Annual Profile 2017

YEAR ONE

HSE·AG

DECIPHERING THE SECRETS OF LIFE

Content

hseag.com

Dear Shareholders
Dear Customers and Partners
Dear Employees
Dear Stakeholders

Hombrechtikon System Engineering (HSE) was founded on 22 November 2016 as a joint-stock company. Right on schedule on 3 January 2017, HSE commenced its business activities as a development service provider for life science and diagnostic systems. Our first financial year went extremely well. We were able to achieve all our goals and even to exceed them in some cases. The turnover generated was just over CHF 10 million. This resulted in a net profit of almost CHF 1.4 million.

Development of independent infrastructure

2017 saw the transformation of a former corporate division into a company operating independently on the market. As part of a management buy-out, HSE took on 48 employees from the development and administrative functions at QIAGEN Instruments AG. In order to consolidate space and bring the team together, HSE moved to new premises at Garstligweg 6 in Hombrechtikon. A separate IT infrastructure with office software, ERP, CRM and server systems were put in place, as well as an informative website. The development environment was also redesigned.

We were able to set up an independent infrastructure and new processes as early as the first quarter. The audit for certification of quality management for medical devices in line with ISO 13485:2016 was successfully completed in the second half of the year. Despite this significant additional workload, all customer projects were completed on schedule. We would like to take this opportunity to express our sincere thanks to all our employees. Through their commitment, their work, their patience and their understanding, they have played a decisive role in helping us to overcome the many unavoidable shortcomings in the initial phase of the business without any serious consequences.

Employee development

Employees are our key success factor at HSE. In recognition of this, there was a strong focus on supporting the existing team in its transition from working in a corporate department to working in a dynamic SME and limiting any risks for employees. This included a guaranteed job for the first year and continuation of the total remuneration package and social benefits provided by their former employer. Social benefits and pensions have actually been improved under the new contracts. In addition, an employee share scheme has been set up, enabling everyone to participate in the future economic fruits of their work. The fact that around 80% of employees have made use of this opportunity shows that, like the Board of Directors and the Executive Board, they believe that HSE will be successful.

Order volumes

HSE has a solid foundation on which to grow its business. A multi-year service agreement that was concluded with the QIAGEN Group as part of the management buy-out guarantees utilisation of core capacity for three years. In the first year, the QIAGEN order volume amounted to CHF 7 million. The first new customer order was won at the beginning of the financial year. Thanks to the HSE team's broad network, we have been able to establish several new business relationships with relevant customers. In fact, the order volume was increased to CHF 10 million.

In 2017, HSE invested in the development of digital marketing infrastructure so that it would be able to acquire new customers in the future, outside of the personal networks of employees and management. This includes an attractive website and a strong social media presence in particular.

Research and development

HSE positions itself exclusively as a provider of development services. This implies that HSE does not develop or manufacture its own products. To be able to provide services more efficiently for the benefit of its customers, over the next few years HSE will, however, develop a portfolio of modules, components and semi-finished products that can be integrated into modular systems based on core platforms. The aim of this modular strategy is not only to reduce development timeframes and costs. Project risk can also be significantly reduced by using functional components that are already established within products. The portfolio can thus become a key advantage over competitors.

One aspect of the design of the modules, components and assemblies is the protection of HSE's developments for its customers from access by third parties. For this reason, HSE aims to patent its special processes and functionalities. In 2017, HSE was granted a patent for the automatic sealing of reagent tubes for polymerase chain reaction (PCR). Patent applications were also filed for two ideas for customer products.

Looking ahead

The economic environment in which HSE operates is developing very positively in several respects. Firstly, public investment in the biomedical sciences and investment of pharmaceutical companies and hospitals in molecular biological methods for diagnostics and therapies is sharply increasing worldwide. Secondly, a relatively strong global economy is accompanied by a significant need for experts and engineers. The tight labour market resulting from this favours outsourcing of development projects.

Our location also has an extremely positive influence on our success. Switzerland has a high density of life science, diagnostics and medical technology companies. HSE benefits from this immediate proximity to important clients. With its experienced team members from around the world, HSE is also able to successfully acquire and implement projects in Europe, Asia and the US, well beyond the German-speaking area. Its successful sales in the first few months demonstrate HSE's ability to rapidly expand its customer portfolio worldwide. The Executive Board and the management team are therefore very confident that growth will continue in the coming years.

The strong start made by HSE would not have been possible without the trust of our customers and shareholders. We are extremely grateful for this. We would like to thank our employees and suppliers for their exceptional commitment and the excellent work they do for HSE and for our customers.

Hombrechtikon, September 2018

Hans Noser
Chairman of the Board

Dr Michael Collasius
Chief Executive Officer

OUR VALUES – OUR DNA

HSE is built on six core values that are shared by all our colleagues. They are our DNA, playing a key role in defining our performance as individuals and as an organisation.
Enjoyment: We work on projects that interest us, with people with whom we enjoy working.
Usefulness: The projects we engage in should benefit our customers, our colleagues and society. We continually improve ourselves as individuals and as a company.
Ambition: We strive for excellence and continually push our boundaries to build something bigger than ourselves. This is the source of our satisfaction.
Grounded in reality: We make well-considered, disciplined and fact-based decisions. In doing so, we confront the hard realities, draw appropriate conclusions and focus on the best possible implementation. Pressure from tight deadlines must not affect the quality of our work.
Seeking out the best solution: We are curious and open-minded, guided by truth and transparency. We encourage and seek feedback in order to learn rapidly.
Fairness and respect: We treat everyone fairly and with respect. We communicate openly and honestly. This forms the basis for respectful and mutually challenging discussion.

«HSE combines an experienced and proven team with the dynamics of a start-up. As a quality manager, I have the opportunity to help shape new structures. My goal is for our customers to benefit even more from our existing expertise.»

Andrea Wildhaber,
Quality Manager HSE AG

«Working with our diverse and motivated team challenges and enriches me in equal measure. I particularly appreciate how openly our management responds to ideas and suggestions for improvement, assesses their value and then implements them.»

Andrea Weber,
HR Manager HSE AG

VISION

We help our customers achieve their next scientific breakthrough.

MISSION

By combining our application and engineering expertise, we aim to develop superior tools that enable our customers to understand the key principles of life.

In doing so, we implement systems and processes that meet the precise needs of our customers.

PROMISES

1 We focus all of our energy not only on meeting our customers' expectations, but also on exceeding them whenever possible. We aim to ensure they receive the greatest possible added value and the best possible quality.

2 The consistent application of our clearly defined processes and the uncompromising implementation of all requirements of our customers and regulators ensure the safety and performance of our products and services.

3 All of our employees at all levels are required to comply with all applicable specifications of our customers and the authorities and to ensure effective quality management at all times. We want to make a clear difference for our customers through our high-quality services.

4 To continue to boost our performance, we embrace continual improvement methodologies in compliance with regulatory requirements. We set objectives for the systematic management of these processes and review them regularly.

Enabling new insights from active proteins

HSE has developed a platform to prepare cell samples for Munich-based start-up PreOmics. This is the key to automated analysis of all proteins active in a tissue, known as the proteome. HSE was able to minimise the development time and associated risks by using an established nucleic acid platform as the basis for the solution.

Nucleic acid analysis has undergone enormous development in recent years. Instead of being sequenced over a period of many years at a cost of several billion dollars, a human genome can now be sequenced within a few days for only about US $1,000. This opens up countless new possibilities for biomedical research. HSE made a significant contribution to this breakthrough under the umbrella of the QIAGEN Group with numerous developments ranging from the first microtiter plate-based purification system to the current next generation sequencing platform.

Proteomics opens new doors

A new door in molecular biological research is now opening, enabling science to look even deeper into the mysteries of life: the analysis of all proteins that are active in a cell at a certain point in time, known as the proteome, facilitates a much more detailed understanding of the differences between the various cells within an organism. The protein composition differs depending on the cell type, stage of development and environmental influences. This allows questions such as what distinguishes frogs from tadpoles or tumours from healthy precursor cells to be addressed in the same way as the influence of environmental factors on cell functions. HSE is now also active in this fast-growing new research field. The company's goal is to make as big a mark in proteomics as it did in genomics.

Fundamental researchers and start-ups

Scientists such as Bernd Wollscheid from the Institute of Molecular Systems Biology at ETH Zurich are pioneers in this rapidly developing new field. Together with his team, he is investigating the

«WITH PROTEOMICS, HSE IS ENTERING A NEW FIELD OF APPLICATION. WE BENEFIT GREATLY IN THIS FROM THE PLATFORMS WE HAVE DEVELOPED FOR NUCLEIC ACID ANALYSIS. THESE FORM THE BASIS ON WHICH WE CAN QUICKLY DEVELOP AUTOMATION SOLUTIONS IN CLOSE COLLABORATION WITH OUR CUSTOMERS AND USERS.»

Konstantin Lutze, CTO HSE AG

foundations on which future biological and medical applications can be built. On the other side of the fence, there are start-ups such as PreOmics GmbH in Munich, which develops technological innovations that simplify the work of scientists like Wollscheid and help them achieve results even faster and more reliably.

Rapid and highly sensitive mass spectroscopy

These days, mass spectroscopic methods are typically used to capture all the proteins within a cell and differentiate them quantitatively. They allow both highly sensitive and selective analysis and can also be performed very quickly and in parallel. This makes mass spectroscopy an attractive candidate for automation. And this is precisely what is needed if proteome analysis is to exploit its huge potential in clinical diagnostics for cancer and antibody therapies.

Complex and unreliable sample preparation

The PreOmics process addresses the biggest hurdle preventing widespread application in clinics and research laboratories. The preparation of the samples is still very dependent on the experience and skills of the laboratory personnel. This not only reduces the reproducibility of the analysis, but also greatly restricts the application of this method. It can only be used if appropriately trained and experienced personnel are available. Additionally, until now the manual preparation of samples has taken up a lot of time.

A partner for marketability

PreOmics has developed a sample preparation process that reduces the time required by a factor of 20, from 44 to just under 2.5 hours. As the number of steps required is reduced to less than half, the reproducibility of the purification of proteins and peptides from the cell lysates is also dramatically increased.

While the young company was well able to meet the scientific challenges of its method itself, it looked for help with transforming the technology into an economically viable product tailored to the specific needs of clinical and scientific laboratories. The researchers needed a partner with strengths in precisely these areas.

«QUANTITATIVE PROTEOTYPE ANALYSIS IS CURRENTLY ENJOYING EVER-INCREASING ATTENTION. DUE TO ITS WIDE-RANGING APPLICABILITY TO ANSER NEW, IMPORTANT QUESTIONS IN HUMAN DIAGNOSTICS, THE NEED FOR AUTOMATION IS ALSO INCREASING RAPIDLY. THE SERVICES, DEVELOPMENTS AND SOLUTIONS PROVIDED BY HSE MAKE A SIGNIFICANT CONTRIBUTION TO THIS.»

Professor Bernd Wollscheid, Head of Proteomics Platform, Institute of Molecular Systems Biology, ETH Zurich

HSE draws on its wide-ranging experience

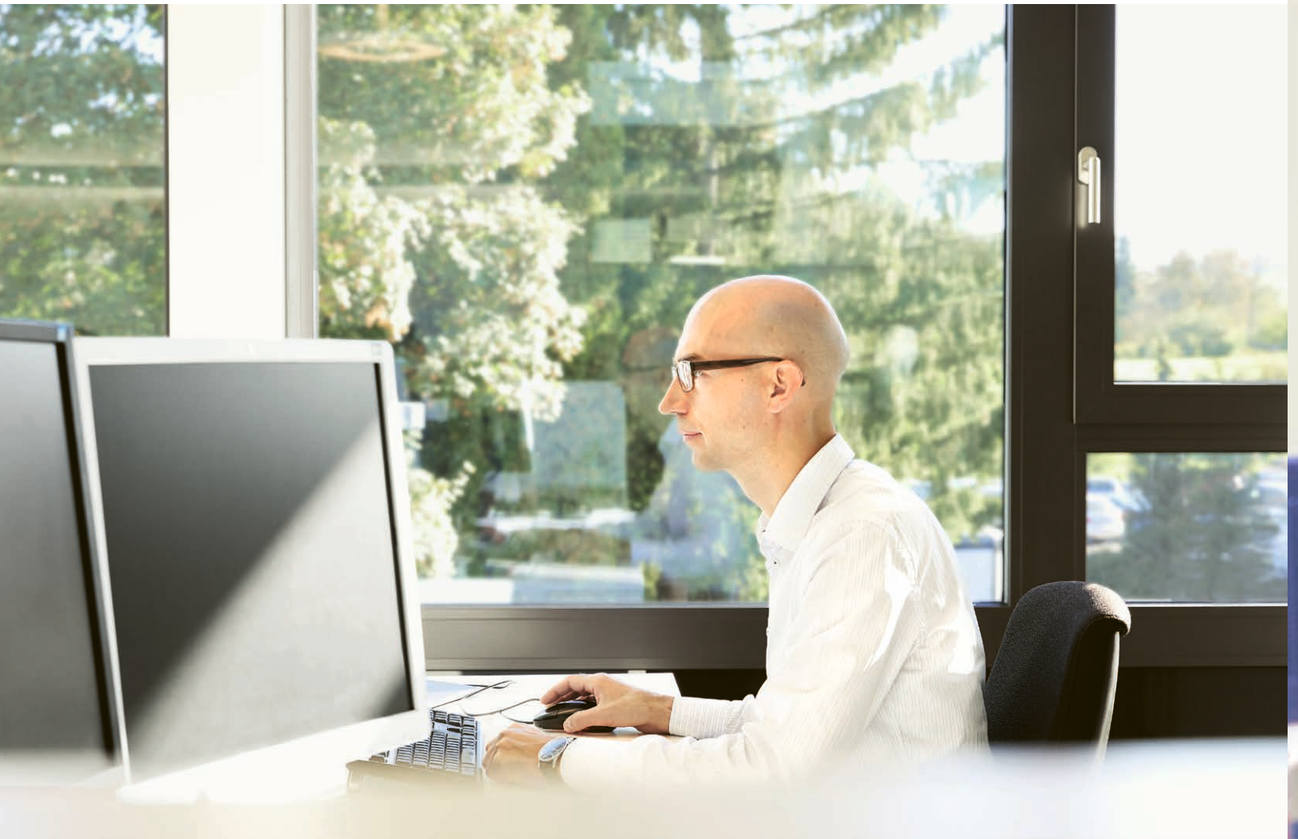
With the help of HSE, the entire PreOmics process was very quickly automated. The rapid implementation was made possible thanks to HSE's many years of experience in the field of molecular biological devices. For example, the new proteomics device was developed based on an established nucleic acid platform. This significantly reduced the development time and thus also the costs involved. In addition, the project risk was lower because various tried and tested components were used, rather than developing entirely new components.

«THE AUTOMATION BY HSE SIMPLIFIES THE APPLICATION OF OUR IST TECHNOLOGY WHILE ALSO INCREASING REPRODUCIBILITY. WE HAVE FOUND HSE EASY TO WORK WITH AND WERE IMPRESSED WITH STAFF MEMBERS' RAPID AND PROFESSIONAL RESPONSE.»

Dr. Nils Kulak, Founder PreOmics GmbH

Ready for widespread application in research and clinical practice

The prototype of the device is currently undergoing thorough testing in reference laboratories such as Professor Wollscheid's lab, which closes the circle rather neatly. In other words, the diagnostic possibilities of mass spectroscopy of entire proteomes will probably soon be able to be used on a much broader scale without the need for specialist laboratory expertise. This will benefit a very wide range of groups, from fundamental researchers such as Bernd Wollscheid to people living with cancer. Proteomics promises much more precise and, above all, more individual tumour examination and thus more targeted treatments.



«HSE helped us to optimise the production of our new UV/VIS system quickly and professionally. As a result, we are now in a position to meet the sharp rise in market demand.»

Thomas Kehl, General Manager Analytical Mettler Toledo

«In HSE, we have found an expert partner for the development of a complex microfluidic interface and its integration into our modular cell analysis platform.»

Marco di Berardino, Founder Amphasys

One year old but over 500 years of experience

HSE is only one year old but it already has more than 500 years of cumulative experience as an organisation in in-vitro analysis and diagnostics. Since the 1990s, its competencies have grown from the automation team at the German QIAGEN Group and from Swiss liquid handling pioneer Rosys.

The origins of today's HSE team go back to the start of the sequencing of the first human genome in the early 1990s. Although the genetic code was deciphered back in the 1960s and the sequence of individual genes could already be read at that time, for a long time the analysis of entire genomes seemed to be virtually impossible. Literally millions of experiments and analyses over a period of 10 years were required before the first human genome was able to be decoded in 2001 as part of the worldwide Human Genome Organisation (HUGO) project. To be able to apply genome sequencing more broadly, however, it was necessary to massively decrease the workload involved. It became essential to automate the main process steps in order to do this.

Nucleic acid purification as the starting point

Until the mid-1990s, sample preparation, and the extraction of plasmid DNA in particular, was considered to be one of the greatest bottlenecks in the process. In 1996, the QIAGEN Group automation team achieved a pioneering breakthrough. It was able to enormously accelerate nucleic acid purification with the world's first microtiter plate-based system. Inspired by this success, a complete portfolio of systems for different sample throughputs and volumes was developed. Among them is the QIAcube, which is still unique on the market and enables the DNA extraction process to be fully automated without any change to the usual manual procedure.

Liquid handling in Hombrechtikon

Another important milestone in HSE's history is the takeover of liquid-handling specialist Rosys by the QIAGEN Group. This enabled us to significantly expand our expertise in automated liquid chemistry. The importance of this acquisition is also reflected in the fact that the two teams were consolidated at the former Rosys site in Hombrechtikon.

Step-by-step automation of the entire process

Although the extraction and purification of nucleic acids from biological samples is of outstanding importance for the success and reproducibility of the analysis, it is only the first step in the entire analysis process. With the aim of achieving a continuous process from the sample through to evaluation of the results, the other components in the process chain were also automated over the years that followed. This enabled more and more researchers who were not themselves familiar with molecular biology lab practices to use nucleic acid analysis for their work.

Integrated systems provide for widespread application

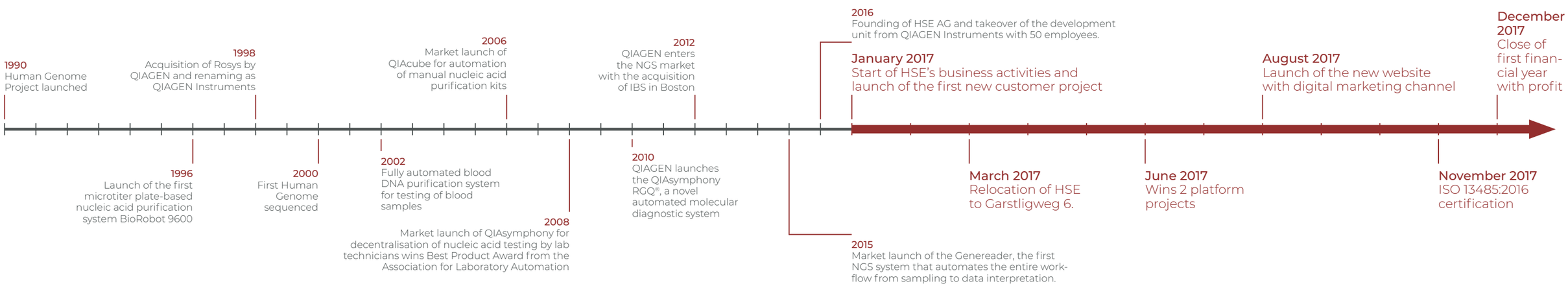
During the 2000s, the potential of DNA sequencing in medical diagnostics became increasingly clear. However, as the complex procedures could only be carried out by highly specialised teams in a small number of medical labs, applications in infection diagnostics and oncology were severely restricted. It was only with the development of integrated systems such as the QIAsymphony that it became possible to use the system in smaller and less specialised labs. Developed by the automation team, the QIAsymphony has more than 2,000 units and is one of the most successful DNA processing systems in the world.

Next-generation brings analysis to medical contexts

The team achieved another milestone in 2015 with the development of a next-generation sequencing system. Here, too, all of the steps in an extremely complex analysis process were automated and integrated with bioinformatics. The result of the analysis of the patient samples can thus be brought directly into the medical context, enabling the clinician to make better therapy decisions.

Unique experience for ground-breaking innovations

The decades of experience available within the HSE team, from the development of the initial, pioneering individual components right through to the fully integrated complete systems of today, is a totally unique resource. It enables a deep understanding of the specific technologies involved as well as the factors that are crucial for market success. This benefits established customers who need to meet the challenges of complex systems or new technologies, as well as start-ups entering new areas. The next ground-breaking innovations are already in development!



Seeking detailed understanding – for the best possible functionality

The radical change that automation is currently bringing to the life sciences is comparable to the internet revolution. HSE CEO Michael Collasius is convinced that this will lead to splitting of value chains – as was seen in the IT industry 20 years ago. Reagent and device manufacturers rely on partnerships to integrate the necessary expertise into their product development. HSE has an ideal combination of engineering skills, practical lab experience and corporate culture that few companies around the world can offer.

Mr Collasius, why did you take the step of becoming an entrepreneur through a management buy-out?

Firstly, because I am convinced that HSE will be successful. There may be several thousand engineering companies around the world that are active in the development of biomedical devices. However, the wide-ranging system expertise and deep understanding of lab reality that HSE offers can only be provided by a handful at most.

And secondly?

Secondly, to some extent, this step is a return to my roots. The origins of HSE go back to Rosys AG, which was founded in 1990. Qiagen took over this pioneer in liquid handling in 1998. My work at that time involved building automated solutions for Qiagen's nucleic acid analysis based on Rosys technology. Because Rosys was the first ever company that Qiagen took over, we were able to enjoy a great deal of independence in Hombrechtikon. It was always important to me to maintain this culture and to manage Qiagen Instruments as an independent company within the group, with flat hierarchies. When Qiagen decided that device development no longer belonged to their core competencies, it was clear to us as a management team that we would seize this opportunity.

You're a biologist. What fascinates you about device technology?

Since I was a young child, I've always wanted to know how things work. My first toy was a screwdriver. While working on my doctoral thesis I developed my first polymerase chain reaction (PCR) cycler. I was pipetting in the laboratory when I realised that it would be possible to automate the many repetitive steps. This not only saved me a lot of time as a researcher. The acceleration also made it possible to massively expand the field of application of the reactions. If you can carry out hundreds or thousands of experiments in one day instead of just a few, you can answer completely different questions. Now, we are basically doing exactly the same thing with HSE. We automate repetitive experiments and thus help researchers to delve even deeper into the secrets of life and finally decode them step by step.

What is it that really makes a difference when developing an analytical instrument?

For me, it is wanting to fully understand the particular analytical reaction in its laboratory environment. This is the key to ensuring that a device really works afterwards. Our entire corporate culture is geared towards always finding the best possible answers. As well as excellent specialists, this also requires a high degree of transparency, flat hierarchies and trust. And don't forget, work should also be fun! That is when commitment is at its greatest.

What do transparency and flat hierarchies mean in concrete terms at HSE?

Our culture is definitely a differentiating factor for us. We have around 50 employees and they come from 18 different countries. This diversity forms a cosmopolitan foundation on which a form of 'idea meritocracy' is built. Decisions are not made based on hierarchy – they are made transparently based on reasoning. Everyone is asked to apply themselves and think critically. It is not rank and name, but experience and expertise that are given the greatest weight.

What are the biggest challenges that HSE's customers face?

Reagent manufacturers can no longer simply sell analysis kits. Your lab customers demand automated systems that cover the entire testing process, from sample preparation to data evaluation. To do this, however, manufacturers have to build up a great deal of additional expertise that is not part of their core competencies. This is costly and involves a great deal of risk. Added to this are the constantly increasing regulatory requirements, which also demand more and more specialist knowledge around devices. Qiagen is by no means the only company to have decided that device development is no longer one of its core competencies. In biotech and medical technology, the value chains are currently being broken down. This is exactly what happened in the automotive and IT industries a few years ago. In the future, success will depend on whether a manufacturer can enter into the right partnerships to gain access to the necessary expertise.

Your customers also include specialist device manufacturers, however. What issues do they face?

Mastering increasingly complex development projects is becoming a huge challenge for large device manufacturers as time goes on. There are many different components that have to be integrated. It is at this last step that many projects fail. Although the individual components function perfectly, incompatibilities arise in their interaction that cannot be resolved. For example, there may not be enough space for a cable, or a hose to pump a very expensive reagent may need to be over a metre long. These contradictions can make the whole system non-viable. This means that investments in development are lost, as well as a lot of time. In extreme cases, a company can lose its technological lead.

How can functional incompatibilities like these be prevented?

Firstly, this requires a great deal of practical experience in the dependencies that can arise in biomedical equipment between biological, chemical, mechanical, hydraulic and electronic components, as well as in control and data processing. Secondly, it needs structured processes based on practical experience. Dependencies must be taken into account from the outset and their interactions must be regularly and systematically reviewed and evaluated throughout the entire development process.

What benefits can HSE offer manufacturers in this area?

We have proven many times that we can manage even highly complex development projects and bring them to a successful conclusion. We are extremely agile and therefore also very fast – and as well as our expertise in engineering, we also have a very strong understanding of the practical realities of work in the lab.

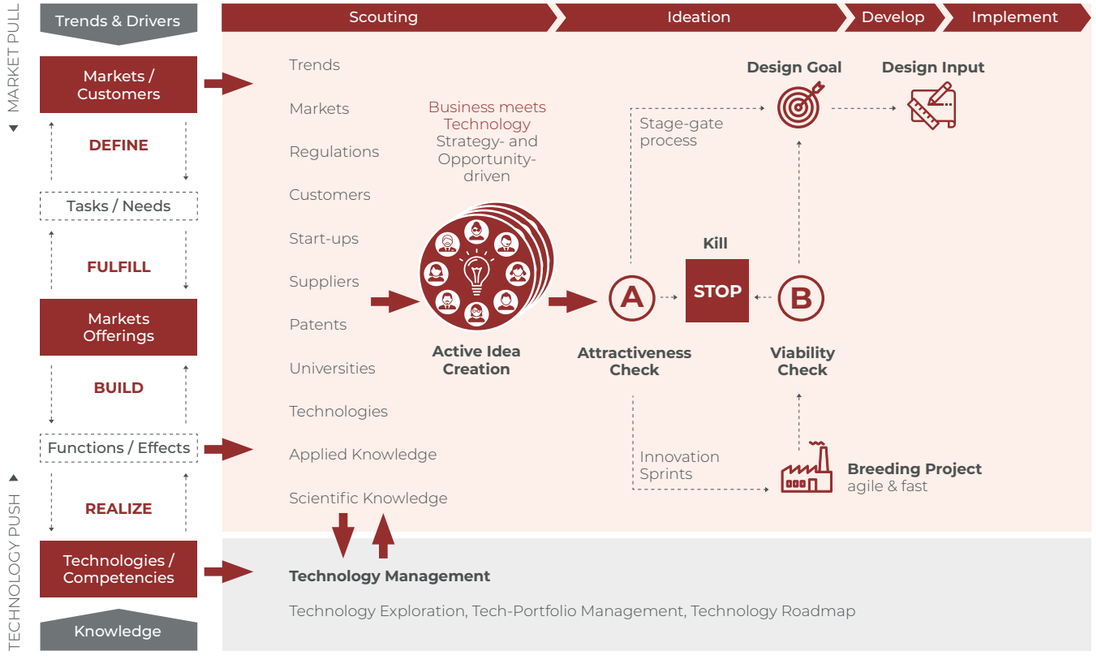
What does that mean in concrete terms?

On the one hand, we have close contact with the users of the de-

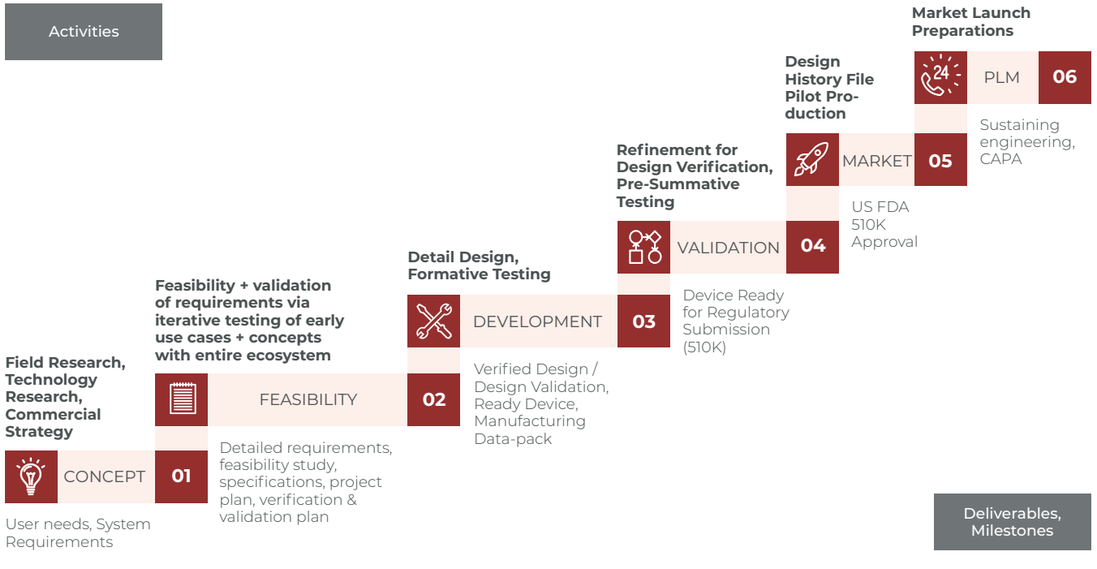
INNOVATIVE START-UP TECHNOLOGY MADE MARKETABLE

A start-up company has developed a revolutionary technology for the rapid analysis of cells. The prototype for the device worked exactly as planned. However, the transformation into a marketable product presented the young company with a challenge for which it lacked internal expertise. Thanks to HSE's years of experience in the systematic conversion of prototypes into systems that meet the practical needs of analytical laboratories – and that can be industrially produced as cost-effectively as possible while also meeting all regulatory requirements – the product was launched on the market in just a few months. This meant that the start-up was able to take advantage of its technological lead and commercialise it much earlier.

INNOVATION PROCESS AT HSE



WE DRIVE ALL PHASES OF SYSTEM DEVELOPMENT



vices and touch base with them regularly to discuss their needs. On the other, we also have our own lab where we use and test our developments under realistic test conditions and with actual samples. Taken in combination with our experience and processes, this means we can virtually eliminate the risk of a fundamental failure. The bottom line is that our customers save a lot of time and money. Especially since the work required for knowledge transfer remains minimal, because we are quick to understand their technologies as well as the specific requirements of their customers in the labs.

What trends will drive the market over the coming years?

We have witnessed breath-taking developments in recent years. The HUGO project, which sequenced a complete human genome for the first time in 2001, took more than 10 years and cost approximately $3 billion. Now, genome sequencing takes less than a week and the price has dropped to around $1,000. And we are also seeing similar progress in the field of proteome analysis. The paradigm shift triggered by high-performance analytical instruments in the life sciences can be compared to the internet revolution of the late 1990s.

EIGHT LOCATIONS IN FOUR COUNTRIES FORMED INTO A SINGLE TEAM

Systems for next-generation sequencing, which enable complete human genomes to be deciphered within a few days and for just a few hundred dollars, integrate a large number of individual technologies into a single device. This means that a wide range of specialist departments need to collaborate in the development process. HSE led the development of a highly complex next-generation sequencing system for one of its customers, across a total of eight sites in four countries. As well as a comprehensive understanding of the interdependencies between the individual components, a key success factor for the project was the culture within the HSE team, with its high degree of diversity and flat hierarchies. This ensured smooth collaboration between all parties involved and thus speedy implementation of the project.

ANALYTICS PLATFORM BOOSTED TO THE NEXT LEVEL

Customers of reagent manufacturers are increasingly demanding end-to-end analysis platforms that integrate all work steps, from sample preparation to evaluation, in a single system. The ever-growing complexity of systems and the increasing specialist expertise required outside of their own core competencies are pushing many providers to their limits. In contrast, HSE covers all specialist domains in the field of analytics. A medium-sized manufacturer benefited from this coverage for the further development of an existing platform. The HSE specialists and the manufacturer's engineers worked together as a team to integrate state-of-the-art technologies in liquid handling and evaluation software. This enabled the analysis performance to be significantly increased and the data analysis workflows considerably improved. Today, the platform is once again positioning itself as the clear market leader in its field.

What impact is massive automation having on research and medicine?

It means that researchers can investigate phenomena in much greater detail. Instead of having a single model organism for one species, whole populations or particular individuals can be analysed. Automation also means that they have to spend less time on lab techniques and, instead, can focus on their core competency – interpreting the results.

How will the analytical revolution be applied in the coming years?

Personalisation is the keyword here. New business models are constantly emerging. Knowledge of the individual genome of each human being, or even of an individual tumour, opens up possibilities for completely new and profoundly more effective therapies. The same applies to microbiome research. It is becoming more and more obvious that the bacteria that live in and on us have an enormous influence on our well-being. Detailed knowledge of the individual populations is the key to exerting a targeted influence here. And then there is prenatal diagnostics. Modern sequencing technologies enable non-invasive and thus risk-free testing. The associated dynamics are huge. For me, as someone who always wants to know exactly how something works, it is absolutely fascinating and highly motivating to be part of this revolution through my daily work.

Facts & Figures for the 2017 financial year

The figures for the first financial year are documentation of a successful launch. The objectives that were set have been achieved or surpassed with virtually no compromises. Among the most important activities in 2017 were the rapid development of functioning independent structures and the work to retain existing employees.

Key figures

In its first financial year, HSE generated sales of **CHF 10,059,576** and a net profit of CHF 1,377,776. Of this net profit, HSE paid CHF 1,200,000 into the pension fund as an employer contribution reserve, resulting in a clear profit of **CHF 177,776**.

This business result gave rise to the following key figures:

0.47

Debt factor

13.70 %

Return on revenues

19.26 %

Self-financing ratio

1,450,000

Investments

Appropriation of profits

The Board of Directors proposes to the General Meeting that the profit be appropriated as follows:

Distribution of a dividend of	CHF	0
Allocation to general reserves	CHF	9,000
Allocation to free reserves	CHF	0
Carried forward to new account	CHF	168,776
Total	**CHF**	**177,776**

Audit of the financial statements

The financial statements of Hombrechtikon Systems Engineering AG for the financial year 2017, which covers the period from 22 November 2016 to 31 December 2017, were audited as at 23 April 2018 by Treucontrol AG as external auditors in accordance with the Swiss Standard on Limited Audits.

Risk assessment

In the first year of its existence, HSE established a quality management system as per ISO 13485:2016 for the development of in-vitro diagnostics (IVD) systems. This was certified in November 2017. Risk management is an integral component of this system. In order to identify both risks and opportunities at an early stage, HSE regularly reviews internal and external factors across the entire corporate environment. The financial data determined for the financial statements in accordance with the Swiss Code of Obligations and the risk-related financial figures in accordance with the regulatory requirements form the basis for this review.

Employee skills

HSE has an exceptional breadth and depth of expertise among its staff. Its **49 employees** come from **15 different countries**. Their competencies cover the entire spectrum of technology and project implementation requirements for the development of molecular biology-based life science and diagnostic solutions. In combination with many years of experience, they represent a crucial competitive advantage for HSE.

Employee development

HSE's staffing increased slightly to 49 employees in 2017. Of these new staff members, three are apprentices (one design engineer and two commercial apprentices), resulting in an **apprentice ratio of around 6%**. This is above the Swiss average of 4.8% of all employees (2015).

A key factor in the future success of the company in 2017 was the provision of support for employees during the transition. At the beginning of the year, they all transitioned from an established major corporation with a functioning business model and clear processes to a start-up whose strategy, structures and processes had yet to be established. This departure into the unknown was a huge challenge for everyone involved. In order to balance the uncertainties, jobs were guaranteed for the first year and the employees' total remuneration and social benefits were continued. The new contracts actually offer improved social benefits and pensions.

As expected, some employees did not want to follow the new path. In view of the massive changes and uncertainties, however, **the turnover rate was very moderate, at around 20%**. In addition, all vacant positions were quickly filled with outstandingly qualified new employees. We saw that HSE, with its clear focus on reagent-based life science and diagnostic systems for molecular biology, is also very attractive internationally for highly qualified specialists.

Employee participation programme

An important cornerstone for HSE's long-term business success is the employee participation programme launched at the end of the first fiscal year. Selected employees can acquire participation certificates through this programme. Their value is strongly linked to the success of the company. The purpose, detailed participation conditions and calculation of value of the employee participation are documented in the programme regulations.

After the first financial year, **the value of the participation certificates is 2.77776 times the original** nominal value of CHF 0.01. We are pleased to report that, by the end of the first year, around 80% of employees had taken advantage of the opportunity to participate in the programme. This high proportion shows that employees also have great confidence in HSE's business success.

49
Employees

3
Trainees

80 %
of employees
have a stake in HSE

«The unique solutions and outstanding customer service make HSE a first-class and reliable partner. The agility of the team and their skills in developing end-to-end workflow solutions have contributed significantly to our business growth. We look forward to further successes together.»

Peer Schatz, CEO QIAGEN N.V.

«At HSE I can work on exciting projects as a trainee, take on responsibility and even manage projects. This really motivates me to perform well.»

Carlos Schönherrl,
Trainee Design Engineer HSE AG

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