



Qentinel

SOFTWARE QUALITY ASSURANCE



BUSINESS REVIEW

JULY 1, 2008 TO JUNE 30, 2009



Qentinel

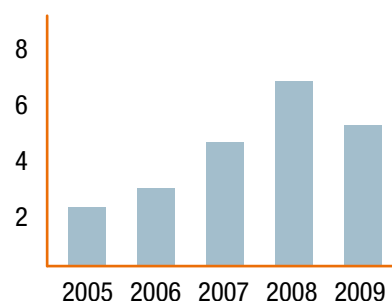
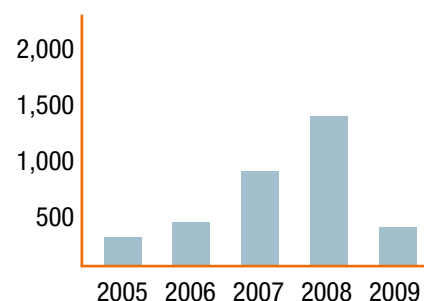
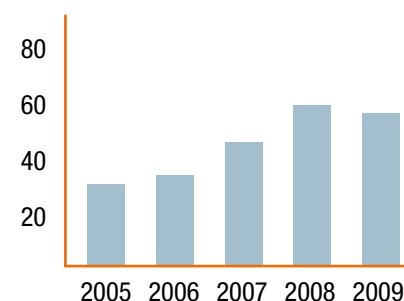
SOFTWARE QUALITY ASSURANCE

Qentinel is a leading Finnish provider of independent software testing and quality assurance services. Our customer base consists of companies who develop or utilise software and IT systems, and for whom quality is a major success factor.

Our mission is to improve the profit our customers get from their information systems and to minimise the risks involved. We test, measure and improve the quality of our customers' information systems, implementation projects and business processes.

KEY FIGURES

| | | | | | |
|---|---------------|--------|--------|--------|--------|
| EUR 1,000 | 2009 | 2008 | 2007 | 2006 | 2005 |
| July 1 to June 30 | | | | | |
| TURNOVER | 5,275 | 6,772 | 4,715 | 3,003 | 2,229 |
| Change in turnover, % | -22.1 | 43.6 | 57.0 | 34.7 | 54.1 |
| Operating expenses | -4,867 | -5,290 | -3,799 | -2,565 | -1,983 |
| OPERATING PROFIT | 408 | 1,482 | 916 | 438 | 246 |
| Operating profit, % | 7.7 | 21.9 | 19.4 | 14.6 | 11.0 |
| Financial income and expenses | 53 | 22 | 25 | 1 | 2 |
| Profit before taxes | 460 | 1,503 | 941 | 439 | 249 |
| Income taxes | -120 | -392 | -246 | -114 | -65 |
| PROFIT FOR THE PERIOD | 341 | 1,112 | 695 | 325 | 184 |
| ASSETS | | | | | |
| NON-CURRENT ASSETS | 70 | 55 | 26 | 34 | 45 |
| CURRENT ASSETS | 3,229 | 3,622 | 2,545 | 1,477 | 919 |
| TOTAL ASSETS | 3,298 | 3,678 | 2,571 | 1,511 | 963 |
| SHAREHOLDERS' EQUITY AND LIABILITIES | | | | | |
| SHAREHOLDERS' EQUITY | 2,341 | 2,201 | 1,458 | 857 | 483 |
| Long-term liabilities | 0 | 0 | 0 | 0 | 0 |
| Short-term liabilities | 957 | 1,477 | 1,114 | 654 | 480 |
| TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES | 3,298 | 3,678 | 2,571 | 1,511 | 963 |
| Equity ratio, % | 71.0 | 59.8 | 56.7 | 56.7 | 50.2 |

**TURNOVER,
EUR MILLION****OPERATING PROFIT,
EUR 1,000****PERSONNEL ON AVERAGE**

GOING FORWARD TOGETHER WITH OUR CUSTOMERS

Qentinel's fiscal year 2008–2009 witnessed a recession that made the year highly challenging. Until October 2008 our business developed as planned. The global financial crisis that surfaced in autumn 2008 brought along a collapse in Finnish industries, which naturally affected Qentinel as well.

Qentinel, accustomed to rapid growth, did not increase its turnover during this fiscal year. In these demanding circumstances, we nevertheless managed to maintain the profitability of our company and strengthen our long-term customer relationships.

The changed market situation manifested itself in assignments that were significantly smaller than before. The demand for quality assurance expert services remained strong throughout the year but large testing assignments were rare. Regardless, we did gain many new customers and we were delighted that our customer satisfaction surveys showed our customers' trust in us had grown.

We continued to develop our service products focusing especially on the further development of our Successful Software Acquisition service and Testing as a Service, our continuous service model. It is often the case that our services evolve from the concrete, acute needs of our customers. Therefore, we have adopted a customer-centric product development strategy that emphasizes service development in close collaboration with our customers.

Obviously, the number of employees at Qentinel did not grow during the fiscal year 2008–2009. Despite these difficult times, we continued to deepen and diversify our experts' skill sets.

In the summer of 2009, the global economy started showing some small signs of recovery and general optimism has increased. At Qentinel, our order volume is showing a promising upward trend. However, the business environment is still very unstable – we anticipate only moderate growth for fiscal year 2009–10, although we do expect profitability to improve remarkably.

I want to thank all the employees of Qentinel who, despite these difficult times, have continued to work without compromising the quality of their excellent customer service. I also want to thank our customers, with whom we have been able to grow together and remain strong in anticipation of the predicted upturn in the economy.

Esko Hannula
CEO



SERVICES FOR SUCCESSFUL INFORMATION SYSTEMS



In IT projects, Qentinel's role is that of an independent quality assurer. By using our services, customers can ensure the successful development and acquisition of software and information systems.

Qentinel measures and improves the quality of IT systems, implementation projects and the business processes involved. This ensures that the customer's needs are met. Professional quality assurance and testing mitigates the risks associated with business or risks to a company's reputation. The quality of systems improves and the customer has up-to-date information on the progress of the project at hand, which improves the project's predictability and monitoring. Testing methods document the project's progress primarily in its development and maintenance phases.

CUSTOMER NEEDS DEFINE THE SOLUTION

In an information system project, companies in different roles and development stages need different services. Qentinel has developed several

services that anticipate different customer needs, and our experts tailor the content of the service together with the customer.

As a quality assurance specialist, we can offer our customers the talent they need, from project management professionals to technical experts, all of whom have the special skills and best practices required by the customer's project.

SUCCESSFUL ACQUISITION

Today, a company's business relies increasingly on their information systems – for example, on extensive use of their ERP systems – and the effectiveness and ability of a new information system to deal with changing market circumstances can be a significant asset. Acquiring and implementing a new system is, however, seldom a part of the core competence of a company, and an unsuccessful project can significantly hinder normal business operations.

Qentinel's experts will ensure that the information system project is a success, from the definition phase to acceptance testing. After deployment and when the system has gone into production, for the system acquisition to be completely successful, it is also important to verify the quality of version updates.

Qentinel acts as an impartial "building inspector" in system acquisitions, which is a very important role, especially in projects with multiple suppliers. It is important to take quality assurance into consideration when delivery agreements with a supplier or suppliers are signed. By doing this, a company avoids situations where the contents and schedule of a delivery are not clearly agreed upon, or where wide-ranging parts of the project – like testing – are ignored. With professional test planning, our customer can also optimise the testing contribution of application testers with expertise in a key area of the new system.

QUALITY PRODUCT

Qentinel's services support companies during the product development and delivery phases of their software projects, especially if the software has an important role in their products and services roadmap. Much like traditional software and information services companies, industrial product development companies are now increasingly dependent on software.

Our expertise and experience can be used to develop our customers' own quality assurance and testing operations, and they can also outsource as much testing to us as needed in order to optimize their organization. By using Qentinel's professional quality assurance services, our customers can improve their own operations. Information on software quality is documented for the product development and archived for further use in upcoming projects, and you will always have industry best practices and up-to-date information on the most effective testing tools at your disposal.

TESTING AS A SERVICE

An organisation with frequent quality assurance and testing needs but where the amount of testing varies can benefit from our Testing as a Service concept. It is applicable to all levels and tasks of testing, and the cost is based on your required service level and the extent of service used. The service is monitored with mutually accepted targets and measured through agreed expected results. Procedures and modes of cooperation are continuously developed and optimised as our understanding of our working relationship grows.

Typical uses for the service are system testing, interface integration and changes testing, acceptance testing, compatibility testing, and version and patch testing.



SOLUTIONS FOR OUR NEEDS

Global operations in the field of environmental observation and industrial measurement equipment demand the software and operations to be completely reliable. Vaisala Plc is developing its operations by renewing its global ERP system.

For the project to be successful, it is crucial that the company's business processes are modelled and tested in the new system. In addition, modelling and testing serve as an important part of the user training phase.

*"The testing phase is very intensive and the people involved gain a deep understanding of our operations – in the future, they will be able to support other staff members. The ERP system we are now developing will serve Vaisala globally in all its offices, so the solutions need to be fully approved and tested," says project manager **Jaakko Hirvensalo** from Vaisala.*

When the ERP system's implementation began, it was decided that an investment in systematic quality assurance of the solution was needed.

Cooperation with Qentinel began with the development of a testing process. Qentinel's experts used their experience from earlier similar projects and testing and, in accordance with Qentinel's recommendations, new testing tools and an improved testing process were introduced. The development and testing activity in the project has been carried out by a truly international team, so the processes needed to be well defined.

"I greatly appreciate that Qentinel's contact people have understood the needs we have for our ERP system testing, and they have been able to offer us the correct solutions for a variety of situations."

SOCIETY IS INCREASINLY DEPENDENT ON IT SYSTEMS



Qentinel's operations are characterised by the idea that software quality is quality of life. IT systems have become an integral part of society, and problems in those systems have direct consequences on the everyday lives of both people and companies.

All kinds of software and systems serve most diverse needs. At the same time, their unreliability seems to be increasing. This unfortunate development has one benefit – increasing problems have prompted software developers to pay more attention to quality. The industry is beginning to understand the impact quality, or lack thereof, can have on their business and bottom line. Understanding the meaning of quality is an appreciated trend.

THE NEED FOR TESTING IS INCREASING

The need for testing and quality assurance for IT systems – and the skills required by those needs – are growing as society becomes more dependent on increasingly complicated information systems.

Qentinel is operating in a rapidly growing area. By specialising in testing and quality assurance, we are able to answer the needs of software development and be a leading provider in our own sector.

IT systems that are both extensive and integrated will demand a substantial amount of testing work in the future, which may lead to testing becoming a bottleneck in IT projects. At worst, testing may become the phase that prolongs the time to market of IT products, which means that

software development projects need to pay more attention to quality and faultlessness right from the beginning.

SOFTWARE WORK IS OUTSOURCED TO LOWER-COST COUNTRIES

The operations of many Finnish companies are rapidly becoming more international. The downturn in the economy has further increased the cost-based outsourcing of software development, particularly to lower-cost countries. For globally operating companies, outsourcing is easy because they often have established procedures for outsourcing their operations and there is a global supply of outsourcing services. In outsourced and in particular off-shored software projects, the need for systematic management and quality assurance cannot be over-emphasised.

AGILE METHODS AND SAAS IN THE MAIN STREAM OF SOFTWARE DEVELOPMENT

Agile methods have become the current mega-trend in software development. The adoption of agile software development methods has been such a dominant trend that they are now used in situations where they are not entirely appropriate, and in organisations where the necessary know-how and discipline do not yet exist. At best, the benefits of agile methods – e.g. increased productivity and manageability – are superior to what traditional methods have delivered, but it should be noted that reckless use of agile methods can lead to expensive chaos, from which it can be difficult to recover.

Another current central trend in the software business has been the adoption of the SaaS (Software as a Service) model. Buying software as a service has not yet made its final commercial breakthrough, but from the point of view of operating costs and efficient use of resources, the model is much more profitable than providing separately packaged solutions to customers. In the future, the use of the SaaS model will increase and it will have a significant impact on how IT services are purchased and used.

RESULTS INSTEAD OF INVESTMENTS

Over the past year, Qentinel has invested heavily in its Successful Acquisition Service offering. Increasingly, larger and larger part of the work has been directed to determining from the customer's point of view how to conduct an IT project successfully, from definition and tendering to execution and implementation. The objective is that the system acquired must be useful and functional throughout its whole life cycle.

BUSINESS APPLICATIONS LEND FEATURES FROM SOCIAL MEDIA

Neither software developers nor business in general can ignore that Web 2.0 has created a need for more functional web-based applications. Already in the near future, this is going to affect the user interface applications and the functionalities they offer. New opportunities will emerge for totally new kinds of software innovations, and Qentinel will be part of this development as well.



NEW INSIGHT INTO TESTING AND QUALITY ASSURANCE

Work between Qentinel and VR Group started in the spring of 2008. The two companies created a quality documentation package for VR, the most important part of which is the quality handbook. This quality documentation ensures the quality in different phases of software projects and assists in their successful completion.

“Qentinel piloted the quality documentation package and testing model in a large system project for VR Passenger Services. They have taken part in the inspection of definition and planning phase results as well as in planning and developing the testing in the project itself.”

*says **Jukka-Pekka Suonikko**, Chief Information Officer of the VR Group.*

“In addition, Qentinel has helped and supported VR's own testing experts in implementing and using the selected test management tool more extensively, as well as in increasing general testing knowledge.”

According to Suonikko, Qentinel's consultants have given VR more insight into testing and quality assurance, and implementing the quality handbook has prepared the ground for systematic and extensive quality assurance in VR group.

UNDERSTANDING CUSTOMER VALUE IN THE CORE OF SERVICE BUSINESS



Service business is a globally growing field – leading network and hardware manufacturers are now investing in service strategies. Here in Finland, Tekes (the Finnish funding agency for technology and innovation) has started a number of far-reaching programmes for developing and innovating new services. Aalto University, which will open at the start of 2010, will have a field of research focusing on digital service business. On an international scale, a totally new inter-disciplinary field of research has emerged: Service Science.

More and more, services and service-oriented business models have also started to interest traditional software houses.

From the customer's point of view, adding services to products and offering service elements means we are moving from a single product towards a total solution. For the provider, this requires a clearer understanding of the customer's business and the provider's role in it. In the meantime, the provider has to be able to maintain a cost-effective and constantly learning service organisation.

BOTH PROVIDER AND CUSTOMER NEED TO UNDERSTAND SERVICE LOGIC

Service business logic is very different from traditional product logic. The core of service logic is understanding customer value. With this information, the benefits promised to the customer are fully realised in their everyday operations and processes, and while using the product or service, not only when signing the agreement. Particularly in business-to-business services, both provider and customer have to understand service logic. This is the prerequisite for a long-term relationship that will benefit both parties.

QUALITY ASSURANCE IS CONSTANTLY PRESENT

Service offering and improved understanding of service logic is also visible in Qentinel's operations. The first service packages at Qentinel focused mainly on the project level – on technical testing, consulting and management.

Over the years, we have shifted our focus also towards innovating and improving services for proactive quality assurance, on more efficient integration of testing in projects, as well as on taking responsibility for quality at the total solution level. Our service offering is not about what is being done in the production of services, but rather how the targets and methods of the services meet the business targets of the customer.

Even though the need for technical testing and test project management is not going to disappear, from the customer value point of view, it is essential to be able to balance quality assurance in correct, right-sized portions along the duration of the whole project. In practice, this means, for example, that we will monitor cooperation and quality between the customer and the system supplier, and our role will extend from the tendering and definition phases of the project all the way to piloting and final acceptance.

As society and businesses get more service-oriented, Qentinel's role in quality assurance for ICT systems supporting the public sector and private service industry will get even stronger. These systems include companies' ERP solutions, self-service systems, systems for customer information handling, patient information transfer systems, and electronic communication between authorities and citizens.

Quality assurance for total solutions consisting of both services and products is a new challenge, but also an opportunity – our role now extends to evaluating and testing customer processes in integrated services and the systems supporting them.

RESEARCH INTO QUALITY INTELLIGENCE AND VALUE MEASURING

Qentinel has continued to collaborate with universities in practical research and development work. Basic research fields we are involved in encompass the measuring of quality and ensuring comprehensive quality.

Harri Töhönen, who acted as the CTO of Qentinel until the end of 2008, is conducting research at the Helsinki University of Technology, SoberIT laboratory, on service management and on the measuring and controlling of a service business that is based on customer value. He is one of the co-founders of Qentinel and now acts in an advisory role in the company.

We conduct our own R&D work in testing technologies and methods, but also use the know-how of research institutes in this field. For example, we have followed very closely the research on model-based testing. It is not yet ready for everyday use, but the technology with which tests can be generated based on the initial definitions of the software is starting to show some promise.

Qentinel has focused much of its R&D resources on quality intelligence. With quality intelligence, the information system development and acquisition projects' success or failure can be assessed and measured in a manner that all decision-making interest groups can understand and use. Another use for quality intelligence is to provide factual assistance in ongoing project management.



EXTERNAL TESTER CREATES THE FRAMEWORK FOR TESTING

Suomen Maksuturva Oy is a service company specialising in e-commerce payment transfer. The company, established in 2007, expanded its operations in spring 2008 when it began the concept and information system development of its Maksuturva service. Because the service deals with people's assets, everything has to function flawlessly and efficiently.

*The development manager of Suomen Maksuturva, **Konsta Karvinen**, says that right from the beginning, they were aware of the rapid development speed of the service. Just as obvious was their need for an expert and professional testing service to be involved in the project. After definition and planning stages, they chose a Qentinel consultant to work in their team.*

"We expected the external tester to bring insight and

know-how for the planning and execution of the whole testing process. The Qentinel expert became involved in the project at the perfect time – as soon as the implementation had started. With their expert help, we created a framework for testing that we can also use in the future," says Karvinen.

In Suomen Maksuturva, automated testing is used in addition to manual testing. A test entity has been prepared from test cases that cover the whole service, and can be run as needed..

"Each time we make a change to the service, we can run through all the test cases quickly. Then we know that after the changes are made, everything will function as planned," explains Karvinen.

QUALITY IS ASSURED THROUGHOUT THE PROJECT



Qentinel's customers have one thing in common – they understand that software quality has a direct effect on their business. Our customers want to maximise the benefits of the software they have developed or acquired, as well as optimise the system's profitability during its life cycle.

Qentinel has long-term customers in industry, finance and insurance, the public sector, and IT. Our customers include the European Chemicals Agency, the Hospital District of Helsinki and Uusimaa, the National Agency for Medicine, Ratiopharm Oy, SOK, Vaisala Oyj, Veikkaus Oy and VR Group.

The past financial year was characterised by our customers' search for precision solutions for their well-defined needs. In IT projects, there was a clear focus on business-critical solutions, so the overall system quality and thus high level of Qentinel's quality assurance services was monitored very closely. Quality is a very important factor in all stages of our projects when our customers want to ensure a successful system acquisition.

Qentinel offers its customers quality assurance from the inception of the project all the way to the maintenance phase of the system. Thereby our experts are closely involved in the customer's acquisition projects from the very beginning. We evaluate whether the correct management choices have been made, and we ensure successful system delivery and the smooth implementation and maintenance of that system.

OUR CUSTOMERS VALUE OUR PROFESSIONALISM, RESPONSIBILITY, AND RELIABILITY.

As professionals in measuring, we continuously monitor our own work and achievements through, as an example, customer satisfaction. According to our surveys, our customers value our professionalism, responsibility and reliability. They feel our services are beneficial to them and that the targets of the assignments are clearly agreed on.

In the spring of 2009, we conducted in-depth interviews with some of our clients, to find out customer-specific expectations and experiences on working with us. The results of these interviews are now being used to further develop our services and procedures.

In the interviews, we closely examined the actions of our account managers, the everyday work we do in the delivery of our services and any expectations for our future collaboration. Our customers valued the consistent quality of our services and appreciated the predictability and profitability of the projects we were involved in. Our customers would also like to strengthen their cooperation with us through, for example, developing new processes and concepts together.

Our customers feel that our services generate value for them and help them succeed. They expect us to carry out quality assurance in a professional manner, to take responsibility for their testing and to promote new means, trends and methods in the field of quality assurance.



CONFIDENTIAL RELATIONSHIP CREATES OPEN COMMUNICATION

*Qentinel has taken part in several of Itella Information's service development projects. According to Itella Information's Quality Manager **Tapio Oikarinen**, the long-term collaboration has built a confidential relationship between the two companies.*

"Qentinel's staff is professional and it is a flexible company that is very easy to work with. In addition, as a partner, it is the right size for us."

According to Oikarinen, the biggest advantage they have gained from working with Qentinel is that they have been able to improve their operation.

"Our own testing skills have increased. Collaboration

with Qentinel has also given us new methods that have helped us to improve our own operations."

Oikarinen sees the use of an external testing company generally as a sensible solution, particularly if the organisation's core business is not software development. A company specialising in testing brings extensive know-how and deep expertise to the picture.

"In Qentinel, even the sales personnel are professionals and service-oriented. Often in the tendering phase, we have had good discussions of our real needs and, therefore, we have been offered exactly the kind of skill set we have needed."

OUR PERSONNEL NEED A WIDE SKILL SET

The core requirement for Qentinel's personnel is skills in software and IT systems testing as well as in quality assurance methods and technology. In addition, they need to have talent in consulting and communication. The increase in off-shoring means that the need for basic testing work will probably grow less rapidly than the need for specialised expertise. The ongoing market slowdown will intensify this trend.

On the other hand, the need for quality assurance, process development and project management skills in particular is expected to grow. In sales organisations, just like in any other demanding expert role, the importance of understanding solution selling is growing. Additionally, in assignments the demand for competence in project management and quality management methods is increasing.

Strong consulting and quality assurance experience are in great demand. Our assignments are quickly evolving, requiring more in-depth consultancy skills, while the number of business-critical solutions is growing and system integration projects are becoming more demanding. Ensuring the success of system deployment is now more important than ever. This means our experts need specialised know-how in these areas, good consulting skills and the ability to cope in demanding customer situations. The deployment of a customer's business-critical systems requires extensive expertise ranging from drafting agreements to organising system maintenance operations.

Qentinel encourages and supports all its employees to develop and improve both their technical and consulting skills

TRAINING PROMOTES UNIFORM PROCEDURES

Qentinel aims to provide an opportunity for continuous learning and development to its personnel. All employees have been trained to an extensive in-house method of test projects management. This gives us a uniform way of working that can be tailored to meet the needs of different customer projects.

During the past financial year, over 50 per cent of our personnel were trained in exploratory testing by a leading international expert.

Our employees also take part in external training and industry events.



A good example of this is the annual international software testing and quality assurance conference, EuroStar.

Every year we organise several internal training days, where our staff shares the experiences and new skills they have gained.

JOB SATISFACTION IS HIGH DESPITE THE DEMANDING TIMES

During the past financial year, Qentinel has had to adjust its operations and reduce personnel because of how the downturn in the global economical situation affected some of our customers.

Despite these demanding times, staff motivation has remained high. The employees understand the reasons behind the cuts – to ensure continuation of the business and to maintain competitiveness.

We believe that in difficult times open and efficient communication that pays attention to people's feelings is fundamental, and that open communication is a critical responsibility of all managers. The feedback received from our employees tells us that this communication strategy was a success.

Despite the challenges, job satisfaction has remained as high as in previous years. The annual development discussions received positive feedback from the personnel. In personnel satisfaction survey, the feeling of unity, collegial support and professionalism were ranked high.

SOFTWARE QUALITY IS QUALITY OF LIFE



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