry experts. **IE Graphic, IE Food, IE Plast, IE Life Science and IE Technology** are embedded in the IE Group, which has been a market player since 1966 and provides the necessary financial backbone – even for large construction projects.

EMPLOYEES

› 80 construction and operations planners, architects, business and mechanical engineers, logistics and building services engineering experts

ORIGIN

› Founded in 1966 in Switzerland, now at home in Germany, Austria and Switzerland

LOCATIONS

› Offices in Zurich, Munich, Nyon and Frankfurt

TURNOVER

› CHF 80 million (EUR 67 million)

What makes us different

AT HOME IN YOUR INDUSTRY
We specialise in industrial buildings in five different industries. Our extensive experience in these fields mean that we speak exactly your language and understand your production processes. Our industrial buildings are therefore uncompromisingly planned, from the inside out.

EMPLOYEES AS ENTREPRENEURS
Here at IE Engineering, all employees are stakeholders in the company, meaning you can rely on our teams' motivation and initiative. Experience a new kind of partnership in cooperation.

ALL EXPERTS UNDER ONE ROOF
Our IE industry-specific engineers, architects, planners and logistics specialists all work for a common cause, allowing us to create industrial buildings that convince from any angle. Production processes, technical building services and architecture are thus optimally coordinated.

GUARANTEED SECURITY
Our planning and implementation guarantees give you complete security in terms of costs, deadlines, quality and function. From the initial design idea, through the choice of production technology, operational and logistics planning, to architect-engineer design and planning services and implementation, we execute all project stages – including in work contract format.

Our range of services

DEVELOPMENT
- ✓ Objective definition workshops
- ✓ Investment strategies
- ✓ Feasibility studies
- ✓ Site structure plan/ master plan
- ✓ Industry trends

PRODUCTION TECHNOLOGY
- ✓ Requirements profiles
- ✓ Invitations to tender
- ✓ Technical comparison
- ✓ Draft contracts
- ✓ Specifications
- ✓ Commissioning

OPERATIONAL PLANNING
- ✓ Requirements planning
- ✓ Operational concepts
- ✓ Processing plant planning
- ✓ Hygiene concepts
- ✓ Logistics concepts

CONSTRUCTION PLANNING
- ✓ New builds
- ✓ Conversions
- ✓ Extensions to production, administration and warehouse buildings

CONSTRUCTION EXECUTION
- ✓ Construction supervision
- ✓ Construction monitoring
- ✓ Coordination of operations, building services engineering, and construction
- ✓ Guarantees in terms of costs, deadlines, functions and quality
- ✓ Documentation

LOGISTICS — GMP/HACCP/FSC — SUSTAINABILITY

We have a clear methodology, you have complete control

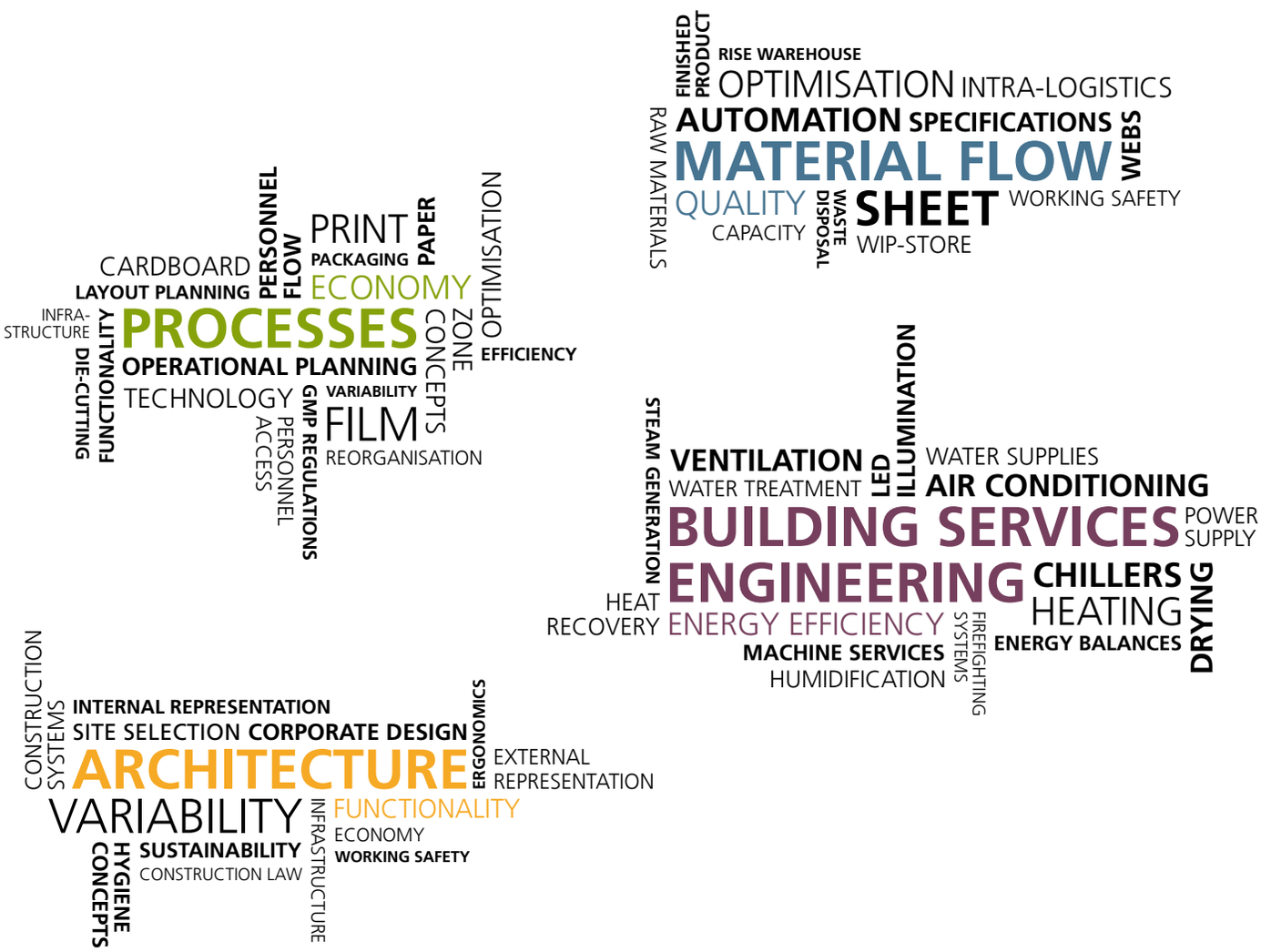
We work in clearly delineated project stages. This allows you to examine the results of our collaboration from phase to phase and to make corrections where necessary – from the initial idea through to implementation.
At the same time, you enjoy cost stability, which is enhanced from one project stage to the next. You can fully rely on adherence to costs during project implementation. We give you our word on that – and contractual guarantees.

Trust and transparency characterise the customer-IE relationship
With our transparent procedures and guarantees, we follow one objective above all others: a robust partnership with our customers characterised by mutual trust. This is the most fundamental requirement for close cooperation and determines the success of our projects.

INVESTMENT IDEA › **PROJECT DECISION** › **INVESTMENT DECISION** › **EXECUTION DECISION**

Our services for the packaging industry

How are we able to cover all of these aspects and sensibly interlink them all? Because we are at home in the packaging and printing industry and have already implemented a large number of industrial building projects. This is how we know our way around the industry's production processes just as much as we are aware of the typical problems of organically developed facilities. Trust in the experience of our experts: together we create industrial buildings in which all gears intermesh.



Try us out – and your own ideas!

Already have an idea of your construction project? We will thoroughly assess your idea and examine how well it can be implemented within your budgetary framework. In addition, as part of this feasibility study, we identify possible alternatives and compare the cost–benefit ratios. You get to know our way of working and, at the same time, have all the facts in order to make a project decision.

You have a lot to gain, without risking anything: greater efficiency, lower costs and better quality.

Don't miss out on these competitive advantages.
Why not arrange an initial meeting, with no obligation?

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IE GRAPHIC

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