

FORUM

Forum 43 | 06/14 | For clients, partners and friends of Arnold AG

Mirror, Mirror ...



SMBs – A Target for Hackers
Everything that Customers Need
Guiding People Properly



Editorial



Dear FORUM readers,

Emotions set us apart as individuals, even if they are often undesirable or even frowned upon in day-to-day business. They distinguish us from purely functional apparatus that works on the basis of logical algorithms.

At Arnold ...stark in Metall! we have made no secret of the fact that emotions and human interaction are a fundamental part of everyday life. This is the only way for us to deliver a top performance time and time again.

For nearly nine months, a great many people within our company were burdened with the knowledge that someone from within our ranks was terribly ill and they were aware that he was dealing with an invincible opponent. After a selfless struggle, Eckhard Diller, Head of our Thuringian branch and Project Manager for Architectural Constructions, died on 30 March at just 44 years of age. We extend our deepest sympathy to his family. He was a fine man and a truly dedicated Arnold employee. As a close friend of our family, he and his brother Wolfgang have particularly shaped the development of the branch in Steinbach-Hallenberg and embodied our passion for our work.

The loss will have a heavy impact, but there is a stronger desire to further expand the capabilities of our Thuringian site, further improve our competitiveness and thus preserve the memory of Eckhard Diller. He should be proud of us and what we will do with his branch. He never gave up. With this in mind, we look ahead towards continually satisfying our customers' requests. Once again, we would like to give you a few insights in this Forum of how we intend to achieve this.

Best regards,

Uwe Arnold

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SMBs – A Target for Hackers

Data espionage not only affects states, large corporations or Facebook users. SMBs are increasingly becoming victims of economic espionage. It is no longer just hackers attacking the company's own network. The risk often lurks within the company – from careless employees or even those who are bribed.

"Ultimately, everyone is affected;" this was the sobering conclusion of Thomas Tschersich, Head of IT and Security at Telekom, in a recent interview with NDR. Thomas Tschersich knows what he is talking about. Telekom helps customers to secure their systems again after an attack. It is often still not quite clear who has actually made an attack. The weapons of attack are widely available on the Internet and ultimately it doesn't matter now whether it is cyber criminals or intelligence services.

It is however alarming that the attacks are clearly concentrated on southern and western Germany, where the "hidden champions" are based, as established by the German Engineering Federation (VDMA). Rainer Glatz, Managing Director of the VDMA's working group for product and know-how protection: "It is concerning that targeted economic and industrial espionage is also now in operation." It is only the NSA affair that has probably led to a greater awareness. This is also urgently needed as several studies have shown. The consulting firm IDC surveyed more than 300 German companies

with more than 100 employees. The result: "Half-open barn doors – many companies in Germany are careless when it comes to IT security."

New and complex forms of attack once again carry an increase in potential threats for companies. IT security experts refer to a complete range of the latest forms of attack, from cyber wars and advanced persistent threats (APTs) through to E-espionage, in order to obtain targeted information to gain economic, political or strategic advantages (see box). A characteristic of the approach is the use of advanced or multi-level methods of attacks.

Companies have different opinions of the risks. On the one hand, 50 to 60% of companies perceive the threats to be extremely high or high and, on the other hand, 25 to 40% view the risks to be low or even extremely low. The great trust that such companies have in their security measures is however misleading. The IDC findings are consistent with those of their colleagues from PwC. "Prevention measures are undoubtedly neglected by SMBs" is the conclusion of PwC's partner, Derk Fischer. Companies would often not even

notice attacks because the necessary procedures were missing. One in five of the approximately 400 companies surveyed claimed that they have taken no comprehensive measures to protect their data. However, the NSA discussion seems only to have had a limited effect. Only one third claimed that they have once again had a closer look at their IT security strategy as a result.

>> *Cont'd*



It is a concern that the "hidden champions" in particular are the target of economic and industrial espionage: Rainer Glatz, Managing Director of the VDMA's working group for product and know-how protection

Image: VDMA

The enemy within

However, the risk also lurks within a company, warns Thomas Tschersich from Telekom: "I get an application sometime or other from someone who is perfectly qualified and exactly matches the profile for the position, who probably doesn't even have high salary expectations, but perhaps even receives his salary from someone else." However, an external firewall would not help here either. Often it is no evil intention, but rather carelessness when employees cause a data breach. The PwC experts therefore advise companies to regularly inform their employees about potential data risks and the handling of sources of risk. "Even the most secure network does not protect against data loss when employees save sensitive data unencrypted on USB sticks or never change their user passwords," explains Derk Fischer.

Many SMBs have thorough guidelines for information security but these rarely follow a recognised standard as they are often devised in-house. Matthias Zacher, Senior Consultant at IDC Central Europe, warns: "IT security is becoming increasingly complex and expensive; this applies to both methods and motives of attack as well as to all facets of protection, defence and crisis management." He advises companies to remain alert, keep security up-to-date and pursue an active approach. IT security managers must take equal and appropriate account of old challenges and

new requirements. "Companies are encouraged to get all stakeholders on board and to understand IT security as a holistic concept."

It sounds trivial but it isn't. Derk Fischer therefore recommends developing a comprehensive risk strategy within the company. "An appraisal is required as a first step. Where is information collected and used and how can the the misuse be prevented?" The corporate culture also plays an important role here. Employees at all levels must be more familiar with the issue and take on responsibility.

The German Federal Office for Information Security (BSI) provides high-quality initial information on IT security. Its objective is to promote IT security in Germany. Although the office is primarily the IT security service provider for the German federal government, it also approaches manufacturers as well as private and commercial users and information technology providers. Information is available at <https://www.bsi.bund.de>.

Current attacker environment

Type of attack	Motivation	Perpetrator
Cyber war	Attack on the economic and political infrastructure of a country	States and government-related institutions
APT attack	Targeted attacks on individuals and company divisions	States and government-related institutions, companies, criminal groups or individuals
Cyber crime	Financial intentions	Criminal groups or individuals
E-espionage	Harnessing knowledge	States and government-related institutions, companies
Hacking	Politically or ethically motivated	Political and socially active groups
E-vandalism	Trial-and-error and showing off skills	Individuals or groups with non-profit making intentions

Companies are faced with a variety of methods of attack, which can be quite different depending on the perpetrator and the motivation.

Table: IDC IT Security in Germany 2013

Behind the "demilitarised zone"

Arnold AG operates a state-of-the-art data centre providing both sites, Friedrichsdorf and Steinbach-Hallenberg, with the necessary processing capacity, even for demanding tasks, such as complex CAD designs or calculations. Employees can request information from external sources – even the new Arnold office in Qatar is connected. This requires some effort to be able to avoid attacks from the Internet. The company is safeguarded at multiple levels. A so-called perimeter protects Arnold IT. It is a "demilitarised zone," which is accessible through a firewall from outside and inside alike, but it prevents any penetration," explains System Engineer Alexander Thornhill, who is responsible for the IT infrastructure. Sub-distribution is only carried out behind this zone. In addition, a firewall removes spam from e-mail traffic. Overall, IT has a threefold security barrier.

Efficiency through Mobility

Henry Ford's success was based on the increasingly precise analysis of manufacturing operations and assembly line work. However, this is not always the right answer to current requirements in this day and age. Manufacturing experts often do things the other way round as well. They combine several production steps at one workplace and move complete machines.

Multi-machine operation and process orientation instead of performance orientation are the two key issues that are the current focus in manufacturing. Instead of moving the workpiece from one workplace to another, machines are now mobile. Of course, it is impossible to just fix rollers beneath a one ton bending machine or punch-laser combination machine. Precise process analyses carried out beforehand determine what is feasible.

However, it often proves useful to allow workers to perform two or three steps in parallel. The mobility of machines therefore now plays an important role when making investment decisions, explains Thomas Roth, Head of Prefabrication, with the following example: "We manufacture a lot of small parts measuring 20 by 20 millimetres. Normally they are stored in packaging and transported for deburring. In future, our workers can throw them directly into a new, mobile disc finishing machine at the laser machine, which deburs the parts immediately and can be emptied by means of a handle."

Another example of multi-machine operation: workers are able to carry out other activities in the case of parts, which take a lot of time to be processed in the machine. Workers on the punch or laser have now taken on mass finishing as well. This eases the burden on the deburring specialists who can concentrate on manual and machine deburring. "We have purchased a mobile swing grinder for this where a grinding head with a rotating disc tool is attached to a swivel arm with a counterweight and can be moved easily over the parts, applying only light pressure."

Individual consideration for each and every case

However, example can also be found in the bending shop, where drilling machines and pressing devices are mobilised. "For example, the same worker can drill holes and make press fittings right next to the bending machine." This does not even require any additional investment. Common sense is enough, as Production Manager Joachim Ricker explains: "We have just fitted plugs to machines that were previ-

ously hard wired to the power supply, attached rollers or raised them so that a pallet truck can be easily moved under them." Additional work steps can often even be integrated into a machine so that no other machines need to be moved to the workplace.

However, such an approach doesn't always make sense, as Tonino Turano, Head of the Bending Shop, knows: "It depends on the individual case; if we need to manufacture only one or two parts, then it makes little sense to move complete machines through the factory halls." He considers 30 to 50 parts to be a sensible limit. Therefore such measures are particularly useful in the Thuringian branch with its frequent series manufacturing.

However, intelligent and experienced employees are also needed. They know their process best and know when the addition of further process steps at their workplace can make the entire process more efficient. They must also know, for example, whether a part can also be deburred with the swing grinder instead of using machine deburring. The restructuring of Arnold AG a year ago has been of benefit to the manufacturing team. Joachim Ricker: "This has significantly improved communication between employees and the individuals' knowledge, offering completely new potential for efficiency."



Combination of five processing steps: (From the right) Drilling, countersinking, counterboring, countersinking for thread-cutting and finally thread-cutting, all in one go.

Image: M. Pyper

Wine in Reflection

"Wine architecture" has been a fixed term ever since more and more wineries have put an emphasis on conveying their brand from an architectural perspective. "La Dominique," one of the most famous wineries in the Bordeaux region, has now invested seven million euros in a new building with an extraordinary façade made of red lacquered stainless steel sheets.

The area around Saint-Émilion is a paradise for wine connoisseurs. The famous chateaux, cuisine and scenery create a unique symbiosis, which makes every trip a pure pleasure. For some years now, modern architecture can be admired alongside ancient castles. The extension to the Château La Dominique, designed by French architect Jean Nouvel, winner of the prestigious Pritzker prize, has just been completed. One of the best Grands Crus Classés from Saint-Émilion is produced there. Connoisseurs describe it as "full-bodied with intense fruit as well as a velvety and long-lasting flavour."

Jean Nouvel's goal was to create an object that brings the sky and vines together, but also symbolises the mysteriousness of wine production, where each wine grower guards his processing secrets as if they were treasure. The sky and vines reflect in the façade of the wine cellar, which was built using the latest state-of-the-art technology; however, it is not actually a cellar, but instead a hall filled with high-tech wine technology. The visual effect is achieved using highly reflective façade elements lacquered in six different shades of dark red. Each row is inclined

by a few degrees, thus forming the impression of a concave curved mirror.

Arnold AG's reputation as a specialist for particularly high-quality metalwork has spread as far as Paris. At the end of 2011, Jean Nouvel's architecture company enquired whether such a high-quality façade could be supplied. The contract was finally concluded in 2012 following an impressive sample and some negotiations.

The assignment was to manufacture highly polished stainless steel panels, three metres long and 35 centimetres in height, to laser them in six different shades of red according to the architect's specification and provide a substructure for a precision-angled installation. The visually transparent coating provides the mirror effect, which reflects the surrounding vines and sky. Project Manager Dr. Oliver Drawer: This glazing technique with its many layers makes high demands on the lacquerers, because the slightest mistake can be seen and leads to the construction of a completely new surface." The lacquerers' experience with this technology on other projects was of benefit here.



Bonding instead of clamping

The mounting of the panels and the necessary logistics are also exceptional. "The delivery of materials had to be precisely controlled and the alignment of the panels had to be checked. "To ensure that all panels have the exact same appearance, they should come from one manufacturing batch and all remain aligned in the coil direction." There is no way that panels should be mounted with one in a clockwise and one in an anti-clockwise direction. Each façade element has an exact allocated position on the façade; we therefore needed a logistics system to ensure that the correct installation, which the construction company carried out on this occasion, would run smoothly.

The logisticians benefited from their experience on projects, such as the roof linking the car park and main building at Moscow's Sheremetjewe Airport. There too, each individual panel had to sit precisely in the right position. Dr. Drawer: "The company carrying out the installation on site initially had its doubts, but after they had received the first delivery from us and established that

they could practically handle the panels "blind" and errors were excluded, there were no problems." It had to be taken into account that individual panels can always get damaged in harsh everyday conditions on site. "Our nomenclature enables panels to be clearly identified and accurately replaced."

The bonding know-how acquired in recent years helped with the substructure. After appropriate preliminary tests and quality assurance measures, it was decided to bond the mounting hooks throughout. An existing European standard for bonding stainless steel and glass helped when verifying that the structure was safe; this then of course had to apply for the bonding of stainless steel and stainless steel. Nevertheless, extensive tests were initially carried out with samples and the adhesives tested by a laboratory. Particular attention was also paid to a possible interaction between the two adhesives for the holding and sealing function. Dr. Drawer: "Ultimately, the bonding proved not only to be more efficient than other solutions, but also more aesthetic, because otherwise the necessary mounting brackets would always be visible from odd angles.

Everything that Customers Need

Innovative products, tricky requirements or the search for potential savings: The customer has a job and needs supporters to help him with the solution. At Arnold AG, two teams are specifically devoted to this challenge, one for each of the two key areas – Industry and Projects – and are detached from day-to-day business. The focus is on the support and development of new customers and markets. FORUM spoke to team leaders Felix Bauer and Marcel Glapski.

The first question is, what do customers and markets need that Arnold AG does particularly well? Felix Bauer, Head of the Industry team answers this question with the following example: "We have developed a lot of know-how in the construction of housings over several decades. Therefore, we first asked ourselves where there is a need for housings in comparable sizes and similar complexities. As an example, we have singled out the special machine tool building with stringent requirements for precision." The team, comprising Olaf Schmidt and Klaus Goldmann in addition to Felix Bauer, knows that it also comes down to understanding the customer and his assignment. Detached from day-to-day business, they can fully concentrate on this. During painstaking preliminary work, they selected the manufacturers according to specific criteria, as well as the number of units to be produced. "This way, we were able to specifically approach interested parties and made the initial contacts."

It works slightly differently with the colleagues in the Project Market Development team, managed by Marcel Glapski: "We are very active in the areas of design, architecture and construction as well as metalwork for interior and exterior areas, especially high-quality yachts, which is why we concentrate on suitable architects and designers." It is particularly important for Marcel Glapski and his colleague Albert Dietrich to have a sympathetic ear for their needs at all times. They mainly focus on networks, which is why they frequently attend conferences and exhibitions - or participate in trade fairs, such as at present "Architect@work" in Berlin in November (www.architectatwork.de). Marcel Glapski: "This trade fair with its interesting concept specifically targets designers and architects who may require our expertise." The particular advantage of this trade fair is that every exhibitor, whether large or small, has the same, relatively small presentation area. The products on show there must be particularly innovative and are initially assessed by an independent panel of experts.



Marcel Glapski (right) and Albert Dietrich develop the project market. They primarily focus on the architecture, design and interior fit-out of high-quality yachts.
Image: Arnold





Looking to the future

However, both teams also have a longer term outlook and are open to new ideas. "For example, we look carefully at what trend forecasters say and thus anticipate our customers' potential and wishes," explains Felix Bauer. As a result, new products are also developed in addition to specific customer requests; these are products, which "are not currently available but are wanted in the market and close gaps in technology, which we can provide to help customers." Both teams work hand in hand and make use of the expertise of the other customer teams. In this way, they bring together the specific know-how of the project and the industrial areas. Existing and future customers benefit from synergy effects.

The contribution of future issues, such as electromobility, which is expected to make a breakthrough in a few years, promises good opportunities for Arnold AG and its partners. Marcel Glapski: "As a result, we analyse the supply chain together and which products are available in this area, in which we can get involved." He is thinking about larger charging stations, which are perhaps needed on the main European routes along the North-South and East-West motorways. "What do people do while their vehicles are charging?" A typical question that is worth considering. Stations combining charging with a variety of different services are conceivable. "It's all about building work and we can definitely contribute a lot to this thanks to our experience." The politicians will also have a strong interest in these types of stations if they want to achieve their self-imposed target of one million vehicles on German roads by 2020.

Despite all the strategies, sometimes a stroke of luck plays an important role and customers give new impetus with their wishes, which the teams then pursue. Here again, Felix Bauer provides an example. He wanted to present his know-how in the manufacture of radiation protection housings to a potential customer in the safety technology sector. However, in the course of the company presentation, the customer discovered the high gloss polishing expertise offered by Arnold AG's design and artwork departments. "He needed an extremely smooth surface for a technical application. We were able to use our transfer knowledge from the artwork and solve the customer's problem. We even constructed a small production line especially for this customer."

Both areas also benefited from each other with the feasibility study for a metal façade that was intended to resemble bamboo trees. A tricky assignment for Marcel Glapski, but with the support of design and manufacturing specialists in the other teams, he was finally able to develop a solution that even exceeded the architects expectations. That's what both teams want in the future: "To develop new solutions that have not existed before but produce enormous benefits for the customer."



The Industry Market Development team: As an experienced estimator, Klaus Goldmann (left) always finds a favourable solution and as a born salesman, Olaf Schmidt (right) always has a sympathetic ear for potential customers. Felix Bauer is the team leader and also has his sights on trends when searching for potential.

Image: M. Pypier



Guiding People Properly



Signage is a relatively new design discipline. It is the art of safely guiding people to their destination in unfamiliar surroundings. In 2000, the two designers Peter Eckart, a professor at Offenbach University of Art and Design, and Bernd Hilpert, founded unit-design GmbH, which focuses on this specialist area. They are excited by the diversity of their assignments. FORUM spoke to the signage experts.

Professor Eckart, how do you become an expert on orientation systems?

I'm actually a product designer and previously designed medical devices or household appliances. I was a student of Professor Dieter Rams and he brought me to Braun in Kronberg. During the course of my professional career I have had more and more involvement in space-orientated projects. Bernd Hilpert and I found this a very interesting area because very different aspects of design interconnect with one another here: spatial relationships, product and graphic design, typography and even psychology. Outdoor columns are often as if they were a piece of architecture. A recent example is the WestendGate, a revitalised office building in a prime location in Frankfurt (please also read the following report).

One column there is over four metres high, requires a structural engineering calculation, making similar demands to the architecture itself. However, the whole building also has a graphical dimension, for example, the choice of the lettering or the logo design. This very crosslinking of different design disciplines is the extraordinary and appealing aspect of our work.

Mr. Hilpert, what does an ideal orientation system look like? Are signs not obsolete in the digital age?

In fact, we find orientation systems are at their best when no or preferably very few signs are needed. Our customers always initially ask whether we can do everything digitally. That goes without saying, but to this day we do not know

of a project where this has actually been done consistently. It is impossible to entirely do without physical signs. What's more, often an orientation system should be prestigious, as shown by the example of the WestendGate. The orientation system gives the building its identity. The black and white concept runs through the entire building and is also used to convey to the tenant that the building has been given a new structure.

How does such a project typically work?

Bernd Hilpert: Basically, there are two levels with each project: the structural and logical level and the visual level. The logical level includes, for example, how much information we need, where the main nodal and decision points are or the places at

Short profile



Professor Peter Eckart

unit-design is a design office for communication design in Frankfurt am Main. Around ten employees work on projects with a focus on corporate design, information design and communication with space. The interdisciplinary approach integrates product design, graphics and architecture, facilitating a full range of project development across all service phases. The aim is to work together with customers to develop unusual and successful designs that correspond with their corporate goals and brand values. Its customers in-

clude well-known companies like Deutsche Lufthansa, Deutsche Bahn, the European Central Bank, KPN or Shanghai General Motors. unit-design works closely with a network of architects and design offices such as Studio Dumbar, Ingenhoven Architects or Coop Himmelb(l)au. In addition, unit-design consistently takes on work for cultural projects and exhibitions.

www.unit-design.de



Bernd Hilpert

which the identity should be visible. This is irrespective of what the signs ultimately look like. Before we start properly, we need to consider how many interfaces there are and how many types of signs we need. This is the only way to generally budget for a project. We must agree as early as possible with the client on the number of places that they want to point out. This is an important moment in a project and extremely moderating work. Another issue is the choice of name; for example, should it be called the conference room, meeting room or perhaps the think tank?

Prof. Eckart: And then there is the visual level. It is not only the graphics that are important here but also the corporate design of the company that should be reflected. There are basically two options: either the orientation system moves away completely or integrates the corporate design. For example, it can incorporate the architect's choice of materials. In general, however, we propose lettering that is not related to the corporate design of the company, which corresponds to the building, is easy to identify and legible and can be easily arranged and structured. We make two or three design proposals. This gives the customer the opportunity to express their own thoughts and it is incorporated into the decision regarding the design.

Mr. Hilpert, do you also take over the project implementation?

Yes, in principle we work like architects. The customer gets everything from a single source. We have the same service phases as architects – from the specifications and tender documents and their evaluation through to completion – and we assume responsibility for this. Incidentally, this is a key difference to product designers who usually hand over their work to a development department. However, we also need good partners. Columns like those for the WestendGate are true works of art. The seamlessness of the glass joints represents the most exacting design. Our partners have to be bold, have an understanding of quality, use new technologies and be open to dialogue.

Professor Eckart, what will the orientation system of the future look like and what role will there be for digitalisation?

It will primarily involve the dematerialisation of orientation. We incorporated barcodes into our signs 15 years ago to supply additional information. We also integrate smartphone Apps. For example, with the project that we are currently working on, the event and restaurant area will be entirely digitally networked. This still does not play a major role in day-to-day business; a paradigm shift has therefore not yet occurred. However, we also work with external partners on suitable projects.

unit-design



unit-design has developed an independent and exclusive guidance system for the entire building with the revitalisation of the WestendGate. Arnold manufactured the large columns in the outdoor area as signage for the different floors. They stand out thanks to their quality manufacturing and the intelligent integration of light.

Free-Floating Glass

The WestendGate, with its 47 floors, is one of the most striking high-rise buildings on Frankfurt's skyline. As part of its revitalisation, the building received a completely new façade and outdoor area in addition to the prestigious new entrance. It will be used as an office and hotel building. unit-design has developed an independent and exclusive guidance system for the entire building with the revitalisation of the WestendGate. Arnold AG supplied the necessary columns in the outdoor area and signage for the six floors in the office area.

The secret of the elegant, shiny black glass panels with the bright luminous lettering is explained by project manager Rainer Müller: "Ceramic printing is applied to the rear side of the panels and then they are fired at 700°C to create single-pane safety glass (ESG). We use white glass with low iron oxide content to avoid the typical green tint for float glass." An additional coating with a two-component black lacquer also ensures that no flashes of light, so-called pinholes, interfere with the deep black colour. "We then laminate the areas for logos and lettering with plotted light diffuser film so that no LED points can be seen in the lettering," explains Rainer Müller in further detail. The 'P' of the car park column was made from a blue, translucent film with white cut-outs and a free-occupied display was also incorporated.

Anyone looking closely at the columns will wonder: not one single screw, no hook and no brackets appear to hold the panels. They appear to be floating completely freely in the air in front of the columns. Surely that's not possible with normal things? But it is, affirms Rainer Müller, because there's another secret: the adhesive technology that interconnects the panels and the angular frame.



Pointing the way in the truest sense of the word: the columns around the WestendGate. They rise up to 4.10 metres, are 40 centimetres deep and between 1 and 1.5 metres wide. They were developed by unit-design and manufactured and installed by Arnold.

The ceramic coating not only provides the chic appearance in particular but also forms the basis for the special adhesive so that this has a secure and, above all, lasting hold. Rainer Müller: "The ceramic coating provides the necessary surface finish so that the adhesive can stick and achieve adequate adhesion." The panels were bonded to the anodised and lacquered aluminium brackets, which were then fixed to the beam and post construction. This bonding process lasts about two days and has to be carried out according to the manufacturer's specification with precisely defined conditions, such as temperature and humidity. In order to document this, a measuring device records all parameters, which can be read off a computer and printed out at a later stage. The customer can therefore be absolutely certain that the panels can float for a long time and, above all, safely.



Parking for all: The car park under the WestendGate is open to everyone – it is particularly of interest for events at the exhibition grounds located opposite it. A large P made from translucent film and additional LED information point the way for people not familiar with the area. Images: Arnold

Arnold AG with a New Supervisory Board

The 85 shareholders of Arnold AG in Friedrichsdorf elected two new members of the supervisory board at its annual general meeting on 12 May: Dieter Stemmer and Detlef Walter. They replace Dr. rer. pol. Horst Schweinhardt and Rolf Renke who have been on the committee since the business became a public limited company in 2001. Dr.-Ing. Holger Techen, Professor for Structural Design and Building Construction at Frankfurt University of Applied Sciences was confirmed as a member of the Supervisory Board. In addition, the shareholders resolved to increase the share capital by € 1.75 million from € 5.25 to € 7 million after a successful financial year in 2013.

The new supervisory board elected Dieter Stemmer, 65, a long-standing former member of the board, as its new chairman at a meeting held directly after the annual general meeting. Dieter Stemmer worked for 37 years in different management positions within the company until he took retirement a year ago. With his involvement, the company developed from a 60-man operation into a large, internationally recognised company, specialising in high-quality architectural constructions made of metal, queue management guide-rail and signage systems, the industrial supply of parts, assemblies and housings as well as the manufacture of artwork, with over 350 employees. Arnold AG has been operating a large branch in Steinbach-Hallenberg in Thuringia since 2001.

Detlef Walter, 53, is a recognised expert in materials management and logistics. He has gained his experience in management positions with several companies in various industries, currently as a shareholder for Transnorm Beteiligungen GmbH. Transnorm manufactures high-performance modules for general cargo, container and carton conveyor systems as well as for parcel and airline baggage handling systems and also complete conveyor lines for complex internal logistics systems. Walter is also a managing partner of Walter Investment GmbH. He has been part of the Arnold management team since 2012.

Chairman Uwe Arnold thanked the two outgoing board members, Horst Schweinhardt and Rolf Renke, who have made a decisive contribution to the development of the company for 15 years. He said that he hoped for additional impetus from the two new members on the step towards "Arnold 100", the future programme of the company wanting to celebrate its 100 year anniversary in 2024.

The shareholders of the Friedrichsdorf-based company Arnold AG met on May 12 at this year's annual general meeting. In addition to approving the activities of the board, they appointed two new members of the supervisory board and resolved to increase the share capital by € 1.75 million to € 7 million. Images: M. Pyper



They were involved in the fate of Arnold AG for 15 years since the public limited company was formed and provided valued impetus to the company in their management positions: Rolf Renke (left) and Dr. Horst Schweinhardt, the two members retiring from the supervisory board.



The new line-up of Arnold's supervisory board: The shareholders Dieter Stemmer (centre), a former member of the board and Detlef Walter (right) to the supervisory board. Professor Dr.-Ing. Holger Techen was elected into office. The new supervisory board elected Dieter Stemmer as its chairman.

ARNOLD
...stark in Metall

Apprentices advertise for Apprentices

Companies are already clearly feeling the demographic effects of our ageing society. It is becoming increasingly difficult to get good apprentices, especially in the industrial sector. At Arnold AG the apprentices are now advertising for their peers themselves as they are best placed to know what young people expect from the job.

It is quite clear: anyone doing an apprenticeship at present knows best what he or she likes about the job and the best way to explain this to someone of their own age. This was also the thinking of personnel officer Stephanie Werner and she is also pursuing new promising avenues, even for other companies. She invited Arnold apprentices from all professions from Friedrichsdorf and Steinbach-Hallenberg to an "Education Marketing" workshop. She sought new ideas but also a definition of what the sought-after target group actually looks like and how they tick.

"We quickly came to the conclusion that we need to rework our flyer that we use to advertise our apprenticeship professions," explains Stephanie Werner. As project management and the ability to work independently are a top priority at Arnold AG, this immediately became a project for the apprentices. Ronny Roßberg took on the leadership role with Simon Dittrich as his deputy and Mohamed Boudiouane, Selin Brucker, Vanessa Schmidt, Oliver Rudolf and Yunus Tufanoglu were also part of the team. They were supported by communication designers Irit Völzke and Kai Unger.

The project kicked off at the end of last year and it quickly became apparent that there should be two separate flyers for commercial and industrial professions instead of just one joint one. An unusual format should also ensure that the flyer also immediately attracts the eye. Along the way, the apprentices not only learned

to work together on a project but also a great deal about design, texts, photography and printing – and the costs associated with all of this.

For example, the apprentices were confronted with typical project management problems. Stephanie Werner: "They continually had to struggle with different periods of absence, production workloads, material availability or their own workload, but this is exactly the reality of projects." Another important lesson: persuading other people. Mohamed Boudiouane recalls: "It was not easy to persuade others to leave someone on the machine when the project is not making any money."

They quickly learned that only a strict division of responsibilities within the team and regular feedback helps. "You have always got to be on the ball so that everything stays on track and will be ready in time. But it was fun and an interesting experience for me," relates project manager Ronny Roßberg. And Selin Brucker recalls: "It was a challenge for us, for example, setting up the schedule for the photo shoot, because we had never done anything like this before." But everyone agrees with Simon Dittrich: "I would definitely get involved in the project again!"

Arnold AG asked those who ought to know best, what arguments could be used these days to persuade young people to take up an apprenticeship. The apprentices decided during the workshop with the agency augenfällig to rework the information flyer as a first step.

Images: Arnold





Solar Power from the Roof

"We will generate our own electricity in the future", is the motto of Arnold AG. At least in part as the nearly 1,400 square metre roof area in Industriestrasse 10, which was fitted with 858 solar panels in the last few weeks, supplies an output of 203 kWp (electrical output delivered under specific standard test conditions). This covers around 10 to 15% of the average annual demand at the site in Friedrichsdorf. "We have set ourselves the goal for the future to reduce our CO2 emissions significantly, thus making our contribution to sustainability. The transition to the natural re-

source "sun" therefore made perfect sense to us," believes Christoph Ebert, member of the Board of Arnold AG. The work was carried out by photovoltaic specialists Kirchner Solar Group from Alheim-Heinbach. The company is one of the pioneers of the solar industry. Kirchner has constructed over 12,500 solar parks and roof installations since 1996 and has thus become established as one of the leading suppliers in the field of renewable energies.

Image: M. Pyper

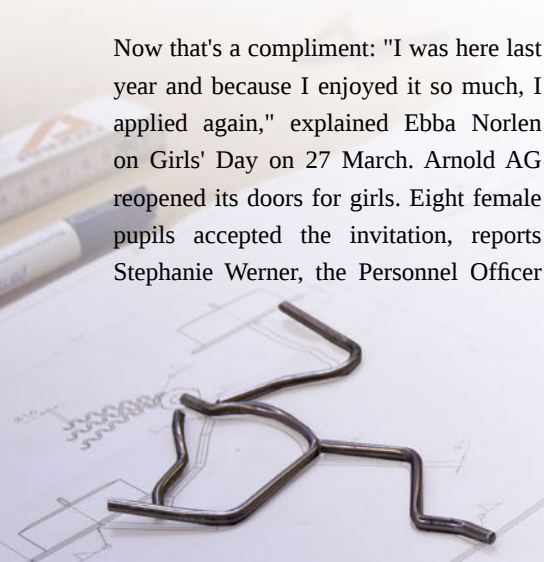
Girls' Day 2014: Steel is Fun

Now that's a compliment: "I was here last year and because I enjoyed it so much, I applied again," explained Ebba Norlen on Girls' Day on 27 March. Arnold AG reopened its doors for girls. Eight female pupils accepted the invitation, reports Stephanie Werner, the Personnel Officer

responsible for apprenticeships: "Having had very young girls as guests in the past few years, we decided to select participants aged between 13 and 15 years from the seventh and ninth classes this time because they are closer to choosing an apprenticeship profession." The pupils were supervised by trainer and master metalworker Matthias Roepke. After a welcome and a round of introductions, the participants found out about the company and its apprenticeship opportunities and then went straight into the practical session in the training workshop. Max-

imilian Corell, still a metalworker apprentice himself, was already waiting there. He showed the young ladies how to bend a candle holder in the shape of a wire man made of steel and then welded the parts. One of the participants, Selina Bartholomä, came to a positive conclusion after five exciting hours: "I already knew about Arnold from the training day that the company held at Philipp-Reis School and that's why I applied here. You have to have patience, especially with bending, but the work was a lot of fun."

Images: Arnold





Obituary for Eckhard Diller

Your loss is a stunningly heavy burden

We mourn Eckhard Diller, our long-standing employee, our good friend and a dedicated Arnold employee. We have lost a member of our family with his passing, a faithful and beloved colleague who helped shape the development of Arnold AG for over 20 years with his passion and commitment. He succumbed to an invincible disease on 30 March 2014 despite a hard struggle.

On 1 March 1991 the trained toolmaker started working at Arnold-Diller GmbH, which was still under construction and later became our branch in Steinbach-Hallenberg. His father ran a metal business back in the GDR era. After German reunification, the families Diller and Arnold met and after a short time it became apparent they they wanted to set up a sister company to the former Friedrichsdorf-based Arnold GmbH together in Thuringia.

The common desire led to the founding of Arnold-Diller GmbH and Eckhard Diller was a shareholder from the very beginning. The company quickly pushed ahead with the expansion of the site. Rolf Arnold not only managed the company but was also a mentor for Eckhard Diller and sent him to the College for Master Craftsmen in Oberursel from 1993 to 1994. With the requisite know-how, Eckhard Diller was initially employed in the workshop and later took over installations and project management. Eckhard Diller ultimately managed the branch after the merger of the companies into Arnold AG.

He always had a passion for trucks and heavy equipment. He renovated a large Tatra tanker, amongst other things, with colleagues from the local fire station and it is still the largest on the Western Rennsteig today. Although fish was not one of his favourite foods, his professional passion was connected with the water. He devoted special attention to projects for high-quality yacht building.

With his incredibly likeable personality, his passion and his great commitment he earned a trustworthy reputation among business partners and he made a significant contribution to the successful development of the Thuringian branch. He had been a member of the management team since 2009 and was actively involved in decisions regarding the future of our company.

Eckhard, we thank you eternally and will do everything possible to preserve your legacy!

