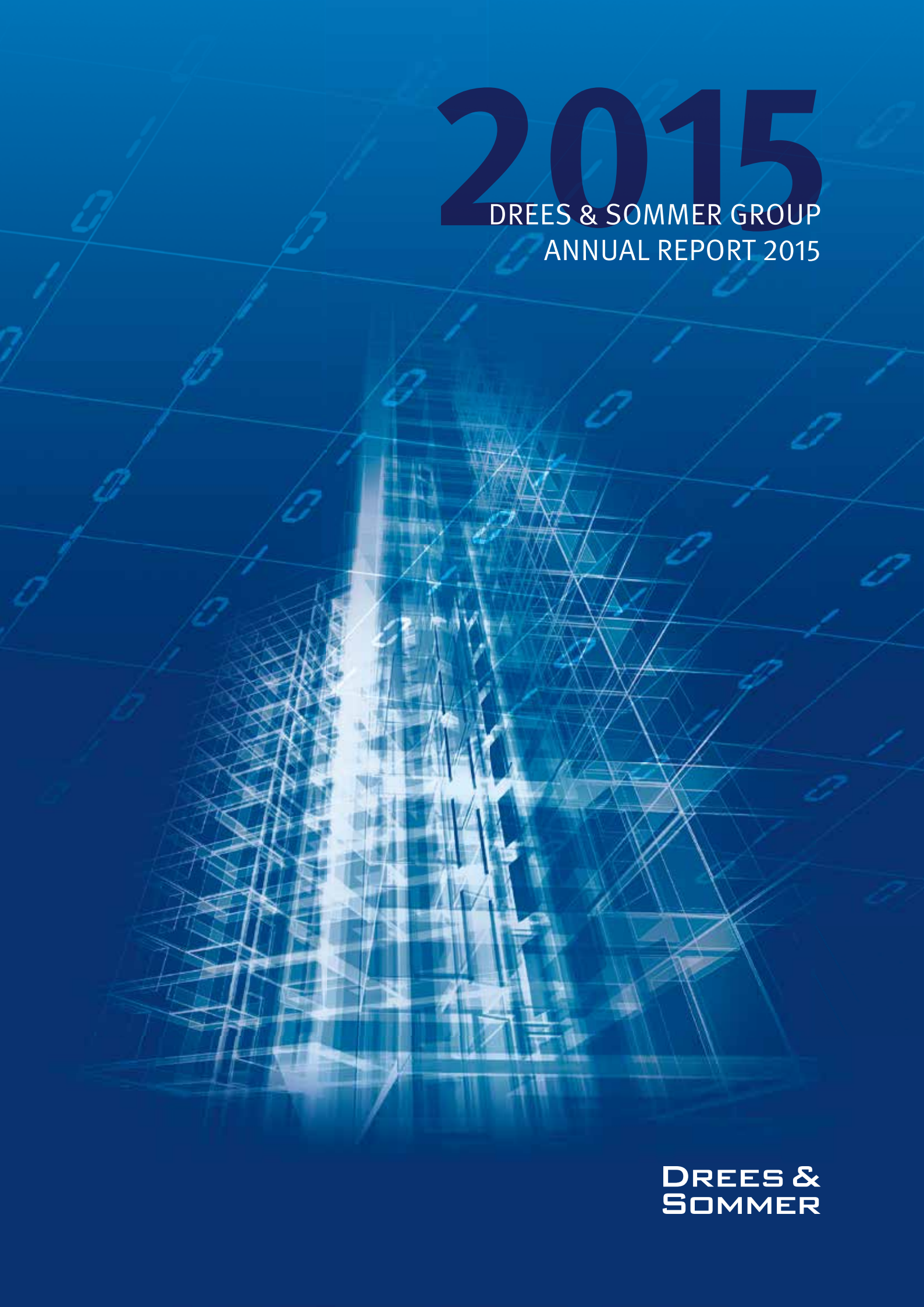


2015

DREES & SOMMER GROUP
ANNUAL REPORT 2015

DREES & SOMMER

GROUP OPERATING RESULT 2015

300.7

Sales in
million euros

37.1

Operating
result in
million euros

28.6 %

Equity ratio

Approx.
2,150
employees

40

National and
representative
offices

CONTENTS

GROUP OPERATING RESULT 2015

PROFIT & LOSS STATEMENT

			(in euros)
1.	Revenues	294,728,801	
2.	Change in work in progress	–2,496,827	
3.	Other operating income	8,478,076	300,710,050
4.	Expenditure for purchased services	57,929,892	
5.	Personnel expenses	156,452,065	
	a) Wages and salaries	139,699,725	
	b) Social security costs and pension fund	16,752,340	
6.	Depreciation	3,980,151	
7.	Other operating expenses	45,181,375	263,543,484
8.	Income from shareholdings	173,874	
9.	Income from other securities and from long-term loans	427,977	
10.	Interest and other expenses	622,227	–20,376
11.	**Operating result**		**37,146,190**
12.	Taxes on income and earnings	12,132,845	
13.	Other taxes	146,515	12,279,360
14.	**Net income**		**24,866,830**
15.	Shares held by other shareholders		–70,727
16.	Profit brought forward less dividends		–10,112,466
17.	Changes in equity as the result of purchase or sale of own shares		–721,814
18.	**Group balance sheet profit**		**13,961,824**

BALANCE SHEET

ASSETS		(in euros)
A.	**Fixed assets**	
I.	Intangible assets	3,878,402
	1. EDP software, licenses	821,938
	2. Good will resulting from capital consolidation	3,056,464
II.	Tangible assets	11,045,445
	1. Land, rights equivalent to real property rights, and buildings	1,566,461
	2. Other assets, operating equipment, fixtures and fittings	8,811,581
	3. Payments on account and tangible assets under construction	667,403
III.	Financial assets	3,608,639
	1. Shareholdings	1,036,915
	2. Other securities lending	2,571,723
B.	**Current assets**	
I.	Inventories	0
	1. Work in progress	301,729,288
	./. Advances received	–301,729,288
II.	Receivables and other assets	52,797,576
	1. Trade receivables	43,919,242
	2. Receivables from shareholdings	3,358,238
	3. Other assets	5,520,097
III.	Securities	4,997,888
	1. Other securities	4,997,888
IV.	Checks, cash on hand, cash in banks	67,271,128
C.	**Deferred income (other)**	1,110,994
D.	**Prepaid taxes**	2,520,000
E.	**Positive difference from asset allocation**	19,315
	Balance sheet total	**147,249,386**

LIABILITIES		(in euros)
A.	**Equity**	
I.	Subscribed capital	13,052,286
	less nominal value of treasury shares	–433,968
II.	Capital reserves	16,979,555
III.	Revenue reserves	98,104
IV.	Net income	13,961,824
V.	Change in equity due to exchange rate difference	–1,552,308
VI.	Minority interests	10,581
		42,116,074
B.	**Accruals**	
	1. Accruals for pensions	3,453,662
	2. Provisions for taxation	13,607,053
	3. Other accruals	40,289,370
		57,350,085
C.	**Liabilities**	
	1. Payments received on account of orders	20,876,664
	2. Trade payables	13,784,989
	3. Liabilities to shareholdings	9,555
	4. Other liabilities	13,098,996
		47,770,204
D.	**Deferred income (other)**	13,023
	Balance sheet total	**147,249,386**

PROFIT & LOSS STATEMENT

Group sales grew by 58.7 million euros to 300.7 million euros (prior year 242.0 million euros). In the year under review, expenses rose 47.1 million euros to 263.5 million euros (prior year 216.4 million euros). The operating result increased by 10.9 million euros to 37.1 million euros. Net income totaled 24.9 million euros.

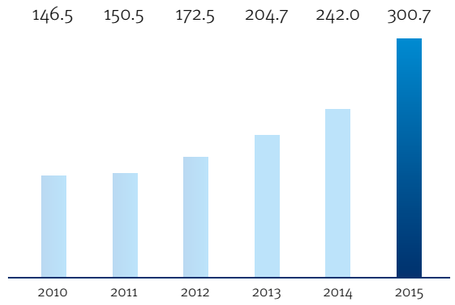
BALANCE SHEET

The transfer of the balance sheet profit of 14.0 million euros – together with subscribed capital, capital reserves and revenue reserves – results in equity of 42.1 million euros. The equity ratio is 28.6 percent.

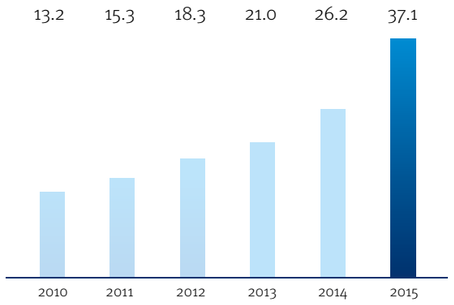
Accruals for pensions, taxes and variable remuneration rose by 14.1 million euros to 57.4 million euros. Liabilities such as trade payables to suppliers and subcontractors increased by 5.4 million euros to 26.9 million euros. Payments received on account of orders rose by 1.4 million euros to 20.9 million euros.

This results in a balance sheet total of 147.3 million euros for fiscal 2015 (prior year 120.2 million euros).

SALES IN MILLION EUROS



OPERATING RESULT IN MILLION EUROS



300.7
Sales in million euros

37.1
Operating result in million euros

28.6 %
Equity ratio

Approx.
2,150
employees

40
National and representative offices

Executive Board and Partners
(from left to right)

Dierk Mutschler

Steffen Szeidl

Peter Tzeschlock
Chairman of the Executive Board

In 2015, we once again completed many successful projects in collaboration with our clients and got new projects under way. Many thanks to our clients for entrusting us with these projects, and to our employees for their exceptional commitment in realizing them.

The 2015 financial year

Group sales in 2015 totaled just over € 300 million (prior year € 242.0 million), and – thanks to the implementation of the efficiency program and the successful integration of companies – the operating result increased by a significantly higher percentage to € 37 million.

This positive development is due to the consistent implementation of our corporate strategy. Our focus on the new Building Information Modeling (BIM) during the planning phase, on lean management during construction, and on customer-oriented service components is paying ever greater dividends. Combined with our renowned competencies in project management, engineering and complementary consulting, we have succeeded in achieving a largely interface-free approach for complex projects. The degree to which these three core competencies are required varies from project to project and from one service phase to the next. The perfect application of the respective competencies at the right time has significantly helped to increase the added value for our clients.

This is all the more important as we now also take complete responsibility for projects as part of our General Construction Management (GCM) service, and continue to support our clients with systematic operational optimization strategies even after completion of construction.

Industry strategy and innovation leadership

In consulting, too, our focus is on the client and their challenges. The positive development of our services in the Life Sciences sector is a good example of this approach. Our experienced specialists in this area have shown that we can make a greater contribution to clients' success if we understand more about their core business and can act as a reliable consultant to them.

In addition to our targeted industry strategy, we have further developed our cross-industry Best Practice approaches. Here we transfer processes and ideas from one industry to another. Retail industry experts, for example, are showing great interest in how their colleagues from the hospitality industry handle the digital transformation of specific processes.

We have also been able to extend our innovation leadership in many areas in the form of opinion leadership – without always putting our company center stage. We continue to do this as an active member of associations and committees such as the German Sustainable Building Council (DGNB) and the German Property Federation (ZIA), promoting our topics and charting a course for the future.

Growth in moderation

RBS - Projekt Management GmbH has been a member of the Drees & Sommer Group since May 2015. Headquartered in Munich, the 80-strong consulting firm is part of the RBSGROUP.
Our new colleagues will selectively augment Drees & Sommer consulting expertise, especially in the area of workplace consulting. We are taking care to ensure that RBS continues to service its established customer base as successfully as in the past. At the same time, however, activities will be turbocharged by joint projects within the Drees & Sommer Group.

» OUR CLIENTS REAP THE BENEFITS OF HIGHLY MOTIVATED EMPLOYEES WHO BELIEVE IN SYSTEMATIC AND CONTINUING VOCATIONAL TRAINING AND ARE SPURRED ON BY SUCCESS

Further mergers in Austria (Reality Consult), Switzerland (RBS Switzerland), and Dubai (SIDE) were negotiated at the end of 2015, with those companies also becoming part of the Drees & Sommer Group from 2016. There is still a general focus on strategic mergers, but the main objective is never simply sales growth, but always strategic additions or the development of new areas of business or international locations. Organic growth is called for in our established business areas.

What the future holds

Digitization is a topic that will require very close attention over the coming years – both on our part and on the part of our clients. Drees & Sommer is in excellent shape in this area, and is already ahead of the curve for support with developments such as BIM, digital tools and innovative apps.

However, it is inevitable that, in the course of the digital transformation, there will be significant changes for our clients too – perhaps even extending to disruptive change of business models. Such changes will in turn affect us and our business model.

Our 'BLUE CITY – Integrated Urban Solutions' theme – the vision of the city of tomorrow – is one example of this. While Drees & Sommer is taking a holistic view of the future – ecologically, economically and socially – a company like Google sees the future solely from the perspective of the digital 'Smart City'. The challenges will not diminish.

Supervisory Board

Prof. Dr. Hans Sommer
Chairman

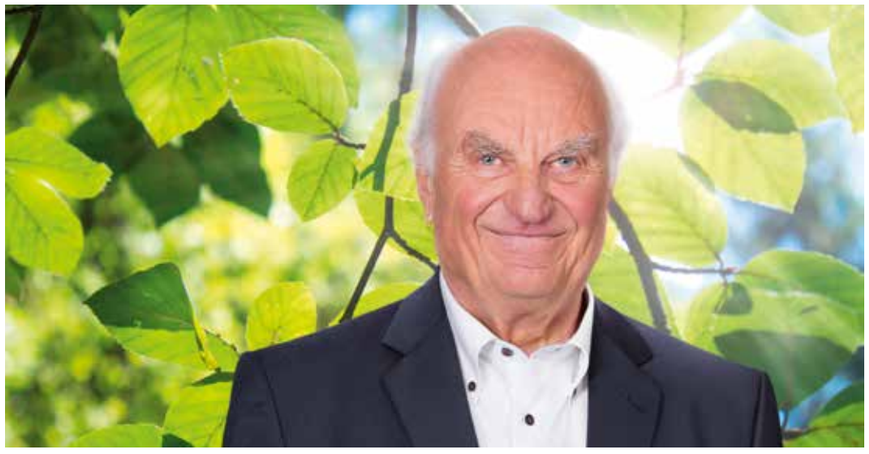
Dr. Johannes Fritz
Deputy Chairman

Eva Dietl-Lenzner

Dr. Bernd Gaiser

Prof. Holger Hagge

Volker Mack



Although the market environment has softened rather than improved, particularly in Russia, the good results achieved on the domestic market and in Switzerland allowed us to once again achieve a very successful financial year. On behalf of the Supervisory Board, I would like to thank all employees of Drees & Sommer for their dedicated efforts. This thanks also applies to the members of the Executive Board, Partners, and all our managers, who provided successful leadership to the company.

Continuous dialog with the Executive Board

We fulfilled the Supervisory Board tasks in full compliance with statutory requirements, the Articles of Association and rules of procedure in fiscal 2015. In particular, we carefully and regularly monitored the work of the Executive Board and gave advice on the management and strategic development of the company, as well as supporting major decisions.

Focus of Supervisory Board meetings

At each meeting we discussed the Executive Board reports, the development of the company, and strategic issues. We also reviewed general economic conditions and their impact on the Drees & Sommer Group's business model.

At the meeting on March 17, 2015 we primarily discussed strategic considerations. The focus was on the strategy for digitization and initiatives already undergoing implementation in accordance with the Strategy Roadmap, such as the new Project Management Agreement (PAV) and the restructuring of IT. Other discussion topics included proposals for the Annual General Meeting agenda, such as a stock split or a further capital increase.

Our meeting on May 12, 2015 focused on the annual and consolidated financial statements for 2014 and our proposed resolutions for the 2015 Annual General Meeting. During this meeting, the Supervisory Board once again satisfied itself of the required independence of the auditor. The auditor declared to the Audit Committee that there were no grounds to assume bias on its part. The Supervisory Board discussed the annual and consolidated financial statements for 2014, including the auditor's reports, the proposal for the appropriation of net income, and the risk report, and prepared the appropriate resolutions for the Annual General Meeting. Moreover, the Supervisory Board made a recommendation to the Annual General Meeting regarding the appointment of the auditor for 2015.

At our meeting on October 13, 2015, the key issues included the critical developments in Russia, Saudi Arabia and China. The Executive Board proposed a range of solutions – including a hub in Dubai for the activities in the UAE and Iran. These were generally approved by the Supervisory Board. Other topics related to the Strategy Roadmap were future reporting to the Supervisory Board, and the current status of the efficiency program and of internal processes. Finally, the current acquisition of the RBS company in Munich was presented by its senior executives.

The projections and business plan for the year 2016, as well as planning for the individual organizational units, were the focus of our meeting on December 10, 2015. Three planned mergers or acquisitions already in preliminary negotiations were also presented, namely RBS Switzerland, SIDE Dubai and Reality Consult, Austria. The Supervisory Board approved subject to individual stipulations for the final negotiations.

Annual and consolidated financial statements 2015, audit of annual accounts

The annual financial statements and the consolidated financial statements of Drees & Sommer AG were prepared by the Executive Board in accordance with the provisions of the German Commercial Code (HGB). Baker Tilly Roelfs – appointed by the Annual General Meeting as auditor for the 2015 financial statements – audited the 2015 annual financial statements and the consolidated financial statements, including the management reports. Baker Tilly Roelfs performed the audit in accordance with article 317 HGB (German Commercial Code) and in compliance with the auditing principles adopted by German Institute of Public Accountants (IDW). The annual and consolidated financial statements were approved without reservation.

The annual financial statement and management report, the consolidated financial statement and group management report, the auditor's reports, and the Executive Board's proposal for the appropriation of net income of Drees & Sommer AG were made available to all members of the Supervisory Board in a timely manner. We examined these documents and discussed them at our meeting on May 10, 2016, in the presence of the auditor, who reported on the key findings from the audit. We duly approved the auditor's reports. The Executive Board's assessment of the company and the Group is consistent with our assessment. At our meeting on May 10, 2016, we also approved the annual financial statement, the consolidated financial statement, and the management reports prepared by the Executive Board. We discussed and approved the Executive Board's proposal that the net income of Drees & Sommer AG be used to pay a dividend of € 2.00 per share, and that the balance – and the amount allocatable to own shares held by the company at the time of the Annual General Meeting – be carried forward to new account. The financial and earnings position of the company, medium-term financial and investment planning, and the interests of shareholders were taken into account in this decision. (Note: The 2015 stock split is to be taken into account when assessing the dividend. For the purpose of comparison, the total post-split prior year dividend would have been € 1.65 per share.)

» THE SUCCESSFUL INTEGRATION OF NEW EMPLOYEES AND MERGERS WERE THE KEY CHALLENGES IN 2015

Our meeting on May 10, 2016 also focused on our proposed resolutions for the Annual General Meeting.

Risk management

In addition to the Audit Committee, the full Supervisory Board also addressed issues of risk management. The focus was on Drees & Sommer's risk management system, in connection with which we requested reports on the major individual risks. No risks that threaten the continued existence of the company were identified.

Changes to the Supervisory Board and Executive Board

There were no changes to the makeup of the Supervisory Board during the year under report. Executive Board member Steffen Szeidl took up his duties as Chief Financial Officer and Chief Digitization Officer effective January 1, 2015.

Stuttgart, May 10, 2016

Digitization – threat or opportunity?

Digitization is changing the economy and society to an extent that seemed almost inconceivable just a few years ago. Disruption and scalable business models are the new buzzwords. What do they mean and what prospects do they offer for the construction and real estate industries?

Standard IPv6:

340

undecillion (10^{36}) IP addresses instead of the 4.3 billion (10^{9}) IP addresses with IPv4 to date

The Internet was invented over 25 years ago and since then, as part of the global process of digitization and networking, it has shaped, changed and fascinated, but also brought uncertainty.

Now, many historians believe that, strictly speaking, the digital age began in 2002. That was when digital storage capacity overtook that of all analog storage media for the first time. It is estimated that today over 95 percent of global information capacity is digital – a radical change that has been compared to the Industrial Revolution in the 19th century, and is referred to as the Digital Revolution.

The speed of this change is manifested most clearly in the huge increase in computing power and storage capacity of even relatively simple devices. For example, today's standard smartphones have far more computing power than the computers that controlled the processes of the Apollo 11 moon landing less than 50 years ago. Big Data – the collection of massive amounts of data from all areas of life – gets more comprehensive every day. The number of IP addresses has recently seen a massive increase to keep pace with demand.

Because now it's not just every phone and computer that gets its own IP address, but 'intelligent refrigerators' already have – or soon will have – their own IP address, too. The Internet of Things (IoT) represents a further quantum leap in the digital penetration of our world.

Visible consequences of digitization

No segment of the economy, no aspect of life escapes the digital transformation. This transition is accompanied by far-reaching dematerialization: Photo collections and slide boxes become dematerialized files that you can save on your smartphone or in the cloud. Internet-based Wikipedia replaces multi-volume encyclopedias. Almost every book can now be purchased digitally and stored and read on an e-reader or other device. Turntables, dictation machines, cameras, telephone books, etc.: All these media can be packed onto a smartphone and accessed any time, anywhere. The owner of a smartphone can share activities immediately and (almost) anywhere in the world with millions – indeed billions – of people.

This really brings home the fact that no technological change in recent decades has brought such massive and lasting change to structures, communication processes and ingrained habits as this dematerialization. For this reason, this type of change is called 'disruptive' change. The massive impacts of the first phase included:

– Global player Kodak had to file for insolvency in 2012 because the company had missed the trend to digital photography
– Currently, the publishing industry is under huge pressure because all important and up-to-date information is available on an increasing number of online platforms free of charge
– Banks have had to close huge numbers of branches because more and more services are being digitized
– And the next phase of dematerialization is imminent: that of money. Then there will be absolutely no need for bricks-and-mortar bank branches

The process is far from complete, but the problem is now being recognized as more of a technical change.

Hardware manufacturers such as Apple, Samsung and Toshiba, and software developers such as Microsoft, Oracle, IBM, SAP and many specialist companies, have been the winners in this first phase of digitization. This phase was essentially about digitizing and accelerating processes.

But now the second phase of digitization has started – with disruptive models. And Silicon Valley has long been the world market leader in disruption and scalable models. Platforms dominate the digital economy. They are establishing themselves as intermediaries between manufacturers and conventional retailers on the one hand and customers on the other. Examples include:

– Amazon and Alibaba, as dealers without retail space
– Facebook as a media company without media
– Uber as the largest taxi company without taxis
– AirBnB as the largest supplier of accommodation without real estate
– Booking.com as a hotel accommodation provider without hotels
– Google as a search engine, that is, the mother of all platforms with huge advertising revenues

All of these companies would not exist without the Internet. In the meantime, these companies are no longer confining themselves to their original business, but have discovered the industrial sector as a growth area – a prime example being Google. And that will have consequences!

One example: The Digital Revolution in the automobile industry

The automotive industry faces major challenges when it comes to deciding what its future products should look like. Google, for example, has discovered transport & mobility as a new business model. Three new trends have prompted the company to adopt this strategy:

– The idea of the autonomous car
– The rapidly growing concept of share mobility
– The electric drive, which will reduce the complexity of car production and radically minimize car emissions in cities

These trends enable industry outsiders to forge new and almost inconceivable paths in the area of transport & mobility. The established car makers have recognized the danger however, but their new competitors approach the issue from a completely different perspective:


© picture alliance

© picture alliance

Above:
Mercedes-Benz F015 research vehicle

Below:
Google research vehicle

In the case of autonomous cars, for example, the established auto manufacturers see the market as evolutionary and want to bring the Internet and the associated artificial intelligence to cars, so that these are able to drive autonomously.

They see the algorithms as assisting and relieving the burden on the driver, even to the extent of autonomous driving. But the steering wheel will remain, so that the driver can take over driving again if they feel like it or in emergencies (to enhance safety). The Mercedes-Benz F 015 research vehicle, for example, is a visually impressive car that seats four people who can face each other. It can drive at speeds of up to 200 km/h, and the front seats can be swiveled round so that the driver can operate the steering wheel.

New rivals such as Google, on the other hand, see things very differently. They see the transformation of the industry as a revolution, as a disruption of the whole sector. For them, the car is an intelligent robot that brings people or goods from A to B. And the prototypes reflect this, looking like a cross between a smart and a Beetle, with two seats and few displays.

In this vision, the car always drives autonomously, which is why the prototypes dispense with a steering wheel or joystick. The computer looks for a parking space independently and picks up its passengers when called. Realization of this vision will depend, amongst other things, on regulatory approval.

The situation is similar for ‘share mobility’. The established carmakers are engaging with the idea of car sharing, but their focus is still firmly on car ownership, whether purchased or leased. In contrast, companies like Google are concentrating more on urban mobility. ‘Using instead of owning’ is their watchword – and in their view, this behavioral sea change in consumers will radically change passenger transport in the future. According to Roland Berger, the world of ‘share mobility’ will see sales and customer numbers rising by about 35% a year until 2020. And beyond that, Uber sees a completely new business model for driverless transport of people and goods.

And finally, if electric drives prevail, this will have far-reaching effects on automobile production. Expertise in drive technology with internal combustion engines, crankshafts, valves, fuel injection pumps, turbochargers, catalytic converters, and complex transmissions – as well as the development and production processes geared to these components – could become largely worthless. Because electric cars could be assembled relatively easily on a patch of grass. It is not easy to predict which way things will go. But one thing is certain: The revolution will take place. Maybe at first the two business models will exist side by side – one more aligned to autonomous driving on motorways, the other to cities and megacities.

The real estate industry is facing similar challenges

While the banking and insurance sectors are extremely alarmed about the fast-growing number of start-ups in the areas of Fintechs and Insuretechs, the real estate sector does not seem to be fully aware of the new players in the digital transformation.

Of course, the real estate industry in Germany is more complex and more heterogeneous, and the basis of existing business models – property itself – is still very analog and highly diversified. This means that – at least in some areas – disruptive and scalable business models are much more difficult to implement than in the industries discussed above. But the highest level of alarm should be sounding wherever customers get offers from brokers and financiers. An increasing number of startups in the area of property technology are succeeding in penetrating the industry. The ‘Immobilienscout24’ platform, for example, has shown how a new business model can also be scaled up in a relatively short time in the real estate industry and dramatically change the structure of the value chain. In the meantime, the real estate sector is abuzz with numerous startups in the areas of real estate brokerage, real estate financing, and digital platforms.

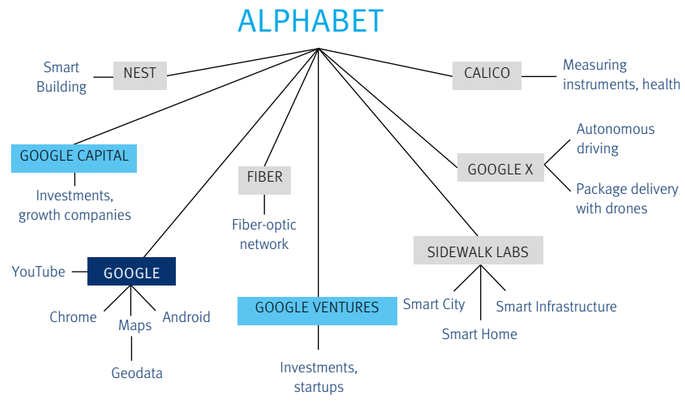
Is the Smart City the city of the future?

The big future planning and construction tasks are clearly in the area of cities and megacities with their well-known problems. And here again – as in the case of autonomous driving – we encounter Google.

Founder Larry Page’s ambitions encompass civilization in general, but above all the future of humanity in big cities. His declared goal is to change this world. His aim is to find out what the future could look like, and then to turn this vision into reality. He is deeply convinced that he can change the world for the better through his technologies and is gradually turning the company into an impressive – but also quite scary – future machine.

The laboratories and research departments are working on self-driving cars, quantum computers, cancer treatments, and an airborne drone delivery service. And software will soon control not only smartphones, but also cars, household appliances, and even robots developed in-house. Satellites and balloons at the edge of space will provide the entire planet with Internet access.

On October 2, 2015, the 1998 startup Google established a holding company called Alphabet and assigned all its business divisions to it. Closer examination of the structure of this holding makes it clear that it is part of an overarching plan, the main aim of which is to digitize life in cities. Users surrender their data and, in return, are permitted to participate in Larry Page’s vision of a better and more efficient future.



Organization chart showing Alphabet company structure

His master plan for the Smart City, the digital city of the future, is evidently to be developed by Sidewalk Labs. Projects include:

- Digitized buildings as smart homes with new ownership models such as shared ownership
- Digitized mobility management of limited road capacity, autonomous driving with electric cars and shared mobility
- Digitized management and personalized social services with digital health check
- Digitized energy management

More than

73%

of people in Europe
live in cities

This of course requires a fast digital infrastructure in cities, with upgrade of fiber-optic networks to 5G to handle the huge data streams. But Alphabet already has this covered by appropriate subsidiaries too:

– Fiber: Company for the installation / upgrade of fiber optic networks
– Nest: Basis for the Smart Buildings of the future
– Nest thermostats capture a wide range of information about what is currently happening in a household
– Google X: This division is running pilot projects such as the development of artificial intelligence, autonomous driving, and package delivery by drones – the latter two as basic elements of the digital mobility concept
– Google Maps: This division of Google provides all geodata for the digital city
– Calico: A biotech company that is researching into the extension of human life. It is collecting masses of patient data for this purpose

All this is financed by Google revenues, especially from Chrome, YouTube, Maps, and Android. All very impressive! But 'smart' alone is definitely not enough for the future of urban planning!

That is why BLUE CITY – the city of the future – is smart, sustainable and cost-efficient

According to a UN study, by 2050 over two-thirds of the world's population will be living in cities. In Europe, almost 75 percent of the population already do. At Drees & Sommer we have been looking at the city of the future for some time with a program entitled 'BLUE CITY – Integrated Urban Solutions'.

Of course, digitization will be an essential part of the city of the future, the brain of the cities, so to speak. But digitization is just one of the important elements of the so-called Smart City. One unresolved issue is the extent to which the population at large will accept access to their personal information and how far existing laws and regulations will permit this following the necessary amendments. And there are many other stress factors beside digitization that have to be resolved.

These are primarily social issues to ensure a livable society, such as demographic change, the multi-generational society, migration, the harmonization of living and working, and an ecologically and sustainably designed future.

The analog components of a city are essential for people's sense of well-being – and there are a whole range of analog elements in the city. First of all, the buildings themselves, which have a significant impact on perceptions. Instead of being drab and grey, buildings should have an attractive, natural appearance. Or as Professor Michael Braungart puts it: "Buildings like trees, cities like forests." Combined with urban farming, this could give the feeling of a perfect combination of city and country life. Construction must take the issues of resource conservation and the reduction of grey energy into account.

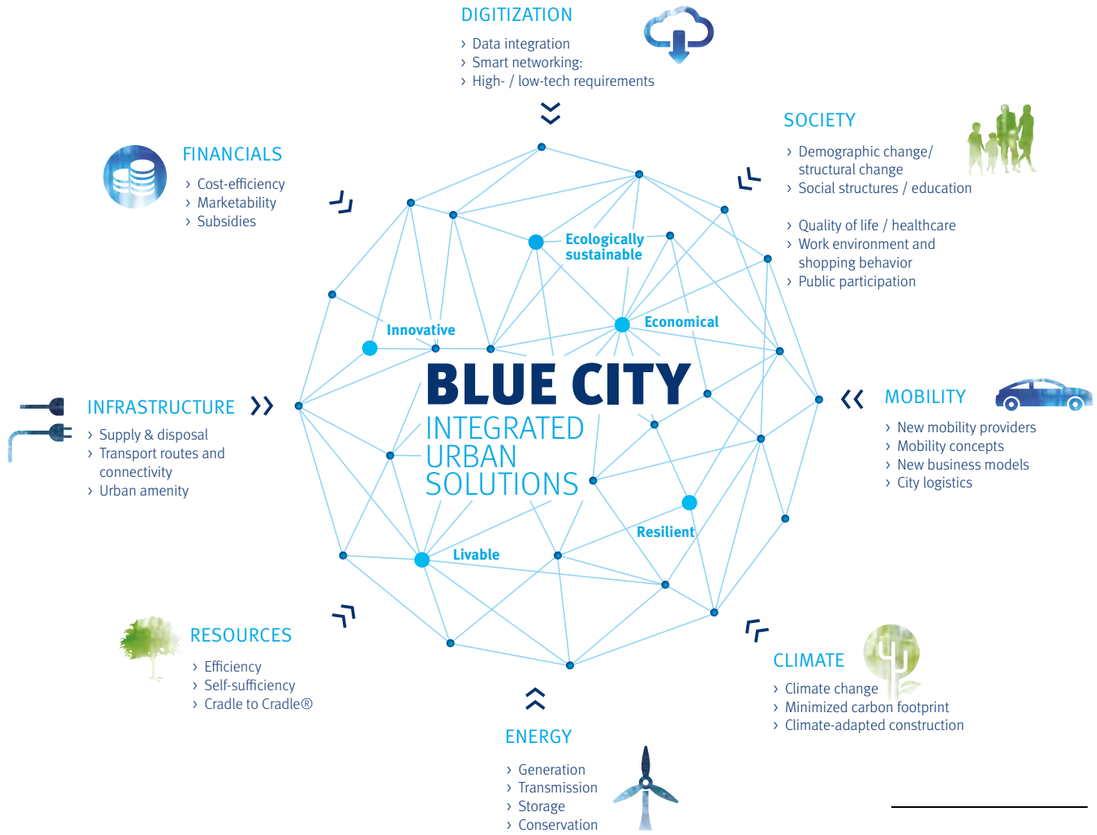
The infrastructure is a key element of the city. Along with reduced energy consumption, the production, transmission and storage of energy must be environmentally friendly. The same is true for water supply and drainage. The collection and recycling of service water and rainwater must become standard practice.

Mobility is still crucial to the functioning of a city. There are major challenges here, such as the upgrade and conversion of transport routes for urban rail, the building of bicycle highways and roads, and parking space design. And all this with minimal emissions.

Implementation will require totally new approaches to ensure cost-effectiveness and practicability. Subsidies must flow to the right places and their application be subjected to professional controlling. Management of these tasks requires a holistic approach and the integration of all subtasks.

This includes digital networking of buildings and infrastructure, as well as the mobility concept.

To create or revitalize cities to achieve the qualities listed above, all planning and construction processes have to be taken – with the help of digitization – to a completely new level with regard to quality, processes and cost-efficiency. Failing to achieve this would simply result in a patchwork solution.



A BLUE CITY takes the interaction of many different factors and fields of activity into account

BUILDINGS LIKE TREES, CITIES LIKE FORESTS!

Prof. Michael Braungart, EPEA

Quellen: www.community.simtropolis.com, www.tianjineco-city.com

DIGITIZED PLANNING (BIM) – THE OPPORTUNITY TO REALIZE INDUSTRIALIZED CONSTRUCTION

When purchasing a car, an online configurator allows a choice between

10^{29}

different options for a single model

Even today, the design and construction of buildings comes nowhere close to the quality and process levels that are standard in the automotive and aerospace industries. A key reason for this is that up to today, the fatal mantra has been that “Every building is a prototype”. That’s why – with the exception of prefabricated houses – industrial construction has not been possible.

And it’s true of course – nearly every building is unique. But today, nearly every car is unique too, with features selected by the customer from a wide range of options offered in a configurator. So would it theoretically be possibly to revolutionize construction in a similar way? After all, the processes used for the production of cars and buildings are basically not all that different.

To achieve industrial construction, it is essential to think in advance about possible building and equipment variants without even knowing who the intended customers are. It will also be necessary to develop a modular system for buildings too. Different ‘building producers’ could perhaps collaborate to do this, as many suppliers are well organized and have professional internal processes and excellent products.

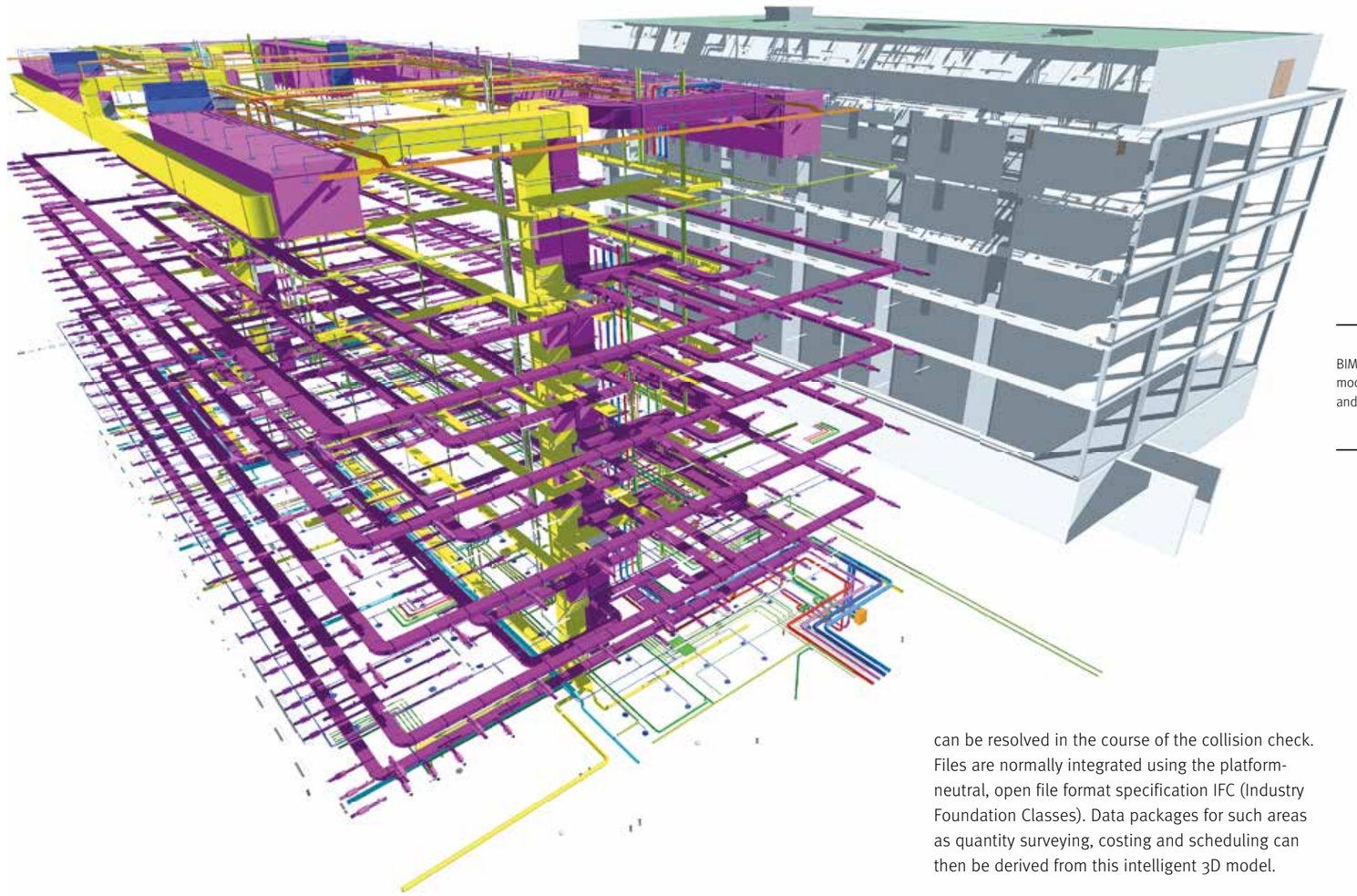
Instead of the kind of platforms seen in automotive production, buildings would have to have application modules for various uses. After all, we already know which grid system, technology and fitout is practical for which use.

And as in the automobile industry, there need to be standardized building elements for facade, building systems equipment, sanitary installations, switches, partition walls, doors, suspended ceilings, etc. designed by the various suppliers, ideally in collaboration with the planners and builders.

Digitization with Building Information Modeling

Digitization of construction has led to a new, digital planning process: Building Information Modeling (BIM). This allows the creation of a digital model of a building with a great depth of information. In addition to this virtual model of the structure’s geometry, data such as material, weight, surface, volume and name – as well as the function and location within the building geometry – can be captured for individual building elements. BIM does not involve any physical drawings, but the creation of a digital model of the intended building – a process similar to the one used in automobile production. The design elements are stored in a project database. Manufacturer’s data for building elements – for facades, for example – can also be downloaded to the database via the Internet. These models can also store all sorts of information required for production, logistics and construction of the building.

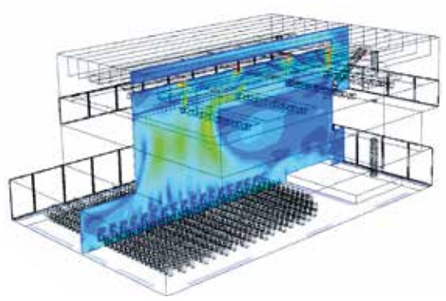
The digital model of the building takes shape as separate objects created by various authors (modelers), such as architects, structural engineers, building services equipment planners, etc. The integration of the individual objects and the complete model view are crucial, as only the overall view of all trades automatically highlights any issues or conflicts that can be resolved in the course of the collision check. Files are normally integrated using the platform-neutral, open file format specification IFC (Industry Foundation Classes). Data packages for such areas as quantity surveying, costing and scheduling can then be derived from this intelligent 3D model.



BIM objects (component models) for architecture and BSE

Precision through simulation

Simulating the different variants allows the performance of various functions and in various states to be predicted precisely.



Ventilation airflow simulation in a hall

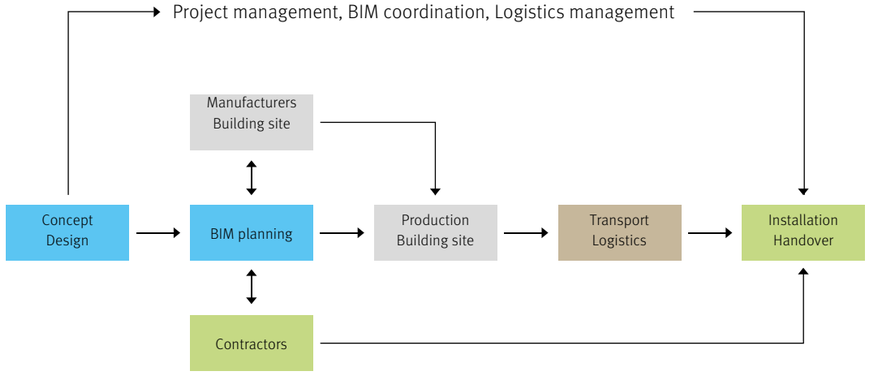
Using visualization, designers can quickly test and compare alternative ventilation variants, for example, to find the optimal design. Simulations can also be used to examine a whole range of design aspects, including fire prevention, smoke extraction measures, and user movement profiles within the building.

Modularization

Reliable geometries are a prerequisite for a modular construction. They are also essential for prefabrication of building components and for coordinated assembly processes on the construction site. Modular planning – with a suitable grid system for each type of use, in conjunction with appropriate designs – leads to levels of repetition in designs and processes. The complexity of the building design is reduced by up to eighty percent, with planning becoming more systematic and conflict-free.

That is why, for some time now, Drees & Sommer has been working with Professor Volkmar Hovestadt to develop project-specific modules – as used, for example, in a new building in Switzerland – as well as generic basic modules for a range of applications such as offices, residential buildings and hospitals as ‘platform concepts’ for appropriate construction projects. We are also examining the effects of layered uses and developing smart ‘big grid’ systems.

Modular planning with BIM by no means results in bland uniformity for architects. Rather, modules can be adapted to the different building floor plans based on the defined type of use and design grid.



Integrated process for a project with BIM

Rooms can be combined into room modules and saved in a room module catalog, on the basis of which planners then assign room modules to the floor area. Many room module types can be defined with a few different fitout details. Quantities, costs, schedules and quality levels can be precisely calculated. However, in order to achieve the above-mentioned benefits, care must be taken to ensure a sufficiently high level of repetition within a specific building.

Assembly processes are significantly accelerated and improved as the result of the learning effect, and prefabrication and logistics are systematically supported.

Planning and contract award process

The planning process is integrative and co-operative. Product manufacturers and contractors should be involved at an early stage in the functional contract award process – competing on both price and innovation – and following the issue of a Letter of Intent, they should bring their expertise to bear in the planning process.

In this way, the principal is only bound to the selected company if it meets specifications and expectations. As the level of detail of building elements increases in consultation with the selected companies, their description and dimensions become specific, allowing services for a final contract to be derived. The resulting performance specifications contain jointly developed solutions, which greatly reduces the likelihood of planning changes and supplementary claims. This results in construction being much more efficient and of better quality than in the past. Cost reductions of up to 20 percent and significantly shorter construction times can be expected. However, realizing such processes requires suitable adjustments to the existing HOAI definitions (German Order of Fees for Services by Architects and Engineers).

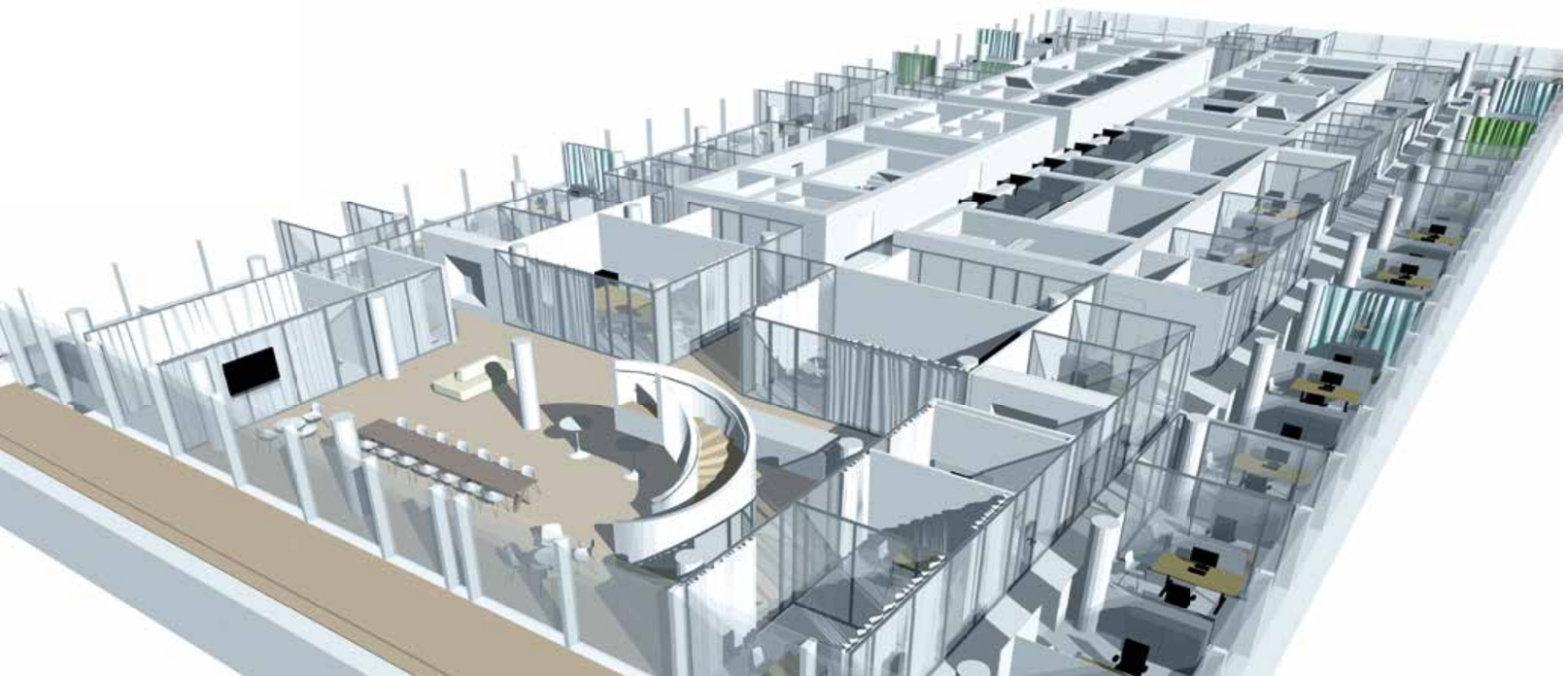
Systematic modularization can result in a reduction of building design complexity by up to

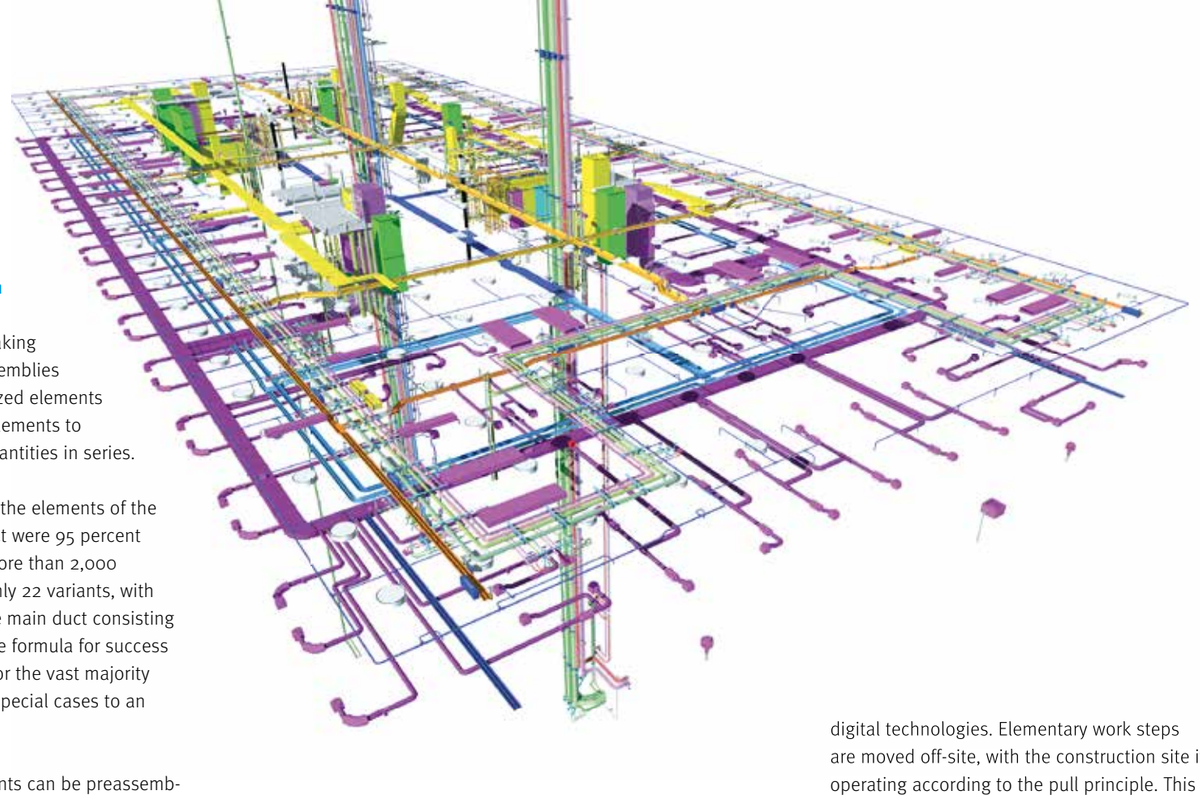
80%

Cost savings of up to

20%

are possible





Standardization of BSE elements

Over

90%

of the main duct comprises only three variants

Optimization of production through standardization

Standardization means breaking individual modules and assemblies down further into standardized elements and allows many building elements to be prefabricated in large quantities in series.

In one large office building, the elements of the main 'ground air intake' duct were 95 percent standardized. Among the more than 2,000 standard ducts, there are only 22 variants, with more than 90 percent of the main duct consisting of only three variants. So the formula for success is to use very few variants for the vast majority of modules, and to reduce special cases to an absolute minimum.

In some cases, these elements can be preassembled in the factory (as in the case of prefabricated wet cells, for example). This results in modules and assemblies that only require final installation at the construction site.

Logistics and transport

Building site logistics has to be largely digitized for transport to the construction site to run as smoothly as possible. Barcodes used on packaging and during transport to the site ensure that each pallet arrives at the right location on schedule. Lean construction site logistics based on which building elements can be preassembled or modularized is a key factor here.

The delivery strategy is specifically tailored to the building site situation, with a logistics hub and checkpoints. Special digital tools are used, such as 'Waste Walk' and RFID technology, which provides information about the exact location of any building element. The benefits of lean building site logistics are clear. Efficient processes cut construction costs, because they significantly reduce costs such as for transport or construction site facilities.

On-site assembly

The construction site is tightly organized according to the principles of lean management and using digital technologies. Elementary work steps are moved off-site, with the construction site itself operating according to the pull principle. This means that precisely those material and experts required for the current work are on site at exactly the right location. All processes mesh seamlessly, minimizing or even completely eliminating waste of material and time.

As many identical elements as possible, high levels of repetition and the associated learning effects, as well as a high degree of prefabrication, increase both installation speed and quality. BIM-generated 3D installation instructions bring further improvements. Based on the model of industrial production, building construction is moving away from laboriously created one-offs towards professionally manufactured products.

Summary

Digitization will penetrate all areas over the next few years. For this reason, it is crucial to use digitization for long-term optimization of planning and building in the construction industry. Other countries and regions, such as the United Kingdom and Scandinavia, are ahead of us in this regard. Drees & Sommer has teamed with partners vrame Consult and publishing house Beuth Verlag to establish the BIM blog (www.bim-blog.de) as a platform to promote BIM. The blog provides the German market with a practical guide to working to a single standard. And planners, principals and experts can use the site as a forum to discuss digital design and construction, thereby turning theory into practice.

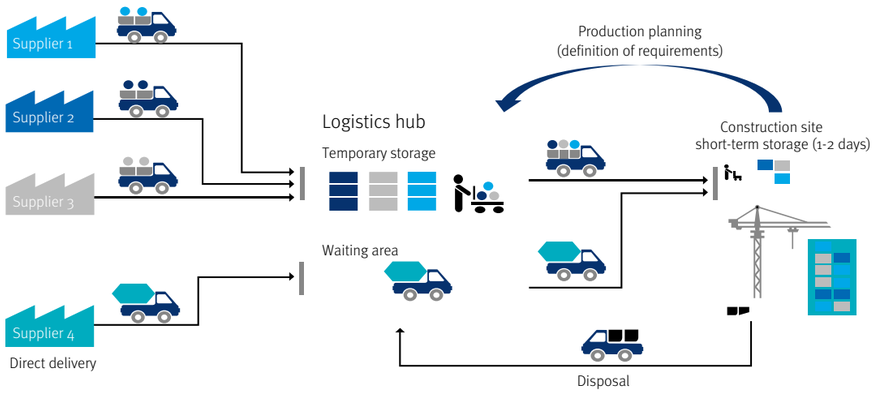
Perhaps one topic will be whether or not some disruptive software is emerging somewhere that would simplify and network the processes described. In Germany we have to abandon certain strategies, which, according to Christoph Keese of Axel Springer, also harbor both strengths and weaknesses:

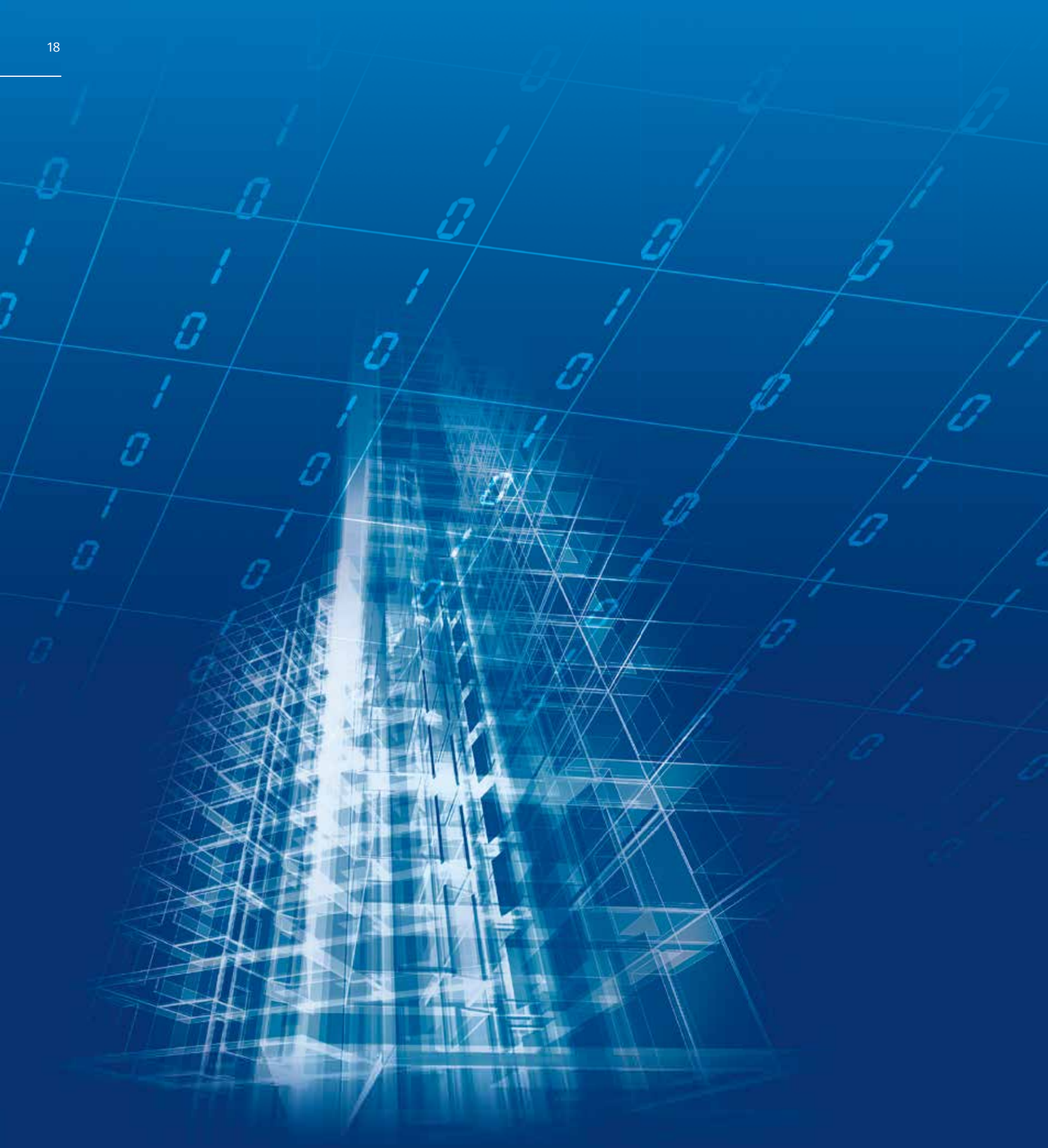
– Digitization without networking
– Data generation without data processing
– Engineering expertise without business models
– Kaizen without disruptive approaches
– Growth without digitization

Whether planning or building, because the market here is still booming, companies run the risk of being driven by current customer wishes into strategies that can represent major threats in the medium and long term. As the disruptive changes usually come from industry outsiders or startups, companies are well advised to take note of digital strategies in their business environment and to treat them seriously. Simple clerical and routine tasks will progressively disappear. In contrast, the demands on creative and digitally networked planning and control of construction work will increase significantly. The future will be determined not by growth, but by digital literacy and scalable digital business models.

But digitization and social needs must also complement each other. And human expectations and needs are certainly not all digital. The future belongs to the Blue City. Blue because, whatever level of digitization, future success depends on being – and remaining – sustainable.

Concept of just-in-time logistics





HIGHLIGHTS FROM CURRENT PROJECTS

MULTIPROJECT MANAGEMENT FOR MERCK GROUP HEADQUARTERS

Science and technology company Merck is currently building a new Innovation Center with an adjoining staff restaurant in Darmstadt. Drees & Sommer is providing extensive project management and consulting services to ensure adherence to the ambitious schedule.

Merck will invest some one billion euros in its group headquarters by 2020

» SCHEDULE AND COSTS ON TRACK THANKS TO MULTIPROJECT MANAGEMENT

Client:
Merck KGaA, Darmstadt

Project duration:
June 2014 – June 2018

General planner:
Henn Architekten, Berlin

Key project data:
- GFA Innovation Center and staff restaurant: 22,000 m²
- Emanuel-Merck-Platz: Approx. 37,000 m² (including square, grounds, and Frankfurter Strasse)

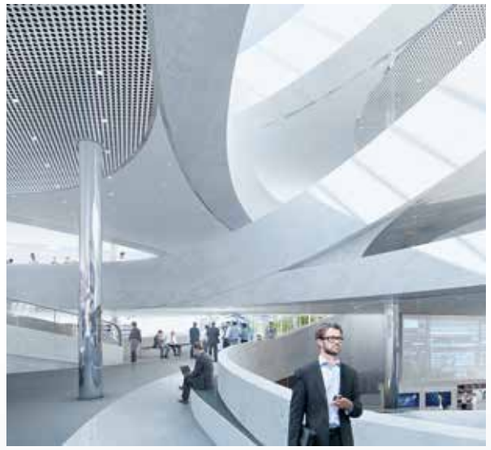
The Merck Group is headquartered in Darmstadt, Germany. In addition to the production of a range of medicines and chemicals, it is home to the group's central functions. The 'ONE Global Headquarters' program has the goal of upgrading the site to the group's global headquarters by the time Merck celebrates its 350th anniversary in 2018.

As well as the construction of the future Innovation Center (replacing a modular center built in spring 2015 as an interim measure) and a new staff restaurant, extensive infrastructure measures are being carried out on the plant premises. Emanuel-Merck-Platz, which is to encompass Frankfurter Strasse in the future, is to be opened to the public. The restructuring measures include the relocation of a tram stop.

› CORPORATE REAL ESTATE MANAGEMENT, PROJECT & ORGANIZATIONAL ANALYSIS, PROJECT MANAGEMENT, COST & SCHEDULE CONTROLLING, SETUP OF A REPORTING SYSTEM, ESTABLISHMENT OF A CHANGE PROCESS, TECHNICAL DUE DILIGENCE, FM CONSULTING ‹

Drees & Sommer prevailed in the competitive process thanks to its extensive experience in the area of corporate real estate, and joined the ongoing project. One of the main tasks is to ensure cost and schedule transparency by establishing a standardized reporting system. A great deal of expertise and experience is required for this, as – in addition to reporting on the overall multiproject – it involves reporting on each of some 80 subprojects, all on tight schedules. An interdisciplinary team is working closely with the technical project leaders and the client's relevant central divisions.

In the meantime, Drees & Sommer experts are also supporting the client's project managers with other Merck projects, for example undertaking technical due diligence for an established building, providing facility management consulting for site operations, and managing the program of the new pharmaceutical packaging center in Darmstadt, Germany.



Flexible, functional and inspiring: The Innovation Center and the adjoining staff restaurant

PROSPECT OF SUCCESS AND TOP QUALITY

Modern business premises are being created in Frankfurt's MainTor precinct as part of an urban ensemble of offices, retail, and food & beverage outlets. Drees & Sommer specialists successfully supported the exclusive 'Panorama' real estate project.

Client:
DIC MainTor Panorama GmbH, Frankfurt

Project duration:
May 2012 – January 2016

Architects:
Prof. Christoph Mäckler Architekten, Frankfurt

Key project data:
– GFA: 21,500 m²
– Plinth: 7 stories
– Tower: 17 stories

In 2012, Drees & Sommer was commissioned by the developer, DIC Projekt-entwicklung, to undertake project management. The principal wanted lean and efficient project management and reliable quality assurance for the 64-meter tall building on the banks of the River Main. The team of experts was also to provide direct support to the project management.

The new building, which comprises a plinth building and a high-rise, stands at a historic location of Frankfurt – the former 'Untermaintor' (Lower Main Gate) – which marks the entrance to the banking district. The leased office space offers maximum flexibility for international clients operating in the area.

› PROJECT MANAGEMENT, INVITATION TO TENDER, QUALITY ASSURANCE HVAC/GC, TENANT AND BUYER MANAGEMENT SUPPORT ‹

The client's success represented a challenge for Drees & Sommer: Some 70 percent of the property had either been leased or sold to an investor even before construction started, resulting in an increased coordination effort. The handling of detailed planning and construction with a general contractor on the one hand and the tenants' specific design requirements on the other made for particularly challenging project management.

Despite this, the project team – consisting of the principal's project management team together with Drees & Sommer project management and engineering specialists – achieved a successful project outcome as the result of optimal coordination with all stakeholders.

» HIGH STANDARD OF FITOUT AND EXCELLENT QUALITY OF BUILD THROUGH COMPREHENSIVE QUALITY CONTROL

PROFESSIONAL REFURBISHMENT AND SUCCESSFUL SALE

A 40-year-old office high-rise with a staff restaurant and landscaped grounds situated on Munich's Sapporobogen arterial road has been refurbished. Since then, eleven new tenants have been bringing fresh life to the property. Drees & Sommer supported the principal with the project.

»

OPTIMAL CLIENT SUPPORT, SATISFIED KEY TENANTS

Client:
Württembergische Lebensversicherung AG, Stuttgart

Project duration:
May 2009 – March 2016

Architects:
Maier Neuberger Architekten, Munich

Key project data:
- GFA:
  - Offices 28,658 m²
  - Staff restaurant: 1,860 m²
  - Site 16,800 m²
- Cost of basic and tenant fitout for office space: Approx. € 30 million net

Following the departure of the two main tenants, the building – which dates back to the 1970s – was to be upgraded and made more flexible, with an additional story to be added. The building, which is located near Munich's Olympic Park, had last been extensively refurbished in 1998. From 2009 to 2011, Drees & Sommer supported the basic fitout by providing cost controlling and project management services.

With the start of the lease in 2012, Drees & Sommer also supported tenant fitout of the 12-story office complex. When the principal decided to sell the property, Drees & Sommer Real Estate Investment Consulting (REIC) experts also assisted with the transaction through to successful handover to the buyer in autumn 2015.

› PROJECT MANAGEMENT, TRANSACTION PROCESS SUPPORT, DIGITAL DATA ROOM MANAGEMENT WITHIN THE SCOPE OF THE TRANSACTION ‹

During the project, the team and the principal had to jointly master multiple challenges, including a change of general technical planner for building services equipment (BSE) and insolvency of the BSE general contractor.

An Internet company and an Asian automotive supplier were secured as satisfied key tenants.

‘NEW WORK’ OFFICE ENVIRONMENT FOR COMMERZBANK

How will we work tomorrow? Commerzbank has already provided the answer to this question by involving their employees in the planning and implementation of a pioneering pilot project on the work environment.
Drees & Sommer supported the process as project manager and consultant.

»

ATTRACTIVE, HIGH-QUALITY OFFICE SPACE
COMPLETED ON SCHEDULE – HIGH USER SATISFACTION

Commerzbank AG planned an innovative tenant fitout for its ‘Lateral Towers’ site in Frankfurt. Its realization will be a group-wide pilot for a new office environment dubbed ‘New Work’. The measure involved over 2,500 employees and from the outset it was clear that it was essential that those responsible adhere strictly to the approved project budget.

Drees & Sommer project managers and consultants stepped up to the challenge. Despite existing faults and shortcomings, the fact that new processes had to be established, and the high degree of coordination required with the bank’s various departments, the team succeeded in meeting the high expectations of both the client and the users.

Another key challenge was synchronizing construction progress with the internal approval process for ‘New Work’. This involved such issues as modularization of rooms, furnishings, IT, and the change process. The experts solved this problem by taking over bank-internal direct control functions, allowing quick responses when required.

› PROPERTY ANALYSIS, SUPPORT FOR OVERALL PROJECT MANAGEMENT, PROJECT MANAGEMENT, TECHNICAL & ECONOMIC CONTROLLING (TEC), INTERIOR DESIGN OF LOBBY, DESIGN AND USER CONSULTING ‹

This was only possible as the result of close and trustful cooperation with project management and the client’s departments. Short paths of communication to decision-makers and planners and meticulous cost control were also decisive factors.

Client:
Commerzbank AG, Frankfurt

Project duration:
December 2012 – April 2015

Architects:
apd architekten ingenieure, Frankfurt

Key project data:
– GFA: Approx. 55,000 m²
– Workplaces: Over 2,500

» FLEXIBLE IMPLEMENTATION OF HIGHLY SPECIFIC USER REQUIREMENTS AND OPTIMAL START OF OPERATIONS AFTER RELOCATION

THE PERFECT MOVE WITH CUSTOMIZED FURNISHING CONCEPT

Inner values count in Frankfurt's Ostend district: The RBSGROUP, which has been part of the Drees & Sommer Group since 2015, supported the construction of the new ECB premises by delivering an innovative furnishing concept and efficient relocation management.

In June 2011, the RBSGROUP was commissioned by the European Central Bank (ECB) to draw up a concept and plan furnishing for its new premises. The project involved three main tasks: Developing a design concept that reflected the high status of the building itself, draft and detailed planning of fitout and furnishings and assignment of space, and ensuring smooth operation of the necessary logistics.

The challenge was to underscore the building's distinctive architecture and the bank's corporate image guidelines with a specific furnishing concept. The RBSGROUP developed three different lines of furniture: Classic, Sport, and Green. These allowed work typologies to be developed for all the functions in the building, ranging from prestige to informal. Each furniture line is characterized by its own design idiom and range of materials and colors. A total of 16 functional areas – including offices, meeting areas, libraries, archive, conference and press areas – were realized on this basis.

› PLANNING OF FITOUT AND FURNISHINGS COMPLETE WITH PROJECT MONITORING, RELOCATION CONCEPT AND MANAGEMENT, INVENTORY, INVITATION TO TENDER AND CONTRACT AWARD, DETAILED SPACE ASSIGNMENT, LOGISTICS CONCEPT FOR THE MOVE ‹

For the pan-European invitation to tender, the furnishing plans had to clearly show functional and design aspects in the form of floor plans, views, and detail drawings. Thanks to contract award in 13 lots, the project team achieved very favorable pricing.

Relocation management required three offices in Frankfurt's city center to be moved as smoothly as possible into the new ECB premises in Frankfurt Ostend on just four weekends. To achieve this, the team surveyed the existing properties and developed several different relocation concepts. The experts also took care of logistics and the disposal of furniture no longer required, as well as assuming responsibility for management of schedules and interfaces. They paid special attention to ensuring that ECB staff were kept fully informed.

Client:
European Central Bank (ECB), Frankfurt

Project duration:
- Design of furnishings and fitout: June 2011 – January 2015
- Relocation management: February 2012– January 2015

Architects:
COOP HIMMELB(L)AU, Vienna

Key project data:
- GFA: Approx. 185,000 m²
- Offices: 2,900 workplaces
- Restaurant/cafeteria/dining room: Seating for 1,050
- Conference/press: Seating for 1,250
- Library: 2,800 linear meters
- Archive: 3,800 linear meters
- Social/sports facilities: 1,500 m²
- Fitout and furnishing elements: Approx. 60,000 pieces

SUSTAINABILITY AND FLEXIBILITY THANKS TO METICULOUS PLANNING

Bau 1 (Building 1) is the new headquarters of F. Hoffmann-La Roche AG. Accommodating some 2,000 employees, it is the tallest high-rise in Switzerland. To ensure that the building meets the highest standards, Roche enlisted the support of Drees & Sommer as general planner.

Best prospects: The office environment of Roche's Bau 1 is impressive – thanks in part to the planning team led by Drees & Sommer

Client:
F. Hoffmann-La Roche AG, Basel

Project duration:
January 2009 – September 2015

Architects:
Herzog & de Meuron, Basel

Key project data:
- GFA: 74,200 m²
- Investment cost: CHF 550 million

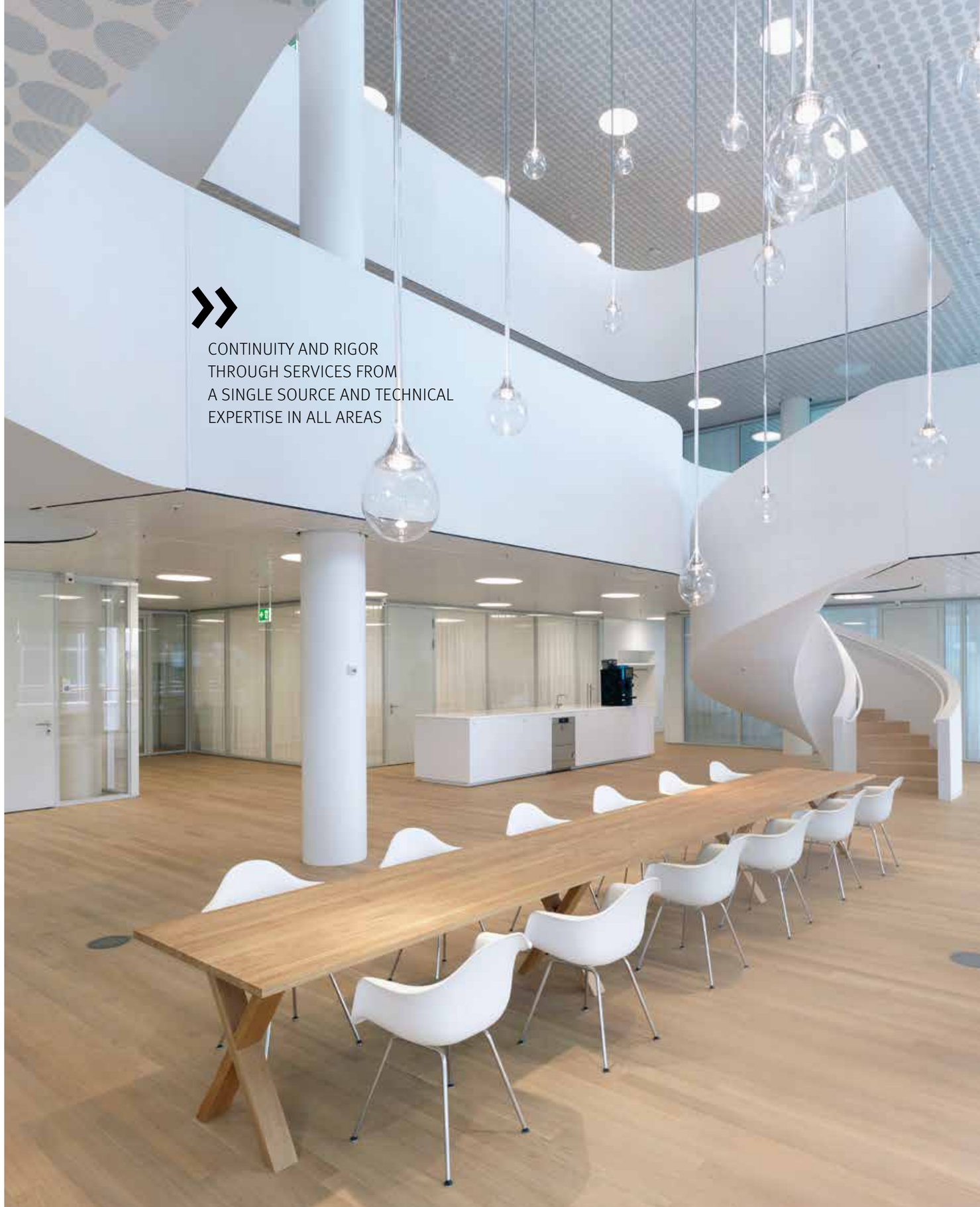
Pharmaceutical company Roche has experienced steady growth for many years. In 2006, the company unveiled plans for restructuring its corporate headquarters in Basel. The central element was the construction of a new building to bring together some 2,000 employees scattered across several leased premises into one location and offer them a stimulating work environment – with communication and teamwork as the basis for new innovations.

A first draft failed to meet requirements in full, so in 2009 Roche took the bold decision to start over, and sought a general planner with high-rise experience. Drees & Sommer – as a single source for nearly all services and with the ability to guarantee seamless quality management – was awarded the contract on the basis of its broad experience and the versatility of its experts.

A structured approach and meticulous planning allowed them to master the complex tasks involved in the development of the 178-meter building, which has some impressive sustainability features, including a holistic energy concept. The flexibility of the building thanks to its modular design is a further key quality feature. During planning, the specialists made use of a number of digital tools, including 3D planning and the ProjectCommunicationSystem (PCS) as a central communication platform.

› GENERAL PLANNING INCLUDING OVERALL COORDINATION OF PLANNING, PROJECT ORGANIZATION, SCHEDULE, COST & QUALITY MANAGEMENT, DOCUMENT MANAGEMENT, REQUIREMENTS MANAGEMENT, BUILDING SERVICES PLANNING, CONSTRUCTION LOGISTICS PLANNING, FACILITY MANAGEMENT DESIGN, ENERGY & SUSTAINABILITY MANAGEMENT, FACADE PLANNING, WORKPLACE CONSULTING ‹

Planning and smooth implementation of an office concept also formed part of the contract. The staff were involved in processes, as Roche views their satisfaction as the key to success. As the company continues to grow unabated, the development of new sites and concepts is imminent or already underway – with support from Drees & Sommer.



» CONTINUITY AND RIGOR THROUGH SERVICES FROM A SINGLE SOURCE AND TECHNICAL EXPERTISE IN ALL AREAS

FULL RESPONSIBILITY FOR A STUNNING BUILDING

The area around the Basel SBB railway station is being redeveloped. Swiss Federal Railways is building another high-rise on the southern side, which is scheduled for completion in 2018. As with other major construction projects in Basel, Drees & Sommer is playing a central role in this project, too.

© Herzog & de Meuron

The anchor tenants' requirements were taken into account during the planning phase

The 'Meret Oppenheim Hochhaus', a building complex with a usable floor area of 28,500 square meters, is taking shape on construction site B in Basel's SüdPark neighborhood. At the heart of the precinct is a 19-story high-rise on a six-story plinth. In addition to accommodating the logistics center serving the SBB station, the basement levels will feature underground parking for approximately 70 cars. Herzog & de Meuron are the architects for the property. The building will accommodate a mix of food and beverage outlets, offices, and apartments.

SBB awarded Drees & Sommer the general planning contract. As well as overall project management, this includes services such as planning coordination, cost and schedule management, planning of building services equipment, building physics, as well as facade and logistics planning. To ensure optimal execution, experts from various Drees & Sommer offices are collaborating on the project. The Drees & Sommer team has been assisted by services provided by external planning partners.

› GENERAL PLANNING WITH OVERALL MANAGEMENT, QUALITY, COST & SCHEDULE MANAGEMENT, PLANNING OF BUILDING SERVICES EQUIPMENT, BUILDING PHYSICS, FACADE & LOGISTICS PLANNING ‹

The complexity of the project is increased by the fact that the team has to coordinate the many interfaces to other construction projects in the station area.

Building Information Modeling played a key role in this project, too. The architect, structural engineers and building services equipment trades modeled the building entirely in 3D.

The 'Meret Oppenheim Hochhaus' is on the right track, with planning permission having been granted at the beginning of November 2015. The sole contractor award was made in April and the laying of the foundation stone will be in June 2016.

Client:
Schweizerische Bundesbahnen AG (SBB), Olten

Project duration:
Since February 2013

Architects:
Herzog & de Meuron, Basel

Key project data:
– GFA: 45,000 m²

TECHNICAL AND PROCESS EXPERTISE FOR ECONOMICAL AND ECOLOGICAL CONCEPTS

‘FÜNF MORGEN’ ON ITS WAY TO BECOMING A BLUE-CHIP ADDRESS

An exclusive residential and business quarter is taking shape a stone’s throw from Berlin’s upmarket Grunewald district and just a few kilometers from City-West. Drees & Sommer is supporting the client with central processes to ensure the ambitious project stays on track for completion in 2017.

As in other German metropolitan areas, there is huge demand for high-quality housing in the German capital. Developments of this kind can be successfully implemented as long as the location and infrastructure are right. But the complexity of such projects demands thorough planning and implementation, otherwise they can quickly become uneconomical.

In the case of ‘FÜNF MORGEN Dahlem Urban Village’ in Berlin-Zehlendorf, the investor took the precaution of tapping into Drees & Sommer’s technical expertise during the project development phase. The experts were then able to provide comprehensive PM services during realization.

› PROJECT AND PROCESS MANAGEMENT, CUSTOMER MANAGEMENT CONSULTING, DGNB CERTIFICATION, TECHNICAL & ECONOMIC CONTROLLING (TEC), PROFITABILITY OPTIMIZATION, MONITORING OF CUSTOMER ACCEPTANCE & HANDOVER ‹

The residential subproject involving 129 dwellings – comprising villas, twin villas, suite houses and condominiums – is of special importance. Not only did the developer have many complex requirements in terms of architecture, but the size and nature of the target groups meant that there were also some tough buyer demands. To address this, Drees & Sommer worked with the client to develop a management process that was perfectly integrated into the project workflow.

Even before the start of construction, the processes for the acceptance of special and communal properties were established, and the construction process aligned to it. During the planning and contract award stages, Drees & Sommer was able to significantly reduce the cost of the residential properties.

In terms of the sustainability and the marketing of the real estate, Drees & Sommer was able to celebrate an important success with the client: Three standard house types were awarded DGNB Gold certification, partly as a result of geothermal energy production. Further collaboration with the client is promising in view of new digital planning methods – we are currently developing a tender for a corporate BIM strategy and an associated requirements specification.

Client:
STOFANEL Truman Plaza Wohnen GmbH & Co. KG, Berlin

Project duration:
May 2011 – June 2017

Architects:
Eller + Eller Architekten, Berlin

Key project data:
- GFA: 29,850 m²
- Dwellings: 129
- Living area: 16,560 m²
- Cost: Approx. € 90 million

CONTRACT AWARDS
REMAINED UNDER BUDGET THANKS TO
A LEAN TENDER PROCESS

PAVING THE WAY FOR AFFORDABLE HOUSING

STADT UND LAND, Berlin's state housing corporation, is building 62 new apartments around Adlershof Technology Park in the south-east of the capital. The project is called 'Wohnen am Campus' (Living on Campus). Drees & Sommer experts ensured that the contract award process went smoothly.

Adlershof Technology Park is regarded as the most important scientific, business and media location in Berlin. Housing is urgently needed in this area – which is home to six Humboldt University institutes, ten research institutes, and around 1,000 companies – particularly in view of the fact that the population of Germany's capital city has been steadily growing for years.

STADT UND LAND's vigorous housing construction program in the area is addressing this need. By January 2017, a new building will offer 62 apartments built to the KfW-70 efficiency standard and featuring underground parking and tenant gardens on a 5,000 square meter site in the 'Living on campus' precinct. The project goals include achieving maximum environmental and social sustainability while conserving natural resources.

› DESIGN REVIEW, FUNCTIONAL INVITATION TO TENDER, GENERAL CONTRACTOR AWARD, PROJECT MONITORING, COST, SCHEDULE & QUALITY CONTROLLING ‹

Following a public tender process, in October 2014 Drees & Sommer Berlin was brought on board as a consultant and partner to help harmonize ecological and economic aspects. Initially, Drees & Sommer undertook review of the draft and of the requirements statement for the project's general contractor. Subsequently, Drees & Sommer undertook management of the two-stage contract award process as well as project monitoring.

Client:
STADT UND LAND Wohnbauten-Gesellschaft mbH, Berlin

Project duration:
December 2013 – January 2017

Architects:
Roedig.schop Architekten, Berlin

Key project data:
– GFA: 8,600 m²
– Construction cost:
› € 8 million net

SUCCESSFUL CATCH-UP AFTER BANKRUPTCY OF GENERAL CONTRACTOR: PROJECT MANAGERS PROVIDE EXTENSIVE SUPPORT TO CLIENT

FIRST TENANTS MOVE INTO THE ‘PROJEKT AM SEE’

Cost and quality under control: The first tenants moved into the new residential complex in Pfäffikon, Switzerland in 2016. During the construction of the lakeside buildings, the Drees & Sommer experts’ responsibilities included ensuring that the buildings were completed to the agreed specifications.

Client:
Zürcher Kantonalbank (Swisscanto Anlagestiftung)

Project duration:
April 2011 – October 2016

Architects:
Fischer und Visini Architekten, Zurich

Key project data:
- GFA: 35,900 m²
- Gross volume: 114,450 m³
- Investment costs: Approx. CHF 100 million

Swisscanto Anlagestiftung (SAS) – an investment foundation and one of Switzerland’s leading real estate investors – is building a residential complex with over 149 rental apartments on a former industrial estate in Pfäffikon. There are also rooms for services, including offices, a travel agency, a day nursery, and a cosmetics studio.

› COMPETITION SUPPORT, CLIENT REPRESENTATION, PROJECT MANAGEMENT, COST MANAGEMENT, TECHNICAL QUALITY ASSURANCE ‹

General contractors and architects were initially asked to tender for the role of general contractor in a two-stage full-service provision competition. Drees & Sommer was commissioned to manage the selection process. In the course of executing the winning design, the project management specialists represented the client, focusing particularly on quality control. Tools used for this purpose included Contrace defect tracking software and CoMo, a digital cost monitor. Drees & Sommer also supported the principal as consultant on all aspects of project development and execution.

Following the insolvency of the general contractor – a key member of the team – the experts also had to take on other activities at short notice, including status assessments and handling the transition to a new contractor. The project team mastered this challenge thanks to close collaboration with the very professional client, and legal counsel.

NEW HOLIDAY INN EXPRESS OPENED IN DÜSSELDORF

The hotel offers business travelers and tourists accommodation in an easily accessible central location in the North Rhine-Westphalian capital. A Drees & Sommer team managed and successfully completed the construction project for the developer.

»

HIGH-QUALITY HOTEL CONSTRUCTION
COMPLETED ON SCHEDULE AND WITHIN BUDGET
DESPITE DIFFICULT INNER-CITY LOCATION

Client:
Investa Projektentwicklungs- und Verwaltungs GmbH, Munich

Project duration:
September 2013 – August 2015

Architects:
Marggraf Architektur, Esslingen

Operator:
Foremost Hospitality, Berlin

Franchiser:
Intercontinental Hotels Group (IHG), Denham, UK

Key project data:
– GFA: 7,150 m²
– Construction cost: € 7.5 million net

164 rooms, a bar, a business center, and an underground car park: A Holiday Inn Express was built in the center of Düsseldorf over a period of just 16 months. In September 2013, the principal – Munich real estate group Investa – commissioned Drees & Sommer with management of the general contractor. The goal for the project managers was to achieve the specified quality within budget and on schedule.

› PROJECT MANAGEMENT, OVERALL PROJECT COORDINATION, CONSTRUCTION SCHEDULE CONTROL, COST CONTROL, QUALITY CONTROL THROUGH OVERALL MANAGEMENT OF CONSTRUCTION AND BSE ‹

The Drees & Sommer experts had their work cut out before the opening party could take place at the beginning of August 2015. Even the planning permission phase was protracted. And as the construction site was on a major traffic artery, the team had to coordinate very closely with the authorities on deliveries and site setup.

They were also frequently called upon to solve problems during the construction phase. For example, the manufacturer of the prefabricated wet rooms went bankrupt and the team had to find a new supplier who could meet the operator's quality requirements. To compensate for schedule delays, in some cases the team opted for conventional wet room installation instead of using prefabricated units.

Despite the time-consuming floor-by-floor handover of the building to the operator, the team ensured that the project remained on schedule. Drees & Sommer had to substantially increase the level of quality control during the final phase of the project to ensure that the remedy of defects by the general contractor did not jeopardize the scheduled opening. The effort paid off: The team succeeded in coordinating the differing interests of the general contractor, franchiser, user and buyer to ensure that the Holiday Inn Express opened on schedule.

The hotel in Düsseldorf is the tenth Holiday Inn Express developed by the Foremost Group in Germany

‘K IN LAUTERN’ SHOPPING CENTER OPENS ON SCHEDULE

Since March 2015, the ‘K in Lautern’ mall has been providing shoppers with a total of 20,900 square meters of retail outlets on four levels. Drees & Sommer supported the purchaser throughout the entire project – from the purchase decision through to the grand opening.

Client:
RREEF Investment GmbH, Frankfurt am Main

Project duration:
January 2013 – March 2015

Project developer:
ECE, Hamburg

Key project data:
- GFA: 67,000 m²
- Retail space: 20,900 m²
- Shops: Approx. 100

Featuring 100 shops on four levels, the ‘K in Lautern’ mall enhances Kaiserslautern’s city center

» CLIENT MADE INFORMED PURCHASE DECISION BASED ON PROFESSIONAL ADVICE

The new mall – where today anchor tenants such as Primark, TK Maxx, Reserved, and Mango now welcome customers – was formerly a disused Karstadt department store building. Before investing, the client wanted to know the exact technical status of the development. So in January 2013, while the shopping center was still in the planning stage, RREEF commissioned Drees & Sommer on behalf of the open real estate fund Grundbesitz Europa.

Drees & Sommer experts from a range of disciplines conducted technical due diligence. The construction and real estate experts investigated the risks and opportunities associated with the project in just three months. One special challenge was that the former Karstadt department store building was to be integrated into the new mall. To ensure sustainable building operation, the experts defined certain principles and parameters at an early stage, namely in the building specification.

› TECHNICAL DUE DILIGENCE (PURCHASE OF PROJECT UNDER DEVELOPMENT), TECHNICAL PROJECT MONITORING ‹

The goal-oriented yet flexible approach to the purchase process impressed the investor, who decided to continue working with Drees & Sommer during the construction phase. The team was responsible for technical project monitoring, ensuring that both the vendor and the project developer ECE adhered to the contractually agreed construction and performance goals for schedule and quality of build. On behalf of the purchaser, Drees & Sommer undertook overall control, monitoring execution status and reconciling this with due payments.

Drees & Sommer also reviewed proposed changes and helped ensure that ownership of ‘K in Lautern’ could be transferred to the purchaser as planned despite time pressure.

COMPETENT MANAGEMENT OF ‘PARADISE’ DEVELOPMENT

The Swabian wheel and castor manufacturer Blickle is strengthening its Swiss subsidiary’s presence with new headquarters in Lyssach. Drees & Sommer is providing support for the project. The industrial park created for this purpose is also a very attractive location for other companies.

Client:
Blickle Räder & Rollen GmbH, Lyssach

Project duration:
April 2013 – May 2016

Architects:
Schmelzle + Partner Architekten BDA, Dornstetten

Key project data:
– GFA: 15,000 m²
– Construction cost: Approx. CHF 45 million

‘Das Paradies’ is located in the Emm Valley (Emmental) not far from Bern – if we are referring to the industrial park of this name built in Lyssach by the Swabian family-owned company Blickle Räder & Rollen GmbH. The principal has moved its Swiss headquarters to a new building in the immediate vicinity of Shopping World Blickle and a shopping boulevard. ‘Das Paradies’ industrial park also features additional offices and business premises, two penthouse apartments and a restaurant.

Based on successful cooperation in the past, Blickle engaged Drees & Sommer to support the project. Consultants working out of Stuttgart and Zurich hit the ground running and were entrusted with various roles including project and cost management. Responsibility for tenant management – divided into separate project areas – was added at a later date. The key brief for the experts was to ensure adherence to budget.

› CLIENT CONSULTING, PROJECT MANAGEMENT, COST MANAGEMENT, PROJECT COMMUNICATION SYSTEM (PCS), TENANT MANAGEMENT ‹

This was achieved without the client having to make any compromises on quality. Blickle was able to reinvest the savings to make improvements to the business park. The client was also pleased with the occupancy rate. And as an added bonus, the company was able to move into the offices and warehouse space of the new Swiss headquarters two months ahead of the original schedule.

» ALL GOALS ACHIEVED THANKS TO COMPETENT CONSULTING

HIGH QUALITY AND ADHERENCE TO THE TIGHT SCHEDULE THANKS TO GENERAL CONSTRUCTION MANAGEMENT

USING INSIGHTS FOR INNOVATION

There is a new chapter in the success story of the Education Campus in Heilbronn: The number of enrollments is climbing steadily, and new facilities are gradually being added to the campus. Drees & Sommer is once again on board as General Construction Manager for ‘Education Campus II’.

Client:
Schwarz Immobilienmanagement GmbH & Co. KG, Neckarsulm

Project duration:
January 2013 – September 2015

Architect:
Glück + Partner, Stuttgart

Key project data:
- GFA: 12,500 m²
  - Auditorium: 4,000 m²
  - AIM buildings: 6,500 m²
  - Underground car park: 2,000 m²
- Gross volume: 57,000 m³

Shortly after the completion of Education Campus I in autumn 2011 it became clear that a substantial expansion would be needed. So the Baden-Wuerttemberg Cooperative State University (DHBW) needed to acquire an additional site fast. The Academy for Innovative Education and Management (AIM) building was considered, but AIM is also growing, so an additional new building was imperative.

› GENERAL CONSTRUCTION MANAGEMENT (GCM) INCLUDING PROJECT MANAGEMENT, CONSTRUCTION MANAGEMENT, PLANNING FOR LEAN CONSTRUCTION MANAGEMENT (LCM), PROJECT COMMUNICATION SYSTEM (PCS) ‹

The substantial Education Campus II expansion included a four-story building with a gross floor area of some 6,500 square meters. The new site will also feature an auditorium with high-end innovative media and presentation technology and seating for up to 500 people. There is an underground car park beneath the new campus buildings, and a forecourt was added between them.

As General Construction Manager, Drees & Sommer was responsible for all planning and construction processes. This included all specialist planning, tendering and construction management tasks, as well as the coordination of the interfaces between the project participants such as architects, construction companies and authorities. The goal of completing all work by the beginning of the winter semester in October 2015 was achieved. So Drees & Sommer met the challenge of adhering to the extremely tight planning and construction schedule despite the high quality standards for the buildings.

The bridge between the past and future campuses is both physical and metaphorical – as the two are separated by a railway line, the client has opted for a pedestrian bridge between the two sites (starting in March 2017).

SPORTS CAR MANUFACTURER DEVELOPS YOUNG TALENT IN A NEW TRAINING FACILITY

Porsche has commissioned an innovative training center in Stuttgart. As project manager, Drees & Sommer made an important contribution, in particular by reducing costs and ensuring successful communication between stakeholders.

»

DEADLINES MET:
PROFESSIONAL INTERFACE MANAGEMENT
LEADS TO SUCCESS

Client:
Dr. Ing. h.c. F. Porsche AG, Stuttgart

Project duration:
August 2012 – December 2015

Architects:
Hetzel + Orthlolf Architekten, Freiburg

Key project data:
– GFA: Approx. 20,000 m²

Porsche's new training center was built on the site of a former tram depot in the Stuttgart district of Zuffenhausen between September 2013 and July 2015. The showcase project for the automotive industry offers space for up to 500 apprentices from a range of specializations including warehouse logistics, automotive mechatronics, car body production, and industrial mechanics.

Drees & Sommer automotive experts were commissioned in stages to undertake project management as the basic design data were being decided. Key challenges were the capped budget for the project and the mandatory deadline of September 2015 for opening of the center.

› PROJECT MANAGEMENT, CHANGE MANAGEMENT ‹

After several rounds of cost-cutting involving all the stakeholders, the specialists finally managed to keep costs within budget. An intelligent technology concept with concrete core activation and geothermal pile foundation helps to further minimize operating costs.

Drees & Sommer also acted as a neutral interface in central communication processes and in coordinating project participants. Transparent documentation also played a part, for example, in the course of change management or contract award negotiations.

TOP DEAL IN 2015 – LANXESS ARENA IN COLOGNE CHANGES HANDS

The sale of the Lanxess Arena and of the 'Technisches Rathaus' (Technical City Hall) to two Asian property investors was one of Germany's biggest commercial property transactions in 2015. That fact that the € 440-million deal went so smoothly is partially thanks to the efforts of a Drees & Sommer team.

Client:
Arminius Advisors Ltd., Jersey (acting on behalf of the arena investor – Junson Capital, Hong Kong – and the South Korean end investor in the 'Technical City Hall')

Project duration:
May 2015 – April 2016

Key project data:
- GFA: Approx. 206,000 m²
- Transaction volume: € 440 million

When buildings of the size and technical complexity of the Cologne Lanxess Arena are up for sale, prospective purchasers bring construction and real estate professionals on board. They want to know the properties' full technical and economic background before signing a purchase contract. At the end of May 2015, investment firm Arminius Advisors commissioned Drees & Sommer with this task. Initially, the experts were only asked to provide a technical opinion. But over the course of the project, the client's and two end investors' requirements grew.

In the end, the expert team undertook comprehensive technical due diligence of the building complex, which was completed in the late 1990s. One particularly challenging technical aspect is the multipurpose arena – which is the home stadium of the Kölner Haie (Cologne Sharks) ice hockey club, a venue for the top Rheinstars basketball games, and a concert and event hall. In addition to this, the project involved 122,000 square meters of office space, a multistory car park, the hockey team's training hall, and the grounds – all of which had to be audited from a construction engineering and real estate perspective. The client's goal was clear – the deal was to be finalized no later than the end of 2015.

› TECHNICAL DUE DILIGENCE (PURCHASE OF ESTABLISHED PROPERTIES), TECHNICAL CONSULTING SERVICES, TECHNICAL TRANSACTION CONSULTING ‹

The team opted for direct paths of communication and coordination – including with the vendor and the two end investors. Drees & Sommer brought in external experts for areas of specialization such as fire prevention, environmental aspects, and the design of the multistory car park. The team achieved the necessary transparency for the client with a combination of construction engineering and real estate expertise. Before signing the contract, the client was aware of the technical opportunities and risks associated with the property, as well as the investment required in coming years.

In addition to undertaking technical due diligence, Drees & Sommer acted as the client's technical consultant for the transaction. Following the sale – which was finalized on December 11, 2015 – the team continued to advise the buyer on a range of topics, including operating equipment, until April 2016.

» SUCCESSFUL SUPPORT FOR € 440-MILLION DEAL

» COMPLETION ON SCHEDULE AND WELL UNDER BUDGET, WITH GROSS SAVINGS OF € 26 MILLION

HEALTHCARE PROJECT PAYS OFF FOR CLIENT

Following renovations and the construction of a new hospital building, Gera is well equipped for the challenges of the future: Its Wald-Klinikum (Forest Hospital) combines economical operation with state-of-the-art health services for patients. Drees & Sommer has provided professional support for the project over many years.

Client:
SRH Wald-Klinikum Gera GmbH, Gera

Project duration:
October 2003 – December 2015

Architects:
Donnig, Unterstab + Partner, Rastatt

Key project data:
- GFA, new building: Approx. 60,000 m²
- Usable floor area, new building: Approx. 30,000 m²
- GFA, established buildings: Approx. 13,000 m²
- Usable floor area, established buildings: Approx. 3,750 m²
- Beds: 980
- Total cost: Approx. € 163 million

The Wald-Klinikum Gera is now a maximum-care hospital with 980 beds. As part of a comprehensive restructuring at the beginning of the millennium, the operator – SRH Wald-Klinikum Gera GmbH – looked to consolidate and centralize the facility, which was formerly run by the local authority. This was to be achieved by construction of a new building and renovation of the established buildings.

Drees & Sommer's bid for project management was the most competitive. The experts also impressed the client at this early stage with specific proposals to optimize the project. The project managers' investment cost estimate also identified substantial cost savings, which ensured the go-ahead for the project could be given.

› PROJECT MANAGEMENT, PROJECT LEAD FUNCTION, COMPETITION MANAGEMENT, HEALTH & SAFETY COORDINATION, EVIDENCE OF USE OF FUNDS ‹

The client's key goals were adherence to budget and on-schedule completion of the new building. In close consultation with the client, the healthcare professionals mastered numerous issues, such as the initially unsuitable structure of the planners. On the other hand, a decisive client, competent technical management, and an effective planning team were tangible success factors. The new building was built in two stages and handed over in April 2013, with handover of the renovated established buildings following in January 2015. The entire construction project was undertaken with the hospital in full operation.

The latest figures show that Drees & Sommer did a great job: The experts' improved preliminary draft saved the principal € 26 million gross. Added to which, Wald-Klinikum Gera has been operating at a healthy profit since commissioning of the new and renovated buildings.

KNOW-HOW FOR URBAN PLANNERS IN MONGOLIA

A new city called Maidar EcoCity+, which will set new ecological standards, is to be built in the middle of the Mongolian steppe. Drees & Sommer development consultants are contributing their management expertise to the project.

LOCAL PRESENCE AND PROCESS EXPERIENCE IMPROVE THE STRUCTURE OF THE FLAGSHIP PROJECT

Client:
Maidar City LLC, Ulaanbaatar

Project duration:
June 2015 – June 2016

Architects:
RSAA Architekten,
Stefan Schmitz, Cologne

Key project data:
GFA: 24,500,000 m²

For some time, Ulaanbaatar, the capital of Mongolia, has been stretched beyond capacity by the constant influx of new inhabitants – but the city continues to grow. To relieve the population pressure, a new city for approximately 280,000 people is to be built some 30 kilometers to the south. Maidar EcoCity+ is a flagship project in a number of ways: It will set new standards in mobility concepts and be largely energy self-sufficient. The local urban planners are being supported by Drees & Sommer development experts.

› MANAGEMENT CONSULTING AND ECONOMIC FEASIBILITY STUDY, KNOWLEDGE MANAGEMENT, EXCURSION / PROFESSIONAL TRAINING BASED ON BEST PRACTICE EXAMPLES ‹

Following successful support of the DGNB (German Sustainable Building Council) Platinum precertification process by the Stuttgart-based Green City team, the client commissioned the specialists to assist with planning. The client's expectations included optimization of an insufficiently elaborated project structure, assessment of risks and potential, and presentation of these to potential investors.

A constant local presence meant that the Drees & Sommer team was able to act as an ongoing point of contact for any enquiries. Follow-up contracts for further urban development projects and a role as permanent consultant and project manager after the start of the realization of Maidar Eco-City+ are already in the pipeline.

NEW USES FOR SITES IN TRIER AND BAMBERG

In Bamberg and Trier, former military sites are now being redeveloped. The Drees & Sommer experts for development consulting brought their expertise and their many years of experience to bear for redevelopment projects at the two locations.

STRUCTURING AND ECONOMIC REALIZATION OF URBAN DEVELOPMENT PROJECTS

French armed forces were stationed in Castelnau until 1999. Today a new residential and shopping district is taking shape there just a few kilometers from Trier's city center. Drees & Sommer experts have been assisting the developer – EGP Gesellschaft für urbane Projektentwicklung – with the project since 2011. From the outset they established orderly urban-planning procedures for the procurement of planning permission, infrastructure planning, and economic management of the overall project.

› COORDINATION OF OVERALL DEVELOPMENT, CONSULTING MANAGEMENT BOARD, USE OF COST-EFFICIENCY CONTROL TOOL, MANAGEMENT OF URBAN-PLANNING PROCESS, SITE PREPARATION AND INFRASTRUCTURE ‹

Following Petrisberg, the Castelnau project is the second redevelopment project that Drees & Sommer has managed for EGP. It is being realized in two stages by 2020. The experts are supporting the principal by establishing clear organizational and management structures and putting transparent project controlling in place. This is allowing the economic and schedule goals for marketing and construction to be met. The development project not only creates a local amenities center, but also a new high-quality residential location in the south of Trier.

Client:
EGP Gesellschaft für urbane Projektentwicklung, Trier

Project duration:
January 2011 – December 2018

Key project data:
- Net building land: Approx. 18 ha
- Total development costs: Approx. € 85 million
- Site development cost: Approx. € 35 million net
- Further potential: Approx. 20 ha

Modern housing combines old and new in Castelnau

The purchase process is in full swing in Bamberg. In 2016, the city of Bamberg will acquire the former Warner Barracks from the Federal Office for Real Estate Management (BImA) to reincorporate the site into the urban fabric. The goal: Orderly and economically strategic development of the city.

› OVERARCHING STRATEGIC CONSULTING, STRATEGIC CONSULTING FOR LAND PURCHASE, BUSINESS PLANNING, COORDINATION / SUPPORT DURING LAND ACQUISITION ‹

The Drees & Sommer experts undertook a profitability analysis, including an area analysis. Together with the city of Bamberg, they drew up a land development plan based on an existing urban development concept. The team developed a business plan for the entire project and is also managing the city's purchase of the land from the BImA.

Client:
Bamberg City Council

Project duration:
since October 2012

Key project data:
– Overall project cost: € 200 million

A new district is taking shape on former military land in Bamberg

LONG-TERM UPGRADE OF COLOGNE CATHEDRAL PRECINCT

Client:
City of Cologne

Project duration:
February 2012 – June 2016

Architect:
Allmann Sattler Wappner, Munich

Key project data:
– GFA: 500 m²

The City of Cologne has redesigned the eastern cathedral precinct. Drees & Sommer provided both specialist and organizational support for the project over several years and helped the client meet the challenges of an inner-city construction site.

Cologne Cathedral – one of the world's most iconic churches – has captivated people for centuries. In the 1970s, the area to the east of the cathedral was eclipsed by the construction of the 'Domplatte', the pedestrian precinct surrounding the cathedral. The city is now reintegrating Cathedral Hill on the Rhine River side into public space, creating an attractive leisure zone. Since 2012, the city has been relying on support from Drees & Sommer specialists with their proven track record in public-sector construction.

» COMPLEX CHALLENGE OF AN INNER-CITY CONSTRUCTION SITE JOINTLY MASTERED

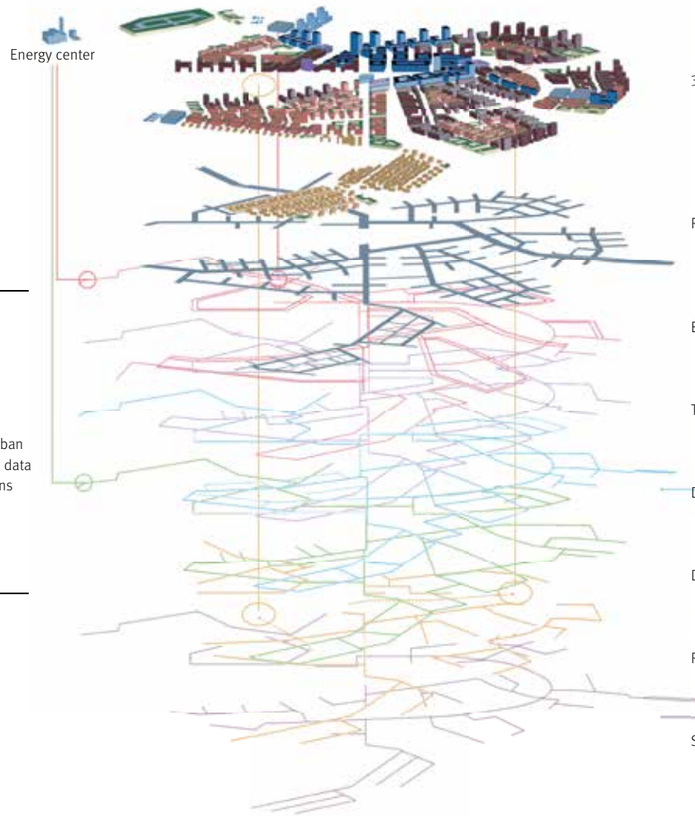
The removal of the cathedral precinct forum and a tunnel roof resulted in an attractive recreational space. The demolition of a pedestrian bridge at the central station has helped to create a spacious public area with natural light. Reduced space for motorized traffic has made way for the construction of attractive paths and bikeways. A sophisticated lighting concept enhances the road area, and the Cathedral Workshop's exhibition space and the Romano-Germanic Museum are now directly adjacent to the pedestrian precinct. A new stairway opposite the Baptistery, which is now once again visible as an additional tourist attraction, connects the city level with the Museum Ludwig.

› PROJECT ORGANIZATION, QUALITY CONTROL, SCHEDULE CONTROL, CONTRACT CONTROL, COSTMONITOR FOR COST CONTROL ‹

The construction site is located in the center of the city. This led to challenges such as diverting car and bus traffic, and the need to design alternative access routes for construction site vehicles. In addition to managing the demanding building site logistics, the experts provided local residents with monthly updates on construction work and current traffic routing throughout the project.

STRENGTHENING RUSSIA'S POSITION ON THE INTERNATIONAL FINANCIAL MARKET

Sberbank is planning to create a new district for 65,000 inhabitants and 70,000 workplaces on a 460-hectare site in the west of the Moscow metropolitan region. Drees & Sommer managed and represented the international planning team, planned the utilities infrastructure, and developed the financial model for the International Financial Center (IFC). Building Information Modeling (BIM) was also used in the process.



City-BIM is the consequent continuation of Building Information Modeling for urban development. The collected data allow for tangible simulations

»

EXPERIENCE AND DETERMINATION RESULTED IN ALL REQUIREMENTS BEING MET WITHIN SCHEDULE, KICKING OFF THE DEVELOPMENT OF A CENTRAL PART OF NEW MOSCOW

The International Financial Center (IFC) in Rublyovo-Arkhangelskoye on the western outskirts of the Russian capital is a megaproject. The district of New Moscow, created by the incorporation of outlying regions, will not only be home to financial institutes, but also become a vibrant urban center. New apartments alone account for nearly three million square meters of land use.

› SUSTAINABILITY MANAGEMENT, PLANNING OF UTILITIES INFRASTRUCTURE AND COORDINATION WITH AUTHORITIES, FINANCIAL MODELING, PROJECT MANAGEMENT, WATER SYSTEM DESIGN ‹

Drees & Sommer is a member of the consortium whose designs and expertise won the competitive tender against a field of more than 80 competitors. The combination of international experience with master plans for ambitious projects and the Moscow team's local expertise in the areas of utilities infrastructure and financial modeling were key to Drees & Sommer's success.

The strain on the Russian capital's existing infrastructure posed a huge challenge for planners, who engaged in close consultation with the principal throughout the project. Changes to plans and modifications of the user mix made detailed consultations necessary.

Despite this, the team met all delivery deadlines and quality specifications – in part thanks to the use of digital tools. The experts simulated the microclimate with envi-met and calculated earth volumes with Civil 3D, modeled utility infrastructure with Tekla Civil, while ArchiCAD and Revit were used for virtual reality generation. BIM and/or City-BIM may be used to a greater extent later in the project. The adoption of the urban-planning scheme is scheduled for June 2016.

Client:
Rublyovo-Arkhangelskoye Closed Joint Stock Company, Moscow

Project duration:
December 2014 – June 2016

Architects:
- ASTOC GmbH, Cologne
- LAND Srl, Milan
- HPP Hentrich-Petschnigg & Partner GmbH + Co. KG, Düsseldorf

Key project data:
- GFA: 4.1 million m²
- Construction cost: € 5.5 billion
- Facilities include 15 kindergartens, 10 schools, two hospitals, and parking for some 27,000 cars

MORE EFFICIENT NETWORK OPERATION, SMALLER ECOLOGICAL FOOTPRINT

The energy transition has arrived in Germany's cities. With Drees & Sommer's support, Mainova is optimizing Frankfurt's district heating network, creating the basis for more efficient network operation, making the heating supply more reliable and reducing carbon emissions in the long term.

Client:
NRM Netzdienste Rhein-Main GmbH, Frankfurt am Main

Project duration:
December 2014 – June 2017

Planning offices:
- FAAG Technik GmbH, Frankfurt am Main
- Kocks Consult GmbH, Frankfurt am Main

Key project data:
- Number of construction stages: 5
- Total length
  - Pipeline: Approx. 3,000 m
  - Inverted siphons: Approx. 500 m
- Internal diameter of tunnel: 250 cm
- Cost: Approx. € 22 million

Together with Netzdienste Rhein-Main GmbH (NRM), Mainova is building a district heating pipeline between the Niederrad, West, and Messe (trade fair) power plants and the Frankfurt waste-fueled heating and power plant. The pipeline comprises both feed and return lines and will be built using three different methods for the various sections: as surface pipeline protected by structures, underground pipeline, and inverted siphons.

› QUICK CHECK, PROJECT ANALYSIS, PROJECT MANAGEMENT, TRAINING FOR CONTRACTUAL CONSULTING, SITE MANAGEMENT ‹

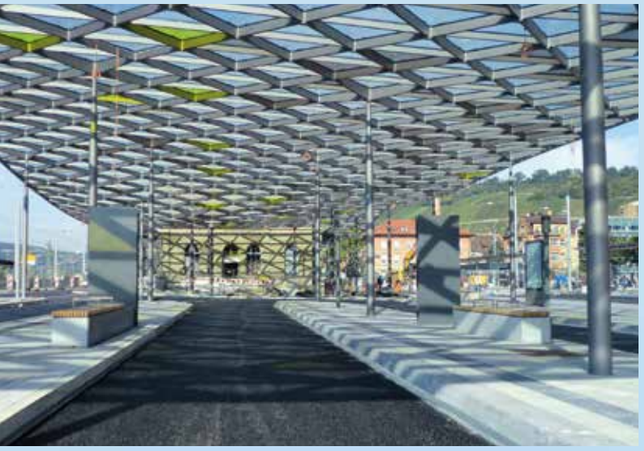
Following successful collaboration in the past, the client initially asked the Drees & Sommer infrastructure experts to undertake project analysis. Then in April 2015, the company was awarded the project management contract, and the experts quickly optimized the relevant processes.

» TIGHT APPROVAL PROCESS, CLEAR AND OPEN COMMUNICATION WITH THE CLIENT

Within a short time, the team verified planning and organized the construction process. The four pan-European contracts were awarded one-by-one, so that implementation of the first subproject – the construction of the inverted siphon under the River Main – was able to start in August 2015. Thanks to excellent progress, at the end of 2015 Drees & Sommer was also commissioned to undertake site management. This means that until June 2017, the company will be responsible for all levels – from the Management Board to the construction site.

In the first stage, the district heating pipeline passes under the River Main some six meters beneath the riverbed. The building pits for the inverted siphon are about 30 meters deep, and the pipeline is being laid using a combination of microtunneling and pipe jacking. The West thermal power station will be connected at a later stage. The pipeline also passes underneath Frankfurt Central's railyard, where an inverted siphon is being built without impacting rail operations.

On exiting the inverted siphon, the district heating pipeline has arrived in the city center. Here it crosses the central Galluswarte transport hub above ground. Most of the work is being carried out at night and on weekends.



Client:
City of Esslingen,
Public Works Department

Project duration:
July 2011 – April 2015

Architects:
– Roof:
Werner Sobek, Stuttgart
– Traffic management systems:
Thomas und Partner, Möglingen

Key project data:
– 18 bus stops
– Traffic area: 12,000 m²
– Roof: 2,000 m²
– Cost: Approx. € 8 million

CENTRAL BUS STATIONS PROMOTE URBAN MOBILITY

Sustainable mobility is inconceivable without an efficient bus system – in particular at the interfaces between town and country, road and rail. This is where central bus stations (CBSs) provide a vital link between various means of transport, pedestrians and cyclists. In 2014 and 2015, Drees & Sommer successfully handed over two such central bus stations to the respective principals.

The new central bus stations in Esslingen and Pforzheim are groundbreaking – both architecturally and in terms of functionality – as they perform important roles. Located between the railway station and the city center, the existing bus station in Esslingen was no longer able to cope with the growing volume of traffic. Added to which there was no wheelchair access. So the new facility had to meet a range of requirements – and above all it had to be built with the current bus station in full operation. Catenaries also had to be provided for electric buses. The project resulted in a clearly structured combination of station, forecourt and central bus station. The eye-catching glass roof consists of 1,300 individual elements and rests on 50 steel supports.

Despite the difficult conditions for the project, Drees & Sommer – acting as project manager – handed the new central bus station over to the principal on schedule and within budget in the autumn of 2014. Success factors were lean project organization, a tightly synchronized schedule, and cost transparency.

Esslingen's CBS features a stunning roof that floods the covered area with natural light (small image top left), while the Pforzheim CBS's futuristic roof is a source of fascination for travelers and passers-by (large image)

› PROJECT MANAGEMENT ‹

The City of Pforzheim held the official opening of its new central bus station in June 2015. Here, too, Drees & Sommer infrastructure experts were responsible for project management. Previously, Pforzheim had three separate bus stations servicing North, Central and South. These have now been consolidated into a single central bus station at the main railway station. To ensure optimal integration of the central bus station into the road network, the adjacent main road intersections had to be redesigned and adapted for bus traffic.

The CBS provides a total of 29 bus stops for regional and urban bus services. Here, too, the roof is the urban-planning and architectural highlight. In February 2016, the Pforzheim central bus station was awarded the Baden-Württemberg State Prize for Architecture in the category Infrastructure and Civil Engineering.

Client:
City of Pforzheim, Department of Parks and Public Works

Project duration:
August 2011 – July 2016

Architects:
– Roof: Metaraum, Stuttgart
– Traffic management systems:
Mailänder Consult, Karlsruhe

Key project data:
– 29 bus stops
– Traffic area: 14,000 m²
– Roof: 5,000 m²
– Cost: Approx. € 12 million

» PROJECTS KEPT ON TRACK THROUGH STRUCTURING, TIGHTLY SYNCHRONIZED SCHEDULE, AND COST TRANSPARENCY

BFLEX: BUILD, GROW, RESEARCH

Swiss biotechnology company Syngenta has expanded its facilities in Stein to meet the growing demand for research. Drees & Sommer specialists supported the principal throughout the demanding project.

The Syngenta Research Center covers several key areas of biological research such as combating plant disease and insects that infest crops and materials.

The expansion of biological research and development is not only intended to meet changing requirements for plant & equipment and supply of materials, but also to ensure that the company remains competitive in the marketplace. Syngenta has expanded its greenhouse capacity by about a third and increased the capacity of climatic chambers by some 55 percent. The new facilities also include offices, evaluation and examination rooms, a biosafety laboratory, and additional storage space.

The ‘partial house-in-house concept’: Inner greenhouses are located inside a new outer greenhouse. That saves energy!

» REDUCTION OF PROJECT MANAGEMENT WORKLOAD THROUGH COST AND SCHEDULE TRANSPARENCY

Client:
Syngenta Crop Protection
Münchwilen AG, Stein

Project duration:
July 2012 – January 2016

Architects:
Wilhelm und Hovenbitzer
und Partner, Lörrach

Key project data:
– GFA: 6,100 m²
– Gross volume: 25,000 m³
– Construction cost: € 41 million

The greenhouses are realized in accordance with the ‘partial house-in-house concept’. The inner greenhouses are located in a new outer greenhouse and are largely protected from environmental influences. As a result, they use significantly less energy. In combination with state-of-the-art climate control technology, this arrangement ensures the necessary homogeneity and regulates environmental factors such as temperature, light and humidity.

Drees & Sommer tested the effective energy design of technical plant & equipment and made optimization proposals

› PROJECT MANAGEMENT WITH SCHEDULE, COST & QUALITY MANAGEMENT, PROCUREMENT & CHANGE MANAGEMENT, VALUE ENGINEERING, RISK MANAGEMENT, 2ND-OPINION ENERGY CONCEPT, COSTMONITOR FOR COST CONTROL ‹

A controlling contract for the refurbishment of the company headquarters in Basel – currently being successfully executed by Drees & Sommer – was expanded to commission the experts with project management of ‘Bflex’, the expansion of the Stein facility. The go-ahead for the preliminary project plan was given in November 2012, and execution of upgrade measures took place from September 2013 to December 2015.

Throughout the entire project, the project managers supported both the client and the team of planners, and were responsible for project organization and project-related procurement. In addition to ensuring that cost and schedule commitments were met, there was a focus on coordination of the interface between architects, building services equipment specialists and energy consultants. Particularly in the areas of scheduling, cost structures and cost monitoring, Drees & Sommer – in consultation with the planners – was able to incorporate the client’s needs and continuously pursue their interests. This not only allowed completion within the forecast cost, but also reduced the workload for project management.

»

USING 3C MANAGEMENT, DREES & SOMMER HELPS THE PHARMA PROJECT ACHIEVE LASTING SUCCESS

PHARMACEUTICAL COMPANY BENEFITS FROM SPECIAL MANAGEMENT

Caelo is building two new buildings for the production and packaging of basic pharmaceutical products in Hilden. The project also includes a three-story administration building and a temperature-controlled warehouse. Drees & Sommer restructured the project using 3C Management and is supporting the client with consulting and auditing services.

Client:
Caesar & Loretz GmbH (Caelo), Hilden

Project duration:
November 2014 – May 2016

Architects:
pos4 Architekten, Düsseldorf

Key project data:
- GFA:
  - Production (cleanroom classes D and F): 1,600 m²
  - Administration: 1,200 m²
  - Warehouse 5a: 800 m²
- Total number of workplaces: 180, of which 40 in production

With over 200 employees, Caelo is one of the leading manufacturers of high-quality basic pharmaceutical materials. Capacity expansion and the increasingly strict interpretation of GMP (Good Manufacturing Practice) requirements were two of the reasons behind the decision for the new buildings at the company's headquarters.

The new PMS production plant will enable Caelo to optimize production processes, and improve production and occupational safety. The future administration building will also have meeting rooms, and the new production building has been designed to allow a future capacity increase to be implemented flexibly and cost-effectively.

Caelo initially brought in a local project management company, which was tasked with draft planning as well as checking and optimizing the expected cost. Tender documents on this basis were published in 2013. Incoming bids differed substantially from the forecast costings, however, and contained a range of suggestions and exclusions.

› CT MANAGEMENT, 3C MANAGEMENT ‹

Caelo then decided that Drees & Sommer – as a company with experience in pharmaceutical and construction projects – should review the costs and tender documents. In particular, the aspects of production technology, compliance and GMP regulations were to be examined. The Drees & Sommer Life Sciences expert team carried out a plausibility check and status analysis.

The external planning team and qualification specialist Gempex was also on board. Amongst other things, they jointly drew up detailed specifications, defined qualification requirements, and reviewed the planning specification. They also updated the cost forecast. The existing GU bids were successfully renegotiated on the basis of the refined data.

To get the project back on track, Drees & Sommer used a project management system specifically tailored to the pharmaceutical industry: 3C Management. The three Cs stand for the different phases – Construction (planning and construction), Commissioning (of technology and production lines), and Compliance (GMP compliance). The key benefits are that qualification is secured, and that the construction process is low-risk and highly efficient.

NEW ADMINISTRATION AND PRODUCTION FACILITY SUCCESSFULLY COMMISSIONED

Drees & Sommer supported timely commissioning of the new ZEISS headquarters for Asia in Shanghai within budget and to the specified quality. The key technical challenge was that the experts were called to join a project that was already under way.

Client:
Carl Zeiss (Shanghai) Co., Ltd. and Carl Zeiss IMT (Shanghai) Co., Ltd.

Project duration:
December 2013 – May 2015

Architects:
- China Haisum Engineering Co., Ltd., Shanghai
- Shanghai Muraya Building, Decoration Engineering Co., Ltd., Shanghai

Key project data:
- GFA: 16,300 m²
- Height: 25.9 m
- Floor space: 8,900 m²
- Offices as reinforced concrete structure
- Production areas as prefabricated steel structure

September 15, 2015 saw the successful official opening of the new headquarters of Carl Zeiss (Shanghai) Co., Ltd. and Carl Zeiss IMT (Shanghai) Co., Ltd. The building provides space for a range of uses and replaces existing premises leased by the client.

The core and the shell of the new building were built by a local project developer and leased back to ZEISS on a built-to-lease basis. Building services equipment and plant & equipment were provided by ZEISS.

The four-story building meets a wide range of requirements, with laboratories for research & development, products display areas, a canteen with kitchen, as well as three office floors. Special attention was paid to the specifications for the assembly hall air conditioning.

› PROJECT MANAGEMENT, CLIENT REPRESENTATION (AS TENANT ENGINEER), USER MANAGEMENT, REPORTING TO CLIENT, MANAGEMENT OF EXTERNAL SERVICE PROVIDERS ‹

Drees & Sommer only joined the project when it was already under way: The specialists then had to restructure the project in a very short time and clarify numerous issues with the many stakeholders.

Drees & Sommer's primary role was representing the principal in dealings with the local project developer, lessor, designers, and local project managers. In dealings with the general contractor responsible for building services equipment and plant, Drees & Sommer acted as the contractually specified 'engineer' in accordance with the FIDIC Yellow Book.

The bright 'no frills' lobby reflecting the client's Corporate Design and featuring an open stairway and gallery

» CULTURAL COMPETENCE AND GERMAN PM KNOW-HOW ENSURE THE REQUIRED QUALITY OF THE NEW MULTIFUNCTIONAL BUILDING

ULTRA-MODERN WORKPLACES IN THE ETERNAL CITY

When moving into its new offices in Rome, Mercedes-Benz Italia secured the services of Drees & Sommer for tenant management support. And this move clearly paid off for the automaker.

»

GOALS JOINTLY ACHIEVED WITH CLIENT,
ALONG WITH INVESTMENT AND ENERGY SAVINGS

Client:
Mercedes-Benz Italia, Rome

Project duration:
March 2014 – December 2016

Architects:
Roberto Bianchi MPPM, Rome

Key project data:
– GFA: 13,000 m²
– Construction cost: € 32 million
– Workplaces: 600

Daimler AG and Drees & Sommer – this partnership has always been a success story – and particularly since the construction of Potsdamer Platz in Berlin. So it was no surprise that when they decided to move their headquarters in Rome to a new building, Mercedes-Benz Italia looked to Drees & Sommer for support. Drees & Sommer experts from Milan and Stuttgart were jointly commissioned to undertake project management, communication management using Project-CommunicationSystem, as well as refurbishment and tenant management.

› REFURBISHMENT, COST MANAGEMENT, COST CONTROLLING, PROFITABILITY ANALYSIS, PROJECT MONITORING, CONSTRUCTION CONTROL, QUALITY MANAGEMENT, COMMUNICATION MANAGEMENT USING PCS, TENANT MANAGEMENT ‹

The goals were to meet international standards, create state-of-the-art workplaces for 600 employees, and make overall operations more cost-efficient. With the help of value engineering during planning and sample inspection, Drees & Sommer saved investment, operating and energy costs, for example through the use of the latest type of LED lighting, heat exchangers, photovoltaics, and rainwater harvesting.

Drees & Sommer also provided Mercedes-Benz Italia with professional support during lease contract negotiations.

Joint goal definition and close coordination with Daimler Benz Real Estate are ensuring that the project for the headquarters of the global group in the Eternal City will be completed by the end of 2016.

CRAFTER FACTORY CONSTRUCTION RIGHT ON TRACK

From groundbreaking to the first production step in just two years: Drees & Sommer will continue to support Volkswagen with the construction of a new factory for production of its ‘Crafter’ transporter in Poland until the end of 2016.

» SYNCHRONIZED CONSTRUCTION AND SYSTEMATIC FOLLOW-UP GUARANTEE PROJECT SUCCESS

Extensive experience, particularly in relation to scheduling, project analysis, and project setup, was decisive for the contract being awarded to Drees & Sommer. The client’s requirements were correspondingly high: Start of production (SOP) was scheduled for autumn 2016 with strict adherence to the planned budget.

Following the granting of planning permission in early October 2014, workers drove the first foundation pile into the ground on October 6. Gradually, halls with a total floor area equivalent to some 46 football fields took shape on the site.

› PROJECT CONTROL, PROJECT MANAGEMENT, COORDINATION AND MANAGEMENT OF PLANT INSTALLATION ‹

The team managed to cut the timeline for factory development from the usual four years to just two years. This required a high level of synchronization of construction trades and close dovetailing with plant installation. To achieve this goal, the expert team coordinated the construction process with plant installation priorities early in the project. The fact that Drees & Sommer was subsequently commissioned to undertake project management and was awarded an additional contract for coordination of plant is testimony to the quality of Drees & Sommer services. Once again, it was the above-average commitment of the entire team and the fact that those responsible left nothing to chance that proved decisive.

In the final months of 2015, the focus was on continued installation and commissioning of plant and equipment. The completion of the outbuildings and public infrastructure in spring 2016 rounded out the success of the project to date.

Client:
Volkswagen Nutzfahrzeuge, Volkswagen Poznan Sp. z.o.o., Posen/Hannover

Project duration:
March 2014 – December 2016

Architects:
Assmann Beraten und Planen, Braunschweig

Key project data:
– GFA: 335,000 m²

Client:
Audi Hungaria Motor Kft., Győr, Hungary

Project duration:
– Stage 1:
October 2013 – December 2014
– Stage 2:
From April 2015

Architect:
ATP Wien GmbH, Vienna

Key project data:
GFA: 5,200 m²

INNOVATIVE TECHNOLOGY AND NEW BUILDINGS

As a long-standing company based in Ingolstadt, Germany, Audi is stepping on the gas in Neckarsulm, Germany, and Győr, Hungary, expanding its car body production and test stand capacity with new buildings, plant and equipment. Drees & Sommer automotive experts are on board as partners.

Client:
Audi AG, Germany

Project duration:
November 2013 – December 2016

Architect:
RPB Rückert GmbH, Heilbronn

Key project data:
GFA: 179,534 m²

Drees & Sommer is assisting with the construction of two buildings (C11/C13) for the production of Audi A6 car bodies in Neckarsulm.

The first official handovers of ventilation technology plant to the operator during the construction phase were a highlight for the Audi world. And all went smoothly thanks to Drees & Sommer commissioning and handover management.

Several factors contributed to the success of the project: The high level of commitment of specialists, high-quality control and work completion schedules, and thorough cost controlling.

› NECKARSULM: PROJECT MANAGEMENT, ENGINEERING, COST CONTROLLING, SCHEDULE CONTROLLING
GYŐR: PROJECT MANAGEMENT / CONSTRUCTION SITE SUPERVISION, BUILDING SERVICES EQUIPMENT (BSE) AND TEST STAND TECHNOLOGY ‹

Audi is also in the fast lane in Győr some 640 km east of Neckarsulm, where the company is breaking new ground with the construction of a new production hall. In this case, the specialists were brought in to analyze cost overruns and to identify potential savings.

Working with local partners, the project team resolved planning interface deficits between engineering, building services equipment and test stand technology. Together, the experts successfully mediated between the client and planners and cordinated with users.

New production buildings in Neckarsulm (large image) and innovative test stands in Győr (small image top left) are symbols of Audi's drive into the future

» SCHEDULE ADHERED TO, MORE EFFICIENT BUILDING SITE PROCESSES, AND REDUCTION IN THE NUMBER OF WORK HOURS

OIL REFINERY PROJECT RUNNING SMOOTHLY THANKS TO LCM

With Lean Construction Management, Drees & Sommer is delivering clear procedures, standardized processes and greater efficiency for Consolidated Contractors Company (CCC) – the largest construction company in the Middle East – during renovation work and construction of a new oil refinery in Kuwait.

Lean Construction Management (LCM) means that the experts transfer the lean management model to construction projects and construction sites. The focus on processes and workflows, information and material logistics allows these to be stabilized and accelerated. LCM makes construction and planning processes so transparent that challenges can be detected early, allowing appropriate solutions to be developed. This increased stability enhances project efficiency, and also has a positive impact on both quality and the schedule.

CCC wanted to increase productivity on the desert construction site and sought a competent partner for the project through a global invitation to tender. The client was impressed with Drees & Sommer's innovative LCM. The method was not only developed by builders for builders, but also takes individual construction processes into account.

Client:
Consolidated Contractors Company (CCC), Athens

Project duration:
August 2015 – April 2016

› PROCESS CONSULTING, CONSTRUCTION ENGINEERING, PREPARATION, EXECUTION AND CONTROLLING WITH LEAN CONSTRUCTION MANAGEMENT ‹

The first step of the intercultural project in Kuwait was to bring construction workers with different qualifications up to the same level of knowledge. For example, the project managers had to demonstrate the relevant tools – such as the planning board, which shows all activities for the next few weeks at a glance – and make the use of such tools mandatory. The value added for everyone involved was clearly demonstrated through clear communication and direct cooperation.

The experts involved in this project developed and successfully implemented a strategy that tailored the lean approach to the requirements of the desert construction site. This led to greater schedule accuracy and a significant reduction in work hours. And in turn, greater planning stability resulted in faster and more efficient execution processes.

ESTABLISHED TEAM DELIVERS SEAMLESS COMMUNICATION THROUGHOUT PROJECT

THE FOCUS IS ON EMPLOYEES

The Fiducia & GAD Group is ushering in the future of the workplace: In Karlsruhe, the IT specialist commissioned Drees & Sommer organization consultants to develop a work and office concept for more than 2,000 employees in collaboration with the Fraunhofer Institute.

The Fiducia & GAD Group is one of the leading IT service providers in Germany and the largest within the FinanzGruppe cooperative. Because of the way the structure has evolved at its headquarters in Karlsruhe, staff there are distributed across different kinds of offices in more than 20 buildings. By 2018, the company wants to shut down several properties and integrate some established buildings into a campus.

Based on a client's recommendation, Drees & Sommer was initially awarded a contract for strategic requirements planning and asked to conduct a feasibility study for the development of the site. Requirements planning was based on the projected number of employees and scenarios for the intended future workplace concept. Local and international companies contributed to the planning report. Drees & Sommer supported the entire process and ensured process quality.

In the feasibility study, the experts identified various ways in which requirements at the site could be met in keeping with corporate strategy. To this end, the study also encompassed the development of an overall budget and schedule concept.

› FEASIBILITY STUDY, STRATEGIC REQUIREMENTS PLANNING, REQUIREMENTS MANAGEMENT, COMPETITION MANAGEMENT, WORKPLACE CONSULTING ‹

In addition, a workplace concept for the IT campus was developed in collaboration with the Fraunhofer Institute IAO and with Fiducia's assistance. The concept drew on findings from over 20 interviews and workshops with users. A modular design was developed based on the established requirements. This enabled assignment of space to be undertaken with little effort at a relatively late stage.

Client:
Fiducia & GAD IT AG, Karlsruhe

Project duration:
- Requirements planning and feasibility study: January 2013 – November 2013
- Architectural competition and workplace consulting: January 2015 – December 2015

Architects:
archis.Architekten, Karlsruhe

Key project data:
- GFA: 55,000 m²
- Total cost: € 150 million (net)
- Workplaces: 1,500

AT EACH LOCATION THE RIGHT CONTACTS FOR EVERY JOB

The staff are our link to our customers. On the following pages we introduce the responsible intrapreneurs of Drees & Sommer: Our Partners and Associate Partners. This is followed by an overview of our international offices and contact persons as well as an overview of our industry experts and central specialist divisions.

All offices are well acquainted with regional peculiarities. This allows us to support our local clients, but also to support international customers in these countries.

PARTNERS AND ...

Prof. Dr. Michael Bauer
Martin Becker
Mirco Beutelspacher
Jörg Ewald-Lincke

Prof. Phillip Goltermann
Thomas Häusser
Sascha Hempel
Stefan Heselschwerdt

Thomas Hofbauer
Roland Huber
Thomas Jaißle
Sascha Kilb

Daniel Kluck
Dr. Jürgen Laukemper
Dr. Peter Mösle
Dierk Mutschler

Norbert Otten
Christopher Vagn Philipsen
Frank Reuther
Ralph Scheer

Andreas Schele
Marc Schömbs
Matthias Schulle
Steffen Sendler

Prof. Dr. Hans Sommer
Steffen Szeidl
Patrick Theis
Veit Thurm

Peter Tzeschlock
Bernhard Unseld
Prof. Jürgen M. Volm
Gabriele Walker-Rudolf

Markus Weigold
Jörg Wohlfarth
Rino Woyczyk

... ASSOCIATE PARTNERS

Niklaus Arn
Maximilien Ast
Oliver Beck
Thomas Berner

André Boers
Jürgen Brandstetter
Claus Bürkle
Tim Comaia

Klaus Dederichs
Stephan Degenhart
Dr. Thomas Harlfinger
Heinz Heger

Klaus Hirt
Marc Guido Höhne
Björn Jesse
Frank Kamping

Ulrich Kaufmann
Alexander Kittel
Markus Lauber
Josef Linder

Boris Matisic
Ralf Molter
Rainer Preisshofen
Heiko Rihm

Andreas Rost
Daniel Seibert
Holger Seidel
Philipp Späth

Matthias Stolz
Hermine Szegedi
Dr. Markus Treiber
Mirko Weiss

Dietmar Zwipp

Status: 01.07.2016

OFFICES AND CONTACTS

STUTTGART

Drees & Sommer – Holding
Obere Waldplätze 13
70569 Stuttgart, Germany
Phone +49 711 1317-0
Fax +49 711 1317-101
info@dreso.com

Your contacts:
Dierk Mutschler
Steffen Szeidl
Peter Tzeschlock

Drees & Sommer – Project Management and Real Estate Consulting
Obere Waldplätze 13
70569 Stuttgart, Germany
Phone +49 711 1317-0
Fax +49 711 1317-101
info.stuttgart@dreso.com

Your contacts:
Thomas Berner
Mirco Beutelspacher
Thomas Jaißle
Alexander Kittel
Josef Linder
Heiko Rihm
Ralph Scheer
Andreas Schele
Philipp Späth
Matthias Stolz
Bernhard Unseld

Drees & Sommer – Engineering
Obere Waldplätze 11
70569 Stuttgart, Germany
Phone +49 711 687070-0
Fax +49 711 687070-368
info.stuttgart@dreso.com

Your contacts:
Prof. Dr. Michael Bauer
Martin Lutz
Dr. Peter Mösle

Drees & Sommer – Development and Infrastructure Consulting
Untere Waldplätze 37
70569 Stuttgart, Germany
Phone +49 711 222933-0
Fax +49 711 222933-4190
info.infra@dreso.com

Your contacts:
Claus Bürkle
Roland Huber
Dr. Jürgen Laukemper
Christopher Vagn Philipsen

Drees & Sommer – Strategic Process Consulting and Facility Management Consulting
Untere Waldplätze 37
70569 Stuttgart, Germany
Phone +49 711 1317-2288
Fax +49 711 1317-101
info.stuttgart@dreso.com

Your contacts:
Thomas Häusser
Dirk Jannausch
Patrick Theis

Drees & Sommer – International
Obere Waldplätze 13
70569 Stuttgart, Germany
Phone +49 711 1317-0
Fax +49 711 1317-101
info.stuttgart@dreso.com

Your contacts:
Sascha Hempel
Bernhard Unseld

G² Holding GmbH
Kronenstraße 34
70174 Stuttgart, Germany
Phone +49 711 225558-30
Fax +49 711 225558-46
stuttgart@gagro.de

Your contacts:
Heinz Heger
Andreas Schele
Mirko Weiss

AACHEN

Drees & Sommer
Campus-Boulevard 55
52074 Aachen, Germany
info.aachen@dreso.com

Your contact:
Klaus Dederichs

ATLANTA

Drees & Sommer USA
100 Hartsfield Centre Parkway
Suite 500
Atlanta, Georgia 30354, USA
info.atlanta@dreso.com

Your contact:
Christine Gruna

BARCELONA

Drees & Sommer España
Ronda de Sant Pere 17, 2°
08010 Barcelona, Spain
Phone +34 93 451-0839
info.spain@dreso.com

Your contact:
Sascha Hempel

BASEL

Drees & Sommer Schweiz
St. Alban-Vorstadt 80
4052 Basel, Switzerland
Phone +41 61 785-7200
Fax +41 61 785-7270
info.zuerich@dreso.com
www.dreso.ch

Your contact:
Prof. Jürgen M. Volm

Drees & Sommer Schweiz
Malzgasse 20
4052 Basel, Switzerland
Phone +41 61 785-7200
Fax +41 61 785-7270
info.zuerich@dreso.com
www.dreso.ch

Your contacts:
Dr. Michael Schwarz
Veit Thurm

BEIJING

Drees & Sommer Project Management and Consulting (Beijing)
Room No. 072, 7th Floor, Unit 1,
Sanlitun DRC, Office Building
No. 1 Gongti North Road,
Chaoyang District
100600, Beijing, P.R. China
Phone +86 10 65900-265
Fax +86 10 65900-275
info.beijing@dreso.com

Your contacts:
Markus Lauber
Martin Lutz

BERLIN

Drees & Sommer
Bundesallee 39 – 40a
10717 Berlin, Germany
Phone +49 30 254394-0
Fax +49 30 254394-222
info.berlin@dreso.com

Your contacts:
Oliver Beck
Markus Weigold

BREMEN

Drees & Sommer
Auf der Muggenburg 9
28217 Bremen-Überseestadt, Germany
Phone +49 421 278712-0
Fax +49 421 278712-6599
info.bremen@dreso.com

Your contacts:
Prof. Phillip Goltermann
Björn Jesse
Jörg Wenzel

BRUSSELS

Drees & Sommer Belgium
Avenue des Cerisiers 15
1030 Brussels, Belgium
Phone +32 2 73770-30
Fax +32 2 73770-31
info.brussels@dreso.com

Your contacts:
Maximilien Ast
Christopher Matthies

BUCHAREST

Drees & Sommer Romania
Str. Lt. Av. Serban Petrescu, Nr. 15, Et. 2
011891 Sector 1, Bucharest, Romania
Phone +40 31 690-8001
Fax +40 31 690-8066
info.bucuresti@dreso.com

Your contact:
Andrei George Ghenghea

COLOGNE

Drees & Sommer
Bürogebäude Westgate
Habsburgerring 2
50674 Köln, Germany
Phone +49 221 13050-5260
Fax +49 221 13050-5202
info.koeln@dreso.com

Your contacts:
Jörg Ewald-Lincke
Stefan Heselschwerdt
Frank Kamping
Matthias Schulle

COPENHAGEN

Drees & Sommer Nordic
Wildersgade 10B, 2. OG
1408 Copenhagen, Denmark
Phone +45 45 2690-00
Fax +45 45 2690-99
info.nordic@dreso.com
www.dreso.dk

Your contacts:
Prof. Phillip Goltermann
Carsten Hyldebrandt

DORTMUND

Drees & Sommer
Königswall 21
44137 Dortmund, Germany
Phone +49 231 9125697-0
Fax +49 231 9125697-9511
info.dortmund@dreso.com

Your contacts:
Nadin Bozorgzadeh
Stefan Heselschwerdt

DRESDEN

Drees & Sommer
Freiberger Straße 39
01067 Dresden, Germany
Phone +49 351 873239-0
Fax +49 351 873239-20
info.dresden@dreso.com

Your contacts:
Andy Brunner
Andreas Rost
Jörg Wohlfarth

DUBAI

Drees & Sommer Gulf
DIC – Dubai Internet City
Building 13, Office 116,
P.O. Box 500 128
Dubai, U.A.E.
info.dubai@dreso.com

Your contact:
Stephan Degenhart
Daniel Kluck

DÜSSELDORF

Drees & Sommer
Derendorfer Allee 6
40476 Düsseldorf, Germany
Phone +49 211 23390-0
Fax +49 211 23390-111
info.duesseldorf@dreso.com

Your contacts:
André Boers
Jörg Ewald-Lincke

ERFURT

Drees & Sommer
Anger 66 – 73
99084 Erfurt, Germany
Phone +49 361 59896-6410
Fax +49 361 59896-6420
info.erfurt@dreso.com

Your contacts:
Christian Krajci
Andreas Rost
Jörg Wohlfarth

FRANKFURT

Drees & Sommer
Schmidtstraße 51
60326 Frankfurt am Main, Germany
Phone +49 69 758077-0
Fax +49 69 758077-8833
info.frankfurt@dreso.com

Your contacts:
Sascha Hempel
Klaus Hirt
Thomas Hofbauer
Sascha Kilb
Ralf Molter
Norbert Otten
Marc Schömbs
Dietmar Zwipp

Gassmann + Grossmann
Baumnagement GmbH
Schmidtstraße 51
60326 Frankfurt am Main, Germany
Phone +49 69 29802887-0
Fax +49 69 29802887-46
frankfurt@gagro.de

Your contact:
Jürgen Brandstetter

FREIBURG

Drees & Sommer
Kaiser-Josef-Straße 194
79098 Freiburg, Germany
Phone +49 761 881790-0
Fax +49 761 881790-1790
info.freiburg@dreso.com

Your contacts:
Stefan Kattendick
Ralph Scheer

HAMBURG

Drees & Sommer
Ludwig-Erhard-Straße 1
20459 Hamburg, Germany
Phone +49 40 514944-0
Fax +49 40 514944-6398
info.hamburg@dreso.com

Your contacts:
Prof. Phillip Goltermann
Björn Jesse
Claudia Niendorf
Helge Plath
Harald Wüst

HANOVER

Drees & Sommer
Podbielskistraße 342
30655 Hannover, Germany
Phone +49 511 2138870-0
Fax +49 511 2138870-20
info.hannover@dreso.com

Your contacts:
Martin Albrecht
Heinz Günter Freihoff
Björn Jesse

ISTANBUL

Drees & Sommer Türkiye
Inönü Cad 29/3 Gümüssuyu
34427 Istanbul, Turkey
Phone +90 212 29284-00
Fax +90 212 29284-10
info.istanbul@dreso.com

Your contact:
Sascha Hempel

JEDDAH

Drees & Sommer
Consulting Engineering
Jameel Square Office 125
Tahlia Street
23612 Jeddah,
Kingdom of Saudi Arabia
Phone +966 12 283 2576
info.saudiarabia@dreso.com

Your contact:
Daniel Kluck

KIEL

Drees & Sommer
Schlossgarten 6
24103 Kiel, Germany
Phone +49 431 200027 9600
Fax +49 431 200027 9630
info.kiel@dreso.com

Your contacts:
Prof. Phillip Goltermann
Joachim Lenschow

LEIPZIG

Drees & Sommer
Brühl 65
04109 Leipzig, Germany
Phone +49 341 91930-0
Fax +49 341 91930-6220
info.leipzig@dreso.com

Your contacts:
Andreas Rost
Jörg Wohlfarth

MANNHEIM

Drees & Sommer
Augustaanlage 13
68165 Mannheim, Germany
Phone +49 621 7186899-449
Fax +49 621 7186899-40449
info.mannheim@dreso.com

Your contacts:
Mirco Beutelspacher
Jochen Günther

MILAN

Drees & Sommer Italia
Viale Luigi Majno, 17
20122 Milano, Italy
Phone +39 02 290-62666
Fax +39 02 290-11388
info.milano@dreso.com

Your contact:
Jürgen Kreisel

MOSCOW

Drees & Sommer Russland und GUS
Zemlyanoy Val 9, 4th Floor
105064 Moscow, Russia
Phone +7 495 79230-92
Fax +7 495 79230-91
info.moscow@dreso.com
www.dreso.ru

Your contacts:
Tim Comaia
Steffen Sendler

MUNICH

Drees & Sommer
Geisenhausenerstraße 17
81379 München, Germany
Phone +49 89 149816-0
Fax +49 89 149816-4890
info.muenchen@dreso.com

Your contacts:
Dr. Thomas Harlfinger
Frank Reuther
Holger Seidel
Hermine Szegedi
Dr. Markus Treiber

RBS - Projekt Management GmbH - Unternehmensberatung
Kistlerhofstr. 70, Geb. 76
81379 München, Germany
Phone +49 89 318561-0
Fax +49 89 318561-99
welcome@germany.rbsgroup.eu

Your contacts:
Martin Becker
Daniel Seibert
Prof. Dr. Christine Kohlert

Gassmann + Grossmann Baumnagement GmbH
Geisenhausenerstraße 15
81379 München, Germany
Phone +49 89 2441920-0
Fax +49 89 2441920-46
muenchen@gagro.de

Your contact:
Boris Matisic

MUNSBACH/LUXEMBOURG

Drees & Sommer Luxembourg
6c, rue Gabriel Lippmann
5365 Munsbach, Luxembourg
Phone +352 261205-5550
Fax +352 261205-5580
info.luxembourg@dreso.com

Your contacts:
Maximilien Ast
Heiko Butter
Lothar Diederich

NUREMBERG

Drees & Sommer
Äußere Cramer-Klett-Straße 19
90489 Nürnberg, Germany
Phone +49 911 9928660-0
Fax +49 911 9928660-4988
info.nuernberg@dreso.com

Your contacts:
Frank Pickel
Holger Seidel

PARIS

Drees & Sommer France
70 boulevard de Courcelles
75017 Paris, France
Phone +33 1 4293-6320
Fax +33 9 7212-7219
info.france@dreso.com

Your contacts:
Maximilien Ast
Jean-Marc Guillen

RIYADH

Drees & Sommer Consulting Engineering
2nd Floor, Building No. 3075,
Al Yasmin District
13322 Riyadh,
Kingdom of Saudi Arabia
Phone +966 11 4005209
Fax +966 11 2034266
info.saudiarabia@dreso.com

Your contacts:
Daniel Kluck
Ralf Schiffer

SÃO PAULO

Drees & Sommer do Brasil
Condomínio Millennium, Av. Chedid Jafet, 222
Turm D – 5th Floor Vila Olímpia
04551-065, São Paulo, SP Brazil
Phone +55 11 2655 7302
Fax +55 11 2655 1710
info.brasil@dreso.com

Your contact:
Miriam Haag

SHANGHAI

Drees & Sommer Engineering Consulting (Shanghai)
The Bridge 8, Building 9, Unit 9506,
No.25 Jianguo Zhong Rd., Huangpu District,
Shanghai 200025, P.R. China
Phone +86 21 6136-9165
Fax +86 21 6136-9162
info.shanghai@dreso.com

Your contacts:
Markus Lauber
Martin Lutz
Baldur Steimle

ST. PETERSBURG

Drees & Sommer Russland und GUS
pl. Truda, 2, lit. A
190000 St. Petersburg, Russia
Phone +7 812 309-9323
Fax +7 812 309-93230
info.st.petersburg@dreso.com
www.dreso.ru

Your contacts:
Evgeniy Kaverin
Kai-Uwe Reitmann
Steffen Sendler

ULM

Drees & Sommer
Hämpfergasse 9
89073 Ulm, Germany
Phone +49 731 9691495-136
Fax +49 731 9691495-40136
info.ulm@dreso.com

Your contact:
Ralph Scheer

VIENNA

Drees & Sommer Projektmanagement und bautechnische Beratung
Lothringerstraße 16, Top 9
1030 Wien, Austria
Phone +43 1 5335660-0
Fax +43 1 5335660-90
info.wien@dreso.com

Your contacts:
Manfred Drescher
Marc Guido Höhne
Georg Stadlhofer

WARSAW

Drees & Sommer Polska
Ul. Chmielna 132/134
00-805 Warsaw, Poland
Phone +48 22 48778-29
Fax +48 22 48778-13
info.polska@dreso.com

Your contact:
Jörg Wohlfarth

ZURICH

Drees & Sommer Schweiz
Förrlibuckstrasse 10
8005 Zürich, Switzerland
Phone +41 43 366-6864
Fax +41 43 366-6863
info.zuerich@dreso.com
www.dreso.ch

Your contacts:
Rainer Preisshofen
Prof. Jürgen M. Volm

RBS Projekt Management (Schweiz) GmbH
Hardturmstrasse 169
8005 Zürich, Switzerland
Phone +41 43 33650-50
welcome@swiss.rbsgroup.eu

Your contact:
Niklaus Arn

CONTACTS FOR SPECIFIC INDUSTRIES

Automotive	Philipp Späth	philipp.spaeth@dreso.com
Finance	Marc Schömbs	marc.schoembs@dreso.com
Healthcare	Hermine Szegedi	hermine.szegedi@dreso.com
Hospitality	Gesa Rohwedder	gesa.rohwedder@dreso.com
ICT	Klaus Dederichs	klaus.dederichs@dreso.com
Real Estate Industry	Sascha Kilb	sascha.kilb@dreso.com
Life Sciences	Rino Woyczyk	rino.woyczyk@dreso.com
Public Sector	Claus Bürkle	claus.buerkle@dreso.com
Retail	Dirk Hünerbein	dirk.huenerbein@dreso.com
Residential	Simon Dietzfelbinger	simon.dietzfelbinger@dreso.com

PHOTO CREDITS

Cover, Pages 6, 18
© 1xpert – Fotolia.com

Pages 2 – 4
© Holger Hill, Reutlingen

Pages 20 – 23
© HENN GmbH

Pages 24 – 25
© MAINTOR PANORAMA

Pages 26 – 27
© W&W Asset Management GmbH

Pages 28 – 31
© Commerzbank, Commerz Real

Pages 32 – 33
© European Central Bank/Hannelore Förster
© European Central Bank/Georg Klein

Pages 34 – 37
© F. Hoffmann-La Roche AG

Pages 38 – 39
© Herzog & de Meuron

Pages 40 – 41
© STOFANEL Truman Plaza Wohnen GmbH & Co. KG

Pages 42 – 43
© roedig.schop architekten

Pages 44 – 45
© Bruno Helbling

Pages 46 – 49
© Foremost Hospitalis HIEX GmbH

Pages 50 – 51
© ECE, K in Lautern, Kaiserslautern

Pages 52 – 53
© SCHMELZLE+PARTNER Architekten BDA

Pages 54 – 55
© Dieter Schwarz Stiftung (Aerial photo)
© Glück + Partner GmbH (Visualization)

Pages 56 – 57
© Hetzel + Ortholf Architekten
© Bernd Seeland

Pages 60 – 61
© Bertram Bölkow
© Herrn Thomas Bergner, DONNIG UNTERSTAB + PARTNER (Aerial photo)

Pages 62 – 63
© Stefan Schmitz, RSAA GmbH

Pages 64 – 67
© EGP GmbH Gesellschaft für urbane Projektentwicklung
© Stadt Bamberg

Pages 70 – 73
© ASTOC Architects and Planners / HPP Architects / LAND Srl / Illustration: Play-Time (Visualization first page)
© ASTOC Architects and Planners / HPP Architects / LAND Srl (small map)
© ASTOC Architects and Planners / HPP Architects / LAND Srl / Illustration: Play-Time (second page)

Pages 74 – 75
© Mainova AG

Pages 76 – 77
Pforzheim: © Zooey Braun FOTOGRAFIE

Pages 78 – 81
© Lilly Kehl, Basel

Pages 84 – 85
© Carl Zeiss (Shanghai) Co., Ltd

Pages 86 – 87
© Esebio SpA

Pages 88 – 89
© Lukasz Zech, Polen

Pages 90 – 91
Györ: © AUDI HUNGARIA MOTOR Kft.
Motorenentwicklungszentrum Prüfstand
Neckarsulm: © AUDI AG

Pages 92 – 93
© Andrei Merkulov – Fotolia.com

Pages 94 – 95
© archis Architekten

Pages 96 – 97
© Syda Productions – Fotolia.com

IMPRINT

Drees & Sommer AG
Untere Waldplätze 28
70569 Stuttgart, Germany
Phone +49 711 1317-2500
Fax +49 711 1317-298
info@dreso.com
www.dreso.com

Drees & Sommer_1605/2000/wdn/E

DREES &
SOMMER