

QUALITY

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The customer magazine of SQS Software Quality Systems



Quality and crisis

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Quality and crisis



The redistribution of market share tends to take place in times of crisis. Difficult times certainly separate the wheat from the chaff and as a rule leaders in quality remain ahead of the competition. They gain their competitive edge and remain cost-efficient by implementing systematic quality management, helping them to streamline production and prevent costly mistakes. This, in turn, allows them to invest in the future when others are having to make cutbacks – for example, by investing in employee training or in their core business.

Is quality, therefore, one of the most important keys to business success, particularly in times of financial crisis? The authors of this edition consider this question from a variety of different perspectives. They are, for instance, convinced that quality is a major factor in future-proofing European companies in particular. Furthermore, Swiss researcher and author Professor Walter Brenner believes that the longevity of Chief Information Officers (CIOs) within a company is assured only if they assume the role of a quality advocate alongside their other responsibilities (page 6). In addition, modern quality assurance measures always increase cost-efficiency (page 8). This is also the belief held by top managers who were polled by QUALITY for this edition (page 14). This discussion about quality as a management topic is to be continued in regular instalments in the newly established SQS Quality Club, a platform and network for managers (page 4).

In addition to all this strategic information, this edition of QUALITY, as always, includes other topics of interest. Houten, for example. This small city, near Utrecht, gives a perfect insight into the Netherlands of today (page 20). Enjoy the read!

R. van Megen

Best regards,
Rudolf van Megen
CEO, SQS Software Quality Systems AG

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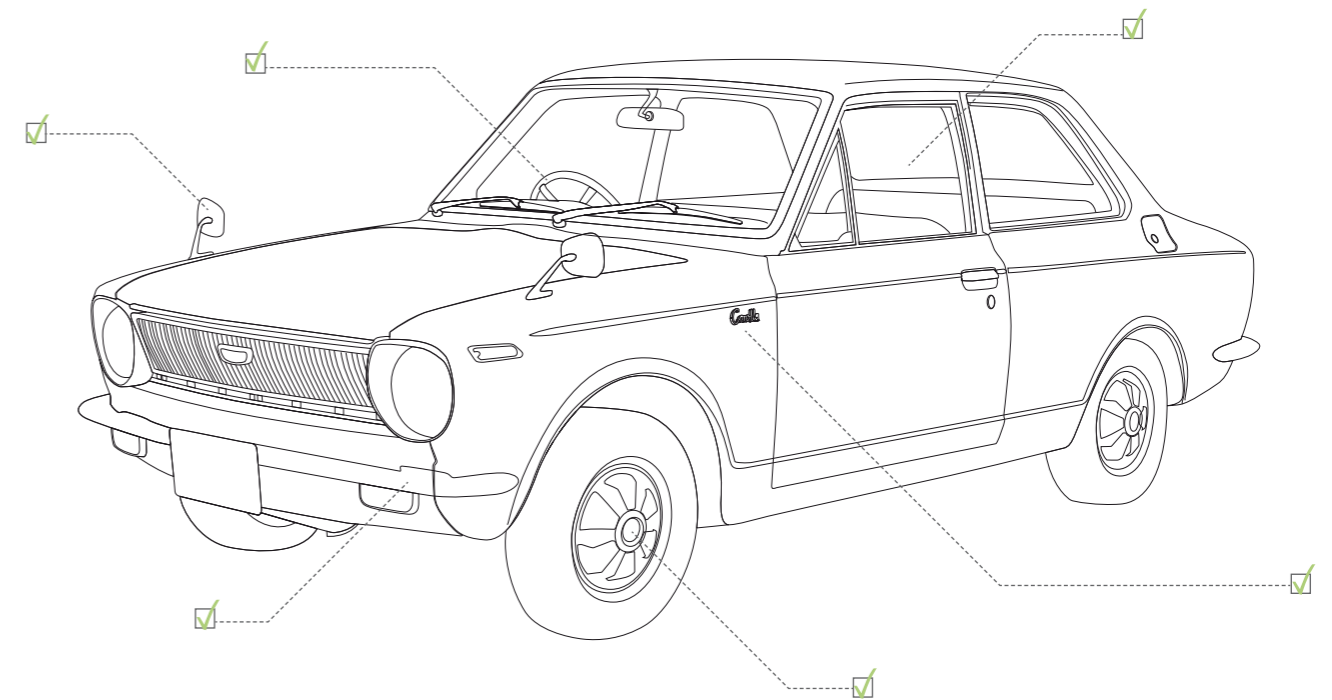
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To begin with, it was an outsider. Although Toyota started to make international sales to the USA in the 1950s, it failed to make an impact for a number of years. Only with the launch of the Toyota Corolla did the company begin its ascendancy, enjoying a period of growth that, during the 1980s, forced American and European automobile manufacturers to revise their production and sales methodology.

The Toyota Corolla E 10 started to roll off the production line in 1966 and from August 1968 it was the best deal on the American market: at only 1,668 US dollars, it undercut all comparable models from domestic manufacturers. However, price wasn't the only factor behind the success of the car that enabled Toyota to gain a foothold in the western market. Ultimately, this was down to the quality management system used by the company that combined high-quality standards and a

high rate of production with low costs. It focused on the high output achieved through mass production without sacrificing the level of quality associated with job shop production.

Nowadays, principles such as total quality management and just-in-time production are part of the standard vocabulary at large automobile manufacturers, and Japanese terms like “kaizen” and “kanban” are included in all textbooks for engineers. What was previously a unique selling point has now firmly entered the mainstream. Other strengths are now essential to market success, as recently demonstrated by the dramatic collapse of Toyota's business. Now it is the turn of European car manufacturers to lead the field in terms of cost-efficiency and reliability thanks to their dedicated quality management systems: from software development to supplier management.

New SQS all-in-one solutions reduce IT costs

SQS Software Quality Systems has expanded its portfolio to include all-in-one solutions. The solution packages focus on the most important challenges currently faced during software quality management and testing, and combine best practices, services and tools that were previously only available individually in the market. SQS solutions enable the targets set for testing and software quality assurance to be achieved more quickly and more cost-efficiently while also reducing the risks of IT projects.

“The new complete packages grant SQS a unique position in the market,” explains Rudolf van Megen, Chief Executive Officer at SQS AG. “Where previously our customers had to obtain

these elements from the market individually, we can now offer a complete solution.” The new all-in-one solutions combine the various strengths of SQS: its own expertise as a market leader in independent software quality management and testing, the on-site and off-shore resources now owned by the company and distributed throughout the world, and collaboration with tool manufacturers.

Alongside its own experience acquired during customer projects, SQS commissioned a series of market analyses to provide additional information about the challenges currently facing the company. Based on this, SQS has initially created solution packages for

five current areas of IT activity: for the early detection of software errors (SQS PractiQ® – Early Error Detection), updates in the SAP® environment (SQS PractiQ® – Rapid Testing for SAP® Implementations), performance testing (SQS PractiQ® – Performance Testing as a Managed Service), regression testing for system maintenance and changes (SQS PractiQ® – Regression Testing in Maintenance) and a thorough check of existing IT processes (SQS PractiQ® – HealthCheck). Additional solutions will be created in line with market demand.

www.sqs-group.com/expertise/solutions.htm

Launch of the SQS Quality Club

SQS Software Quality Systems is pleased to announce the launch of the SQS Quality Club: a network created specifically for Chief Information Officers (CIOs) and other leading IT managers. The Quality Club provides a forum where members can pool their exclusive and comprehensive knowledge of IT quality issues, make new contacts and benefit from the experiences of other club members and SQS experts. In connection with this new forum, Software Quality Systems is arranging events on current topics, presenting information and reports on best practices, trends and strategies online and promoting networking amongst its members. New members who join the SQS Quality Club can request a free efficiency analysis

that is carried out by a member of SQS management.

The SQS Quality Club has been available online since June 2009 and registration is open on the site for those interested in joining. The first event for the newly founded manager forum is the SQS Quality Club Reception on the evening of 23 September 2009 at the Villa Kennedy in Frankfurt. Following a formal dinner and speeches by renowned speakers, participants will be able to exchange ideas with other IT decision makers, make new contacts and learn more about how CIOs can respond to current and future challenges. Speakers planned for the evening event are Prof. Walter Brenner

(St Gallen University), Klaus-Dieter Herrmann-Tenk (Data Centre Manager at the Financial Administration in North Rhine-Westphalia) and Michael Tiedemann (CEO of SYSGO AG).

“IT managers are well aware that the quality of IT at a company is crucial to its success. Which is why we have created a dedicated platform for IT decision makers – the SQS Quality Club – that examines all the important aspects of IT quality,” explains Rudolf van Megen, CEO of SQS AG. “This initiative focuses on the professional interests of the club members and on providing a mutually beneficial exchange of information.”

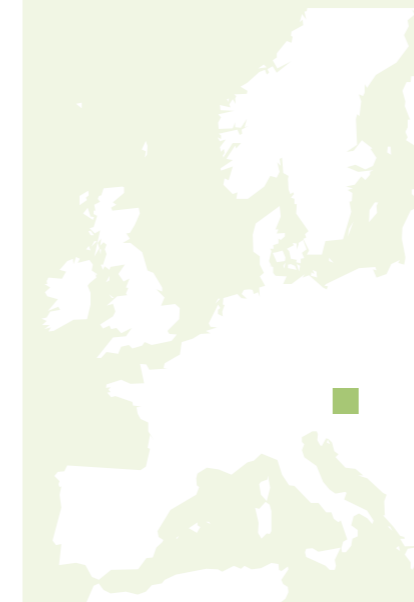
www.sqs-quality-club.com

E-mail from . . .

City

Subject

Vienna



The return of the snail

Sachertorte, Wiener schnitzel, Kaiserschmarren – the list of culinary specialities synonymous with Vienna throughout the world is certainly long. But *Helix pomatia*? Even those aware that this is the scientific name for the edible snail would be forgiven for thinking primarily of France, or maybe Italy. However, until around 100 years ago, Vienna was a stronghold for snail aficionados. It even had its own snail market.

IT consultant Andreas Gugumuck has now revived this tradition by transporting 18,000 snails from Bavaria to a Viennese suburb and establishing his own snail farm (www.wienerschnecke.at). A large number of top Viennese restaurants have since expanded their menus to include this delicacy. These include “RieGi”, where head chef Alexander Sowinetz serves up pan-fried pikeperch on cabbage noodles with purple mustard sauce and escargots. What’s more, the snails themselves enjoy a good life before they end up in the saucepan! They live out their days in an organic, free-range environment, feasting on chard, rapeseed and a number of herbs.

✉ ronald.kaufmann@sqs.at

Oslo



Holmenkollen looks to the future

The most visited location in Norway has seen kings and princes ski-jump and has played host to both Olympic Games and world championships. It also caused shockwaves to resound throughout the entire country when, in September 2005, the International Ski Federation decided that Oslo’s famous Holmenkollen ski-jump no longer met the required standards and would not be taken into consideration for the Nordic World Ski Championship in 2011.

One option would have been to preserve Holmenkollen as a museum piece and build a new ski jump. But, Oslo city parliament made a different decision: Holmenkollen will remain Holmenkollen. The old jump is currently being dismantled piece by piece and replaced by a new one. Following this period of careful modernisation, it will reopen in January 2010 and be ready to host future competitions. The renovation work means that the record for the longest jump from the old ski jump is guaranteed to remain in Norway. Ski-jumper Tommy Ingebrigtsen set a record of 136 metres in 2006. An achievement that will now stand for all time.

✉ frode.olsen@sqs-nordic.com

CIO at a crossroads

In future, will the role of Chief Information Officer within a company merely mean head IT buyer, or will it signify a manager responsible for ensuring quality?

Do internal IT departments or service providers still have a future? How is the role of CIO defined? The University of St Gallen has conducted a survey of eight major IT service providers that operate either exclusively internally, or are also active on the external market. The study revealed that there is clearly still a place for internal IT service providers. But their survival requires professional management, resisting the temptation to experiment on the external market, and having a keen awareness of the role an internal company department plays.

At the same time, CIOs are often the bridge between the internal and external IT service providers, such as IBM, HP or Accenture, that they manage. The outsider's view can be useful in avoiding typical blind spots that may occur in internal operations. However, it is ultimately CIOs who are responsible for ensuring that the IT processes

and products work and are accepted within their companies.

Service quality has catching up to do

To improve service quality, CIOs usually conduct their own user and customer surveys. However, these do not always ask the right questions: do users need a daily, weekly or just monthly backup for their laptops? Can the user helpdesk close at 5.30 p.m. or is a three-shift operation required, which would in turn lead to greater costs? Occasionally, the services provided therefore do not meet the users' quality expectations.

The quality of IT services clearly needs to be improved. Service-level agreements (SLAs) often include quality criteria that are only appropriate to the users' needs in certain circumstances, as they are too technically focused.

Determining the actual quality levels required with the end-users is therefore very important and Chief Information Officers need to tackle this issue head-on.

The study also revealed a need for CIOs to address globalisation and industrialisation. Here, CIOs have the opportunity to further develop their position, rather than allowing it to devolve into the role of head IT buyer.

Demands of globalisation

If, for example, a company generates 70% of its turnover overseas, with the remaining 30% generated in its home country, the majority of the IT services should also be produced abroad. International companies need to have a global IT structure. However, there are often gaps in the knowledge of how global IT markets work.

More than ever, CIOs now need to support end-users across the globe with processes, products and business models, and use external benchmarks to do so. A discussion about quality, conducted according to appropriate criteria, can help to overcome the ongoing challenge of international business and IT alignment: how much investment is needed and what services and response times are expected?

With regard to globalisation, CIOs should also bear in mind the option of offshoring to Eastern Europe, India or China. If carried out at the right time, this can be highly advantageous. However, it is not a cure-all. Some processes simply need on-site presence with the end-user or customer.

Clearly, many internal IT service providers that focus on their core responsibilities do a good job for their company. But they must also take into account outsourcing opportunities in the context of make-or-buy decisions.

Driving industrialisation

Those who wish to promote industrialisation must choose between two areas: the software development process and IT operations.

With regard to software development, this involves a greater focus on standard and, to a certain extent, externally acquired software. This form of industrialisation is comparable to mash-ups:

any internet applications that are more or less created through the combination of existing components.

The objective of industrialising operations is to standardise the internal service provider's heterogeneous software landscape. This centres on the implementation of ERP software, the documentation and greater automation of processes, and the introduction of an ITIL-compatible service management solution. In addition, it is advisable to also apply industrial production models to the preparation of IT services.

In these processes, quality assurance (QA) and management again must be a constant feature. However, the IT sector is still missing some key QA elements that are commonplace in industry. Researchers are continually surprised to find how little knowledge is transferred to IT from industrial production. A more active exchange of knowledge would be beneficial here.

Ultimately, both areas of industrialisation fall within the scope of CIOs, who, in their own interests, should take the initiative in this respect. CIOs also need to react to the emerging changes in the market for IT services. In particular, Software as a Service and Cloud Computing are set to grow in significance and market share over the next five to ten years. It will be essential for the CIOs of the future to master the associated challenges regarding IT security and quality management.

Lastly, it should be noted that the profile of CIOs is also undergoing a transformation. Although most are still managers with a traditional IT background in software development or project management, the number of CIOs in consulting positions, be it at IBM, Accenture, McKinsey or smaller consultancies, is growing. The same applies to those changing career from any other sector, whose specific IT expertise, project experience or leadership skills make them well placed to take on the responsibilities of a CIO.



About the author: Professor Walter Brenner is a business IT specialist teaching at the University of St Gallen, Switzerland. In addition to his teaching and research work, he has extensive experience as an IT manager and corporate CIO.

Innovating through the storm

At a time when everyone is looking for ways to ease the economic pain, testing may be one of the answers. Assuring the right quality at the right price creates efficient use of resources throughout the whole life cycle and reduces the cost of ownership of systems. When times get tough, it's time to be innovative, especially with testing.

When tightening belts to adjust to the new economic environment, companies may take a hard look at the money they're spending on testing, since the direct benefit isn't always immediately apparent. But testing can offer concrete advantages by improving quality and streamlining applications at a time when businesses need any edge they can get. The current environment calls for innovation that will keep smiles on the face of not just CIOs, but also CFOs.

This means innovations have to be more than just technical, they also have to be commercial. Technological innovation in (for example) automation can cut the resource needs but commercial advances can also lower testing costs

– the use of risk reward sharing or output based pricing are viable options to enable the investment in testing at a time when this is really needed. There is also a significant need to support the assurance of vendor delivery – positioning testing as a key part of the vendor management and governance solution. It has never been more important to ensure that vendors are delivering what they should be delivering, to time and budget, and testing is central to this.

Off-schedule, off-budget

And testing itself can help save money. Research shows that most software projects are delivered late, over budget and

fall short of expectations – testing can aid in avoiding these pitfalls by identifying errors early, even before projects move to production.

“As all testing practitioners understand, money invested in quality assurance and testing is seldom money wasted,” says Ivan Ericsson, Director of Methodology at SQS UK, who is currently leading a roll-out of new services designed specifically for the current market conditions.

In tough times, Ericsson says it's innovation that prevails, and he's coming up with new ways of ensuring clients get the SQS testing services they need. Customers can be billed on the number

of tests performed or perhaps the tally of defects uncovered. The SQS director even suggests improvement-based pricing where payment is related to better performance. Not only do these ideas cut costs, they also unload some of the economic risks of testing onto SQS.

“Testing is uniquely placed to meet both the traditional challenges faced by the market and those thrust upon us more recently,” he says, noting that once customers have been acquired, delivered quality is a decisive factor in maintaining those customers and expanding the number of services they use.

The test centre

But companies shouldn't just rely on external testing professionals. Companies can establish their own testing centres that will give each employee access to technologies and resources they didn't previously enjoy, improving quality. “It's a centralised function. Say one project couldn't afford a test manager for 365 days a year, it could afford the manager for 40 days a year and if you get 10 of those projects, then you've paid for a test manager,” he says.

At first glance, an economic slowdown would seem to portend bad things for the testing market since a reduction in IT spending would logically reduce the need for testing new or upgraded systems and applications. But many companies often exploit choppy economic waters to scoop up weaker rivals and grow – as is the case currently with the financial and pharmaceutical sectors. Those mergers often lead to com-

bined IT operations that need testers to assure everything has been sewn together seamlessly and that the business advantage is realised.

Agile methodologies have also emerged as another important step in helping companies cross the currently turbulent waters. External Agile competency centres can help companies ensure their getting the most from this new approach. Agile isn't a specific software product but rather a procedure that breaks projects into small pieces and simplifies organisational tasks – projects and project workers become more agile. The big benefits of Agile are timely delivery of solutions that are exactly what the business needs – critical aspects of any delivery function at present.

Strategic IT

“They're attracted to Agile for two reasons. The first one is that it creates a connection between the business and IT. Businesses are actively involved in ensuring that what IT delivers is exactly what they need. And it gives them a fast return on investment – it gets something in production within four weeks rather than four years,” Ericsson says.

Since IT can help reduce costs and streamline systems during a downturn, Ericsson also expects IT to take an even more integral role within organisations. He hopes companies will begin to look at IT as not just yet another department but as a strategic asset in both good and bad times – and urges IT specialists to become more aware of the financial benefits their activities offer.



Ivan Ericsson

“Testing is still relatively immature with regard to its positioning within organisations. I would like to see all organisations have centralised test functions that can offer cost-effective testing services,” says Ericsson. “For too long, we've had an IT team in the basement doing their techy stuff that the business side didn't understand and there's no direct connection between the costs and the benefits.”

But while Ericsson sees the role of testing increasing during this downturn, quality assurance still has a long way to go. “There are still some executives out there who see testing as the thing that finds problems and they associate that with causing problems,” he says. “Testing is the conscience of an organisation. Testing asks the difficult questions of an organisation. Sometimes it's hard to hear those questions, and harder still to find the answers.”

But it's during tough times that the tough questions become most important.

“Reduce prices and compromise on quality? That would be a grave mistake.”

Economic journalist Wolf Lotter (*brand eins* magazine) on quality as a unique selling point, the problem with standards and Europe’s strengths.

Mr Lotter, there is currently a great deal of discussion about whether the state should support companies financially. However, nobody mentions the quality of these companies and their products.

Strange – after all, quality is the unique selling point par excellence. More so than ever. Quality has become ever more important as the offerings on the market become increasingly complex and varied. A focus on quality within corporate strategies should not therefore be limited to providers targeting a premium niche market; it should be firmly on the agenda at all companies. Of course, there are significant differences between markets. For example, providers that develop and sell highly individual solutions tend to be high-quality suppliers rather than mass producers: they produce bespoke goods that have been customised in line with customer requirements.

What do you actually understand by the term “quality” in this context?

It relates to comparatively clear social and industrial frameworks and procedures from which the local economy benefits. This forms the basis for quality and must not be abandoned. However, for long-term success, even in the mass market, it is not sufficient simply to observe certain quality standards. The criteria of reliability, clarity and transparency must be supplemented by adaptability and enhancement. In a wider sense, therefore, quality also requires the ability to remain flexible and open to changes. Norms and standards may be the roads on which we travel, but they are not the vehicles driving on those roads. And the standards have nothing at all to say about where the journey will ultimately take us.

The consequences of relying on standardisation alone can be clearly seen in the crisis faced by the PC industry. It began a number of years ago, when over-standardisation meant that customers were no longer able to distinguish any meaningful quality differ-

ences between the different products on the market. This resulted in price deterioration and a decline in the importance of an entire industry.

What influence has the new international division of labour had on the significance of quality?

This has reshuffled the deck for most companies. Quality continues to be a game-winning factor for European companies in particular. After all, quality is the undisputed strength of the old continent. So, what exactly does this mean for companies in the IT industry? The answer may appear strange at first: we have to be prepared not to want everything. The majority of manufacturers still continue to act as if software is used and “understood” in the same way throughout the entire world. But that is not the case. It is true that the standard products that we currently produce appear to be well received wherever they are sold. However, that is by no means the end

of the story. Software, in particular, is ideally suited to diversification and can be customised in line with national and cultural considerations. This is an area where Europeans could get ahead of the game, thanks to their experience of living on a multicultural continent.

A further route towards quality that really sets companies apart may appear a little stale, but it continues to be as relevant as ever: companies can improve quality by talking to customers. The confusing and overlapping service offerings that are often unleashed on customers can give the impression that the company is seeking to cover up its shortcomings rather than really provide a service to the customer. This is related to the fact that most people only ever speak with their peers. Journalists speak with other journalists, bankers speak with other bankers and IT bigwigs speak with other IT bigwigs. It is of no consequence whatsoever whether specialist A believes specialist B to be the best – unless we are talking about

discussions around the water cooler. When all’s said and done, it is customers who represent the cold, hard cash. The most important factor is the army of buyers and consumers.

Bearing in mind the current economic crisis, would it not be sensible to reduce prices and, therefore, the quality of products in some cases?

It would be a grave mistake to respond by lowering quality levels. Reducing prices is also not going to cure the problem. That is totally the wrong approach. After all, we are not faced by a crisis based on pricing, but one based on quantities. And you don’t respond to a situation like that by appealing to the masses and brushing quality under the carpet. A large number of major industrial enterprises have compromised their quality levels over recent years in order to appeal to the masses. And more than a few of them are now in discussions with insolvency administrators.

In the west, our basic needs are generally well covered and people are on the lookout for something special that will be reliable over the long term. Customer confidence is therefore placed in experts. That is reassuring, because Europeans are experts in an immense number of fields. However, companies often fail to stand out from the crowd. A company that is simply creating products in line with standards can easily be replaced. However, providers that offer a unique service or a clearly profiled product cannot simply be copied. That is the most important quality.

Wolf Lotter is a journalist, author and joint founder of the German economic magazine brand eins. His most recent book Die kreative Revolution [The Creative Revolution] was published in January 2009.



PHOTOGRAPHY: WOLFGANG SCHMIDT

Hannover Rück benefits

from automated testing

Automating software tests makes IT systems more reliable and cost-effective. This is also the case for Hannover Rückversicherung AG.

In contrast to industries that handle mostly standardised products and therefore work with standardised software, reinsurance companies do not offer a “product” in the traditional sense. “Reinsurance contracts are always negotiated individually in the market,” explains Regina Mosler, Chief Quality Manager of Information Technology at Hannover Rückversicherung AG (Hannover Rück). And the more differentiated the products become, the more complex the associated processes, software and ultimately, the software tests are.

This was also the case for Hannover Rück which implemented a new reinsurance solution as part of a comprehensive project running over a number of years. The system is based on SAP® and includes over 300 specific add-ons that were developed in-house. “We use off-the-shelf standard software where it best suits our purposes. However, we prefer to develop the applications that provide us with a competitive advan-

tage ourselves,” explains the IT quality manager.

New systems – new tests

The replacement of the old systems by this new solution meant that the scripts previously used for software test automation were no longer valid. Faced with this situation, the IT quality management team at Hannover Rück decided to update its test automation concept in line with the most recent developments. Working together with the software quality experts at SQS Software Quality Systems, the company automated its installation and system tests to run as quickly and cost-effectively as possible. An initiative that made sound sense as the automation scripts are used on a frequent basis.

The methodical approach presented by the SQS employees follows the modular design principle. It involves breaking down business requirements and test

cases into individual business components that can then be reused elsewhere or – more specifically – integrated into other test scripts. Together with the external testing experts, Hannover Rück developed a framework and utilisation concept for programming and modifying scripts quickly and easily.

“This type of procedure is particularly advantageous for lean QM departments within companies. If you have easy access to an existing component set, new test cases can be created and automated quickly and without requiring a great deal of personnel commitment,” comments Regina Mosler.

Bundled expertise from specialist departments

A further decisive business benefit of the business component method and test automation relates to the large degree of autonomy held by the



company’s specialist departments and the times at which they are available. Although these departments still have to carry out the function tests themselves, they no longer need to be involved in the automated installation and system tests.

Since the SAP® solution is subject to ongoing expansion and customisation, the test scenarios and associated test scripts must also be adapted on a regular basis. If SAP® makes any changes to the basis system, msg (a partner of Hannover Rück) also needs to modify its part of the software package which, in turn, results in the insurer having to update its add-ons.

Tests are primarily carried out in line with releases and include a three-stage process that covers development, test and production environments. Around

20 releases are planned each year, of which at least two include changes such as SAP® kernel patches, SAP® stacks and msg support packages: wide-ranging changes that each require test phases of between six and eight weeks.

Test tools require experience

The software tools used by Hannover Rückversicherung AG are developed by HP. The excellent relationship between the SQS test experts and the tool manufacturer was extremely beneficial in this case. The thorough, comprehensive training and many years of project experience held by SQS employees also had a positive impact: “The SQS specialists required only a very brief familiarisation period and soon inte-

grated themselves into our QM team,” says Regina Mosler, who is confident that automated system testing will be ready to be rolled out to the operative reinsurance business on schedule by the end of 2009.

However, according to Regina Mosler, in order to reap all the benefits associated with test automation, a company must first be prepared to invest the necessary time and money: “You need to decide beforehand exactly what you want to automate, the level of repetition and the expectations placed on the return on investment”. In her view, test automation needs to be viewed as a strategic, long-term project. And the QM manager is unmistakably clear about one thing: “Under no circumstances can you send home half of your team and simply replace them with a tool!”

What's new in the world of software testing?

When QUALITY calls, decision makers respond

It is not only in times of crisis that decision makers modernise their software quality assurance in order to further industrialise IT production at their companies. Therefore, what is currently on the agenda for CEOs, CIOs and other key executives? QUALITY spoke to them to find out.



Rudolf van Megen
CEO, SQS Software Quality Systems AG

As an essential component of industrialised IT production, software quality assurance has steadily gained in significance over recent years. This is clearly demonstrated by two developments: firstly, the majority of companies now have both an underlying infrastructure and processes for systematic software testing. Secondly, system integrators (SI) have increasingly recognised the significance of testing as a business field with strategic importance. This poses new challenges for us as a provider of solutions for soft-

ware quality management and testing. Our customers need to learn to decide between the relevant merits of an SI and an independent test service provider. Our customers have also come to expect a lot more from us than just individual technologies, tools, procedures or consulting. The current trend is clearly towards complete packages, which we offer in the form of our SQS PractiQ® solutions.

“Companies don’t just want test procedures, they want test solutions.”

The SQS PractiQ® solutions vary depending on the specific requirements of the company in question. Early Error Detection, for example, can considerably reduce associated costs and save time for our clients. Our solution for SAP® implementations addresses the challenges and tool infrastructures that are unique to the world of SAP®. Finally, our performance and regression testing package: since both tasks can be automated to a large extent, we have integrated strong sourcing components into our managed services for these areas. Experience acquired in our test centres from Egypt to South Africa demonstrates that this approach can result in large potential savings for our customers. Word of this is now spreading, resulting in all these test teams currently enjoying strong growth.



Klaus-Dieter Herrmann-Tenk
Data Centre Manager for the Financial Administration
in North Rhine-Westphalia

Tax legislation is always changing, sometimes at a rapid pace. It is therefore important, as an IT service provider to the Financial Administration for the state of North Rhine-Westphalia, that we can deliver quick, high-quality solutions. Quick, because new tax laws need to be implemented on time, and high quality because the public authorities are reliant on a steady stream of tax revenue. Which is why since 1997, we have placed great emphasis on detecting faults in

IT projects at an early stage. The earlier a software fault is discovered, the more quickly and easily it can be rectified.

So how do we find these faults at the earliest stage possible? Firstly, a large number of our developers are trained tax specialists, which means that they understand how our IT systems are actually used. Secondly, we always involve active tax experts in our test processes. We contract out employees from the various tax offices for up to a year at a time to work on test projects. We have set up a formal framework around this procedure and follow it as a matter of course.

“The earlier we discover faults, the more quickly we can deliver.”

We begin drawing up test cases as early as the functional design phase – often before a tax law has even been officially passed. Once the new legislation has cleared all the regulatory hurdles and the Finance Minister has approved the functional design, the development and testing teams coordinate their efforts and work in parallel. The training given to our IT developers also plays an important role and includes a strong focus on software quality assurance.



Michael Tiedemann
CEO, SYSGO AG

As a supplier to manufacturers of safety-critical systems, software quality is our number one priority. For instance, we are currently involved in a cockpit information system for use by pilots. However, we no longer carry out all development and testing activities ourselves as this would divert important resources away from our core activities.

SYSGO now contracts out the majority of its software testing to third parties. Our suppliers must have a good reputation in the field of safety-critical software and have experience

of dealing with the relevant test authorities. Of course, they also need to guarantee a high level of technical expertise. And, finally, it is important that we have also local points of contact.

“Test offshoring is viable even for safety-critical software projects.”

Ensuring that the persons responsible are located nearby means that a number of standardised test activities may be completed offshore. We have good experiences of this – especially as we do not simply leave everything to our service provider when offshoring tests – especially for strategic company projects. We always visit the teams working for us in person before we start on a project. When projects are distributed over a wide geographic area, it is essential that all those involved get to know each other. After all, we can only communicate our requirements clearly if we know exactly who we are dealing with at the other end of the line.

The main benefit of test offshoring is that it saves costs. Since it mostly involves standardised, repeated activities, software testing tends to be ideally suited to being outsourced. Although quality assurance is not one of our core business areas, it does form a large part of our projects. These are the ideal prerequisites for outsourcing and offshoring.



Jason Taylor
Head of Testing Services, Bupa
(British United Provident Association)

Outsourced testing has definitely matured over the past 10 years. I was a fairly early adopter of global sourcing for testing – I got involved right when it was really starting about eight or nine years ago. Five years ago people asked, “Why test?” And then came a huge investment in testing because people realised that if they’re going to put their entire shop on the Web, it needs to perform the way they want it to perform. Sourcing testing externally is an excellent option. You can move into testing more quickly – ramping up internal

testing services and engineering takes too long. External testing vendors also have no conflicts of interest, like internal testers might. And vendors retain knowledge and assets, even if one of their employees leaves. If you hire contractors and they leave, they take all that knowledge with them and you have to start over again.

“The keys are the right understanding and the right relationship.”

This is why, for me, it’s never been just about cost. It’s about finding the right partner. The key is to make sure you have the right understanding and the right relationship. Once that is established, you can move more quickly into more complex procedures or things like automation. It also offers a special advantage for specialised testing.

Standardised testing is another thing that can benefit everyone. A consistent use of tools and materials makes it not only easier for me to talk to the testing company but also with my partners and customers. We’re all speaking the same language. I see a future that involves a lot of test sharing. This doesn’t just help cut costs for everyone, it also helps spread the risk for developing new tools and materials, which is important in this economic environment. Reducing risks reduces costs, which frees up money for us to do more.



David Espley
CIO, Progressive Media Group

Our company is very young and is a combination of a number of smaller companies. So we’re trying to standardise the definition of “quality” and make it not only driven by IT but also by business. Everyone has to buy into quality as a group – it’s not an individual vertical unit of the company. We’re working to identify key quality owners at the businesses to get them proactively involved, maybe with test cases. When you begin developing software, you have to make sure you can test whether or not it fulfils your requirements. For years, we’ve always tried to make software buildable but you have to be able to test to make sure it meets your requirements. You can’t account for every eventuality in the software life cycle but if you write down tests or concepts that need to be proven early it becomes easier to ensure quality – even business quality. If you can’t test it, you can’t develop it.

“Developers and testers should have a healthy rivalry based on trust.”

But we shouldn’t just be testing for usability and function, we should also be testing from a business perspective. This is an important aspect of any project. If new software increases traffic on a website for example, what effect does it have on advertisers? And what about end-users – does it affect the churn rate?

New software doesn’t really get tested enough. For every four people committed to development, I like at least one to be a tester. Simple projects can be stretched to one to six. Developers and testers should have a healthy rivalry based on trust and friendship – no finger pointing. This is where it’s advantageous to have outsourced testing vendors. It removes the need to save face to the company – developers and testers should never be able to put each other under pressure.

The impact of shortfalls in quality

Software error paralyses T-Mobile network

Silence at T-Mobile: millions of the mobile network operator’s customers in Germany were unable to make calls or send text messages for hours on end. At around 4.00 p.m. on Tuesday afternoon, 16 April, a large number of T-Mobile customers were suddenly unable to make or receive calls. Those patient enough to endure a long silence after dialling a number, eventually heard a calm woman’s voice say: “This number is currently unavailable for technical reasons. Please call again later.”

T-Mobile spokesman Dirk Wende said that the technicians had reset and restarted the system at around 7.00 p.m. According to Wende, the network was up and running again throughout the country from around 10.00 p.m. The failure was caused by a software error in the network’s home location register. As Wende explained, this is responsible for allocating telephone numbers to individual SIM cards. A total of three databases were affected and had to be restarted in stages.

Source : spiegel.de dated 21 April 2009



Commercial innovations for quality

Output-based pricing can help shift risk to the supplier

Innovations in testing don't just have to come in the form of new tools and processes. They can also come in the form of different structural or pricing models that can do more than just improve the quality of testing, they can also strengthen the relationship between providers and customers. And they can save money. During an economic downturn, innovations may seem too risky but at least one concept – output-based pricing – offers a unique competitive advantage by shifting risk away from the customer and onto the supplier.

In an output-based approach, providers and customers negotiate service-level agreements that establish just what or how many tests will be performed by a specific deadline. After that, it's up to a provider to determine how best to complete the project and which resources it will require. The agreements mean both customers and providers need to be familiar with each other's demands and requirements but can yield both an increase in quality and cost savings.

Risky business

"Each company has to have a certain level of maturity for output-based pricing to work," says Phil Edwards, a Thought Leader & SQS Business Director. Both sides must have an idea of how much testing still needs to be done and be familiar with each other's work to have a realistic view of what it will take to complete the project. Customers can get a more exact view for budgeting purposes while testing companies are no longer restrained in assigning or limiting resources to specific projects since it's the outcome that matters. "This also enables the provider to build tests up front and then recover the costs over time, thus making a more beneficial client cost model and attractive ROI proposition."

With businesses taking a harder look at finances and reviewing processes to ensure the processes yield the necessary

results, output-based approaches can move both economic and operational risk back onto the provider's shoulders. Offshoring can play a key role here. The prospect of dealing with testers in a different time zone and from a different culture can trigger alarm bells with some clients even though testing companies have good experience with offices and employees elsewhere on the globe. And output-based approaches exploit this discrepancy by allowing the testing company to take on the risk for the outsourcing while providing most of the benefits – primarily lower costs – to the customer.

"We have to manage that and take the risks. It's up to us to ensure we've got the right level of skills in our offshoring. These contracts also allow people to work from home or work remotely. The skill sets just have to be matched – it doesn't matter whether the employees are in South Africa, Egypt or Görlitz, Germany," says Edwards.

In this same vein, providers can also use new technologies and methodologies that they may feel comfortable with but that may not be ready for widespread use. If the end result is all that matters to the customer, then how a supplier chooses to get there is irrelevant. It also allows providers to take advantage of economies of scale by using tests across several projects or applying innovations from one customer to the next. The same can be said for automation. These technologies may make some clients nervous but in output-based pricing they can lower costs even further.

Improvements in quality and communication

Output-based pricing can also boost quality by improving communication between testing companies and customers. The agreements require suppliers to have an intricate know-

ledge of their customers' business and even culture. And clients gain a better understanding of both what they're paying for and what they're receiving. With testers focusing on what they do best – testing – customers are often happier with the end product. This can lead to a broader relationship, especially as the two sides come closer together during the related reports and reviews.

"It's getting it right the first time," says Edwards. "Customers want to be sure that they're guaranteed a high quality of service."

After working with SQS for nearly a decade, the credit card division of a major British financial services group switched to output-based pricing three years ago, allowing them to set output levels to meet their business demands while keeping a leash on costs. So far, they're very happy, says Edwards. That's just one example. A wide number of companies from a broad swath of industries have also tried and decided to remain with the innovative pricing structure. Beyond financial services firms, cellular phone companies, law groups and even software companies have discovered the advantages.

Companies and customers must also determine which yardstick to use to measure the output. Test points are one such currency. Both sides could agree on remuneration for a specific number of test points – for example, 50,000. Access tests on a single screen from a customer could count for 10,000 or 15,000 points. After just a few tests, the milestone would be tripped. While the customer would previously have been billed for the time and material for the testers on that specific project, the customer would now pay according to the points.

"Test points are also a great method of cross-charging across multiple projects as projects only get charged for the number of tests executed. We would try to look at the expected workload for the coming months and set a target," says Edwards. Still, he says it's important to set both spending floors and ceilings on projects or else either side could end up with too few – or too many – resources.

The demands on output-based scenarios can also blur the boundaries between customer and supplier, not only because of the shared risk but also because of a need to clearly define what constitutes a successful outcome. The relationship can often mirror that between two departments within a single company as both sides look to get the job done quickly and correctly.

"Output-based contracts place emphasis on a supplier to do more for less, without compromising quality or timescales," summarises Edwards.

Book review

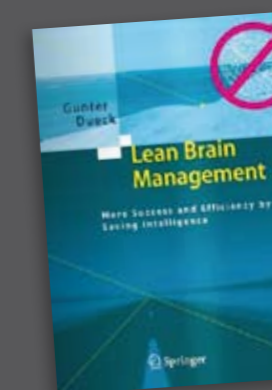
Success without thinking

What would the economy look like if people were to stop using their most precious resource: their intelligence? The ironic answer from IBM chief thinker Gunter Dueck is clear from his book *Lean Brain Management*: the massive wastage represented by excess brainpower results in an enormous potential for savings. Companies can make radical changes to become even leaner. The objectives associated with efficiency and a strict focus on process thinking can only really be achieved once "lean brain" has been adopted as a general principle.

When communicating with customers for example, around 200 general, empty phrases are sufficient if they are supplemented by around 20 additional company-specific ones. Call centres can be viewed as trailblazing examples in this regard. The long-term objective is to bring about lean brain systems that no longer need a high level of human intelligence because the knowledge is sufficiently integrated into the IT systems used. The result: a dramatic reduction in costs.

Dueck's book is one of the wittiest business books in recent years. However, since the lean brain utopia he describes all too often brings to mind our own reality, readers may be unsure whether to laugh or cry. Fans of black humour are sure to get their money's worth from Dueck.

Gunter Dueck: *Lean Brain Management*. Berlin/Heidelberg (Springer) 2008, £ 18.99



From village to boom town in only 30 years

HOUTEN



Hands up if you've heard of Houten. To be fair, even people living in the Netherlands (where this municipality can be found) would initially struggle to locate it on a map. Yet it is worth taking a closer look at this small town, which neighbours Utrecht, because Houten is an excellent example of how the country of dikes and polders is continually reinventing itself.

PHOTOGRAPHY: BEN KNABE

In this day and age, you would probably expect a town whose population has increased twelvefold in the space of thirty years to be located in South-East Asia or Latin America. So you might be surprised to discover that this rapid growth has been experienced somewhere much closer to home; in the Dutch town of Houten to be specific. The town, which is located five kilometres south-east of Utrecht, went from a village of 4,000 inhabitants at the start of the 1970s to a town that is today home to around 50,000; a Herculean task for town planners and architects in particular. But what brought about this extraordinary growth in the centre of the Netherlands?

Central and remote at the same time

"As a consulting company, our employees spend most of their time at our customers' offices – all around the Netherlands," says Wilbert van den Blik who, as Managing Director of

SQS Software Quality Systems, oversees the company's operations from Houten. "Our location makes it easy for consultants: getting anywhere within the Netherlands from Houten is a breeze." The SQS manager himself commutes from the southern town of Breda. "The approximately 70 kilometres are no problem because of the excellent connections to and from Houten."

The Dutch authorities realised early on that society's future and that of the economy would not revolve solely around the big cities and made infrastructural changes to accommodate this. For instance, whilst the number of new buildings permitted each year in most Dutch municipalities is severely restricted, Houten was, for a considerable period, not subject to these restrictions. The reason for this was that in 1966, the Dutch national government declared the area a "groei kern" (centre of growth), essentially issuing a free pass for intensive construction work. The aim was to create affordable homes and places of business within easy reach of the city.

The result today is astounding. Lovers of contemporary living and functional buildings will be impressed by what Houten has to offer. The most recent buildings, with their creative take on the traditional Dutch gable house featuring timber and bright colours, fit perfectly into the modern infrastructure, such as the local traffic-management system. Houten's residential areas, for instance, are set out in cleverly designed cul-de-sacs, making them a no-go for through traffic but fully accessible to local cars. However, only pedestrians and cyclists are permitted to move freely across the town, which is one reason the town was awarded the prestigious title of "Bicycle City 2008."

Living and working

The quality of life here is excellent. Plenty of peaceful green areas make the area very attractive to families, for whom there are often modern workplaces available right on the doorstep. And development in Houten is still pro-



Wilbert van den Blik in Houten

gressing, with a number of new office buildings currently under construction. Arval, for instance, the auto leasing arm of French national bank BNP, opted to set up its Dutch offices in the little boom town which are housed within a futuristic, bright-red building. In total, the town is now home to just under 2,700 companies, primarily in the retail, healthcare, finance and other service sectors, creating a total of approximately 20,000 jobs for the area.

In view of this, Houten can be seen as symbolic of the Netherlands of today, which is currently in the process of reinventing itself and where the lines between town and country are becoming increasingly blurred. Living and working structures are no longer geared to fixed geographical conditions but are instead derived from extremely practical considerations. Wilbert van den Blik explains: "Take the famous Dutch powerhouse, Philips, for example. For a long time, the

company was inextricably linked with Eindhoven, a town referred to as the 'City of Light' on the basis of this association. However, today the company is headquartered in the international meeting hub of Amsterdam, its R&D has remained in Eindhoven and it now has a widely dispersed network of production facilities."

The increased flexibility of business and professional life brings with it new challenges in terms of mobility. According to Wilbert van den Blik, "In the Netherlands of today, if you fail to offer your employees a company car, you won't get very far in terms of attracting good candidates. And, alongside job description and salary, good transport links can often be the deciding factor in a candidate's acceptance of a job.

This is one of the reasons that Houten is increasingly coming out on top. It's away from the big cities and it's unlike-

ly that you will run out of space. In addition to these practical benefits, working in a picturesque environment also has its perks. For instance, if you want to get away from the office at lunchtime, there are some lovely cafés and restaurants in the historic centre only a short walk away.

Living in Houten does not mean you have to miss out on the thrills of the big city either. Utrecht is only a 20-minute bike ride away and by train, just under ten minutes and it only takes about three-quarters of an hour to get to Amsterdam.

Along the waterways

If you head in the opposite direction however, towards the south; a flat and peaceful landscape stretches out before you. Away from the major transport routes, the countryside is dominated by the polders and fields



Be sure to visit

>> **The sandy beach** . . . situated in the Rietplas district in the centre of Houten. Perfect for children. Swimming is allowed, for instance you could swim to the newly created sand island in the middle of the lake. Beusichemseweg/Binnentuin, South Houten

>> **The historic** . . . town centre of Houten. Some parts of the Plein Reformist church on the market square were built in the 12th century. The hotel restaurant De Roskam provides the perfect vantage point from which to watch the world go by on the market square . . .

>> **The modern** . . . apartment building in the Bauhaus style, designed by Gerrit Thomas Rietveld for Truus Schröder-Schröder in 1924. A pioneering building, which broke with all the prevailing conventions of the time, and in some way symbolises the pioneering attitude for which the Netherlands has long been known. Today, the building is a UNESCO World Heritage Site and is open to the public.

📍 www.rietveldschroderhuis.nl

typical of the Netherlands. Also the water, of course, which is carried to the North Sea from east to west by the many different criss-crossing waterways branching off from the Rhine, including ancestral riverbeds, such as the Lek, and the man-made navigation channels which have been expanded over the centuries.

More than most European countries, Netherlands is connected nearly everywhere to its waterways, which flow from east to west. Rivers and canals are still major thoroughfares. Crossing the streams via bridges is still more time-consuming. That's why the Dutch government is currently improving these chokepoints rapidly. "Today's mobile society is still dependent on a number of old traditions," says Wilbert van den Blik. "Following the river is the quickest way to get there." Even if the Netherlands is very different today than it has been in the past, some facts will always remain true.

Profitability through quality



Wolfgang Clement,
Former German Federal Minister

PHOTOGRAPHY: TOM TRAMBOW

We have all seen the competitions in which you have to select the most innovative entrepreneur or the best employer. SQS has – successfully – participated in just such a competition. Whether we like it or not, what we currently need in these challenging times is benchmarks. This means that we particularly need companies that are not afraid of subjecting themselves to comparisons.

The sentence has almost become a cliché, but is still true: within every crisis, there are opportunities ready to be seized. These especially include focusing on your own strengths and options and discarding the shackles that we have imposed upon ourselves over time, whether in our political or commercial lives. These could stem from a seemingly never-ending flood of legislation or the force of habits that are not actually effective.

My thoughts on the political element are clear: if we had previously tried to overcome all the ideological, administrative

and bureaucratic red tape that is now preventing private and commercial investments in our countries, we would have been able to reduce the vast economic stimulus packages that are currently causing a drastic increase in public debt. You need only consider the costs of bureaucracy, which estimates show as amounting to almost 50 billion euros per year for German companies.

However, the courage and strength to revise opinions and introduce new approaches is not only needed from a political perspective; entrepreneurs and managers are also being called upon to revise business models and strategies wherever necessary. Banks, for example, that have become obsessed with foreign worlds of finance and distanced themselves from their customers and clients, or industrial enterprises that have missed opportunities due to placing greater focus on the capital market than on their own strengths. Succumbing to the crisis reflex of cost-cutting is not only understandable but also often necessary. However, although this can naturally help in difficult situations, it has still not enabled any companies to beat the market as a long-term measure.

The financial crisis has taught us a necessary lesson: we need a strong country that concentrates on its core duties and provides a regulatory framework for free, fair and transparent market activities. However, we do not simply need an ever increasing number of laws and ordinances or regulations “from above” that can paralyse autonomous and proactive activities.

Instead, all free countries need strong, active, self-confident citizens and courageous forward-looking entrepreneurs that

are willing to implement changes and assume responsibilities. It is upon such people that we are reliant, both socially and economically.

In these challenging times, you and your company are naturally fully focussed on maintaining a good market position. You contend for orders more than ever, you pursue customers and you take greater care of your financial resources, with which you can sometimes experience difficulties within the scope of the general financial crisis.

However, many companies are now also reporting the existence of a true feeling of team spirit, where everyone is striving for mutual success. Good employees will happily give their all for good employers and this is particularly important in times of crisis. Companies with good human resource management and highly qualified and motivated employees have the best opportunities to perform well, have the best products and procedures, offer excellent services, introduce innovations, provide quality and therefore, achieve a better economic result.

The challenges of our time

If you ask a company director in Europe what today’s greatest challenges are, you are more likely to get a three-part answer than the simple response “the crisis”: firstly, globalisation; secondly, demographic change and thirdly, technical development. This shows a great deal of realism, a willingness to face challenges and an entrepreneurial spirit on which we rely more than ever in economically difficult times.

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Congratulations to the winners of the last survey: Dietmar Krüger, Hella KGaA (Nintendo Wii Sports Bundle)
David Walters, Principality Building Society (Smartpen 2 GB)
Waldemar Münstermann, Inter Versicherungen (digital photo frame)



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- Publisher & Supervision** SQS Software Quality Systems AG | Liliana Preuß | Stollwerckstraße 11 | 51149 Cologne, Germany
Phone +49 (0) 2203 91540 | info@sqs.de | www.sqs-group.com
- Editorial & Coordination** PR-Partner Köln Agentur für Kommunikation | Breite Straße 161-167 | 50667 Cologne, Germany
Phone +49 (0) 221 92150420 | info@prp-koeln.de | www.prp-koeln.de
- Graphic Concept & Layout** Aclewe GmbH Werbeagentur | Marzellenstraße 43a | 50668 Cologne, Germany
Phone +49 (0) 221 91393630 | info@aclewe.de | www.aclewe.de
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