COMPLETE RECUPERATION But not without exercise

COMPLETELY CUSTOMER-ORIENTED Multitalent BSI CRM release 12.8

COMPLETELY ON THE RIGHT TRACK SBB handles the world’s densest railway network
“THOSE WHO DON’T TAKE TIME TO MOVE WILL SOMEDAY HAVE TO TAKE A LOT OF TIME TO DEAL WITH THEIR ILLNESSES.”
Prof. Dr. Ingo Froböse

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BSI value no. 9
“WE LIKE TO WORK – AND AS LITTLE AS POSSIBLE.”

We view someone who “reaches” exactly the same planned working time every month as a bit suspect. How can there be precisely the same amount of work as there are planned working hours? We work overtime when necessary, and we do it with pleasure and enthusiasm. But we also enjoy working less now and then.

D ear customers. I send you greetings from Japan, where I have been for several weeks now, as I hike from the northern tip of Japan’s main island, Honshu, to the southern coast. That’s around 1,000 kilometers. I am really enjoying myself outdoors in nature.

Is a CEO allowed to do that? Isn’t that rather egoistical? Could it be bad for BSI? I hope not: I usually work very hard, and have done so for 16 years, and hope to continue doing so indefinitely! And yet, this long period of time, 42 years, must also be consciously designed with a reasonable amount of work each year and timeouts when needed; like an endurance athlete who strives for high performance, but throughout the entire course, to the finish line. Everyone should design their own time, how they want it to be – and to the benefit of BSI. And sure, when the project demands it, we work till we drop, because it’s needed and important. But when the work is done, we all like to have a few days off.

I also find this invigorating for any organization. It makes it more organic and robust if the so-called “indispensable” people consciously step back, delegate their work to other talents, in order to give them the chance to make their own mistakes. You don’t need to be away for three months to accomplish this, but perhaps the distance makes it easier to let go and delegate. And those who remain behind learn to enjoy doing things for themselves and to take on real responsibility.

Long-term and evenly distributed performance is hopefully in your interest, because, after all, we are here for you and it is for you, dear customer, we seek to remain strong.

Christian A. Rusche
CEO BSI
Mr. Froböse, you were a competitive athlete. And today, as Head of the Center for Sport and Health Research at Sport University Cologne, you advise the German Federal Government, among others, in matters concerning prevention. Was there an experience that particularly shaped your prevention consciousness?

Ingo Frobose: I was significantly influenced by my time as an active athlete. I too was confronted with my physical performance limits. And problems that can be attributed to over exertion still plague me today. As it was then, my Achilles tendon is still a weak spot in my body, one that I continue to feel when jogging. That really made an impression on me and made it clear that prevention is essential.

Is that what led you to your prevention research after your athletic career?

You could say so. In our society, we primarily react and usually too late. Only when the damage is done does the treatment begin. This is not a satisfactory way to go about it for an individual and is ineffective for society. Sports made me aware that a preventive health-oriented approach – prevention – has a lasting impact on health and the quality of life. One of my leading concerns became the ability to personally influence what happens to me.

What lessons can we draw from competitive sports for our everyday lives?

Demands on employees are constantly growing. Performance-orientation and determination are attributes in competitive sports and are also basic requirements in today’s job market. Whenever greater demands are placed on the body, whether through recreational or endurance sports or strength training, it loses energy reserves and suffers minor damage in the locomotor apparatus. However, they only enable us to perform better if the intensive stimulation is followed by recuperation periods. During these phases, biochemical processes take place in our body, such as a renewing of muscular structures to the starting level and beyond. Thus, holistic training or even a daily program, for both an athlete and an employee, should include a period of active recuperation.

What do you mean by “active recuperation”?

Yes, because effective recuperation always involves some sort of activity. Whether this recuperation means long walks or a round of jogging, a bike ride or even sitting in the sauna is a matter of personal preference and individual condition. The aim is not to push your own performance capability in your free time.

It may sound like nonsense to some, but it works perfectly: When we apply ourselves in sports, our body refuels with energy – as long as the rhythm of workout and recuperation is right.

“IF YOU WANT TO RECUPERATE EFFECTIVELY, THEN IT’S BEST TO BE ACTIVE.”

Prof. Dr. Ingo Frobose

Why do we gain strength in the long-term if we get tired doing sports? That’s quite easy to explain: through overcompensation. That may sound mysterious, but in reality it is nothing more than our body’s ability to increase the performance capacity of muscles and organs through training. Whenever greater demands are placed on the body, whether through recreational or endurance sports or strength training, it loses energy reserves and suffers minor damage in the locomotor apparatus. The glycogen storage of the muscles empty, lactic acid forms in the muscle fibers and tiny tears arise there. That is why we often feel tired and worn out after doing sports. If we attempted to complete an equally intense

Why are winter athletes no longer all-rounders? Why is half the national league suffering from public bone stress injury? Does too much spitting hurt a football player’s performance? Pof. Dr. Ingo Frobose regularly gets to the bottom of his viewers’ questions in his “Sportschlaub” television report. In an interview with “meeting BSI”, Ingo Frobose explains why recuperation phases are so essential for our performance in the business work and why “recuperation” is almost always equivalent with “moving”.

100 m semifinal sprint: Ingo Frobose at the 1981 German Championship in Gelsenkirchen.
exercise routine in this condition, we would per-
form significantly less well than before. However, if 
we give our body enough time to recuperate, it not 
only repairs the damage and replenishes its nutri-
tional storage, it even enlarges its energy deposit 
and causes the muscles to grow. In this way it attempts, 
in the overcompensation phase, to arm itself for a re-
newed strain of this type and boosts its performance 
level above the initial state for a certain period. This 
is referred to as the training effect.

The body needs and which frees the mind.

By the way: Light, needs-based nutrition also sup-
ports the body in the process of staying constantly fit, without additionally straining it. Just as an ath-
lete does, we often deliver performance in our work-
ing lives on the level of competitive sports.

Modern technologies, such as the smart phone, are 
causing the working world and private sphere to increasingly merge. There are many advantages to 
this; better use can be made of commuting times to 
work, for example. But there are also disadvan-
tages. In your opinion, how can we get a better 
handle on the work-life balance?

While the term "work-life balance" has become quite popular, it really is not very appropriate. The term it-
self clearly delineates life from work. The most recent societal developments show that the two components 
are growing increasingly closer and mixed together. Work is an important component of our identity. The 
balance that we need for our health, equilibrium and, 
last but not least, our personal happiness, could be 
better termed "life balance". The aim of this is to pro-
vide for all components of the individually designed life – without neglecting essential needs such as re-
creation and recuperation in the process.

Periods of stress must therefore always be followed 
by recuperation phases, and not just during vaca-
tions! By designing recreational time so that it is acti-
ve and filled with movement, we achieve the balance 
that the body needs and which frees the mind.

Are certain groups of people especially in danger 
of taking too few recovery phases?

In particular, very loyal staff and older employees 
tend to exceed their own performance limits. They 
often place too little value on the essential timeouts 
that enable them to remain sustainably productive. 
Employees who are not used to delegating work also 
tend to overburden themselves. These employees 
especially must learn to achieve balance in their 
everyday work life and also to say "no" once in a while if their schedule is full – not only to protect 
their own resources, but also to achieve the best 
possible results.

A study was recently published by Roland Berger 
and the University of Innsbruck which showed that 
the requirements on future managers strongly 
diverge from the qualifications of those running companies today. Does today’s work world de-
mand too much of people?

No! I believe that society today has simply not yet 
completed the transition from the former production 
society to the service society that exists now. The fas-
ter pace of the service society is already with us now.

The work world needs rethinking in order to equa-
ly meet both the growing demands of the company and 
the needs of people. Ultimately, however, each indi-
vidual is responsible for what he or she permits and 
where their borders must be drawn.

The topic of burnout is frequently encountered in 
the media today. Is it really a phenomenon that is 
especially common now?

Let’s just say that the topic of burnout is a media 
darling these days. Pressure and competition have 
certainly increased in comparison to earlier times. 
Commuting, constant availability and working al-
most around the clock are requirements that em-
ployees can only meet with total flexibility. And I 
don’t see that as negative per se. It’s when the stress 
peaks are not just limited to short periods of time, 
but stretch out over years, that physical damage can 
result for people.

Parallel to the fashionable diagnosis of burnout, 
we should not lose sight of another societal devel-
oment: Physical weakness is no longer a taboo!

This means that it is becoming easier for burnt-
out workaholics who have been over burdened for 
years and who are often of a depressive state of mind that is not to be underestimated, to talk 
about it and to take action to treat it. Society has 
grown increasingly sensitive about it, which enab-
les even the “high-performers” and the “dependab-
le” to show weaknesses.

*http://www.computerwoche.de/karriere/hp-young-pro-
fessional/2884649/?r=861618788636632&lid=187883

**PHYSICAL WEAKNESS IS NO LONGER A TABOO!”**

Prof. Dr. Ingo Froböse

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lete does, we often deliver performance in our work-
ing lives on the level of competitive sports.

Two man bob: Ingo Froböse receives the trophy at 
the CSSR Nations Cup in 1978.

http://www.computerwoche.de/karriere/hp-young-pro-
fessional/2884649/?r=861618788636632&lid=187883

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fessional/2884649/?r=861618788636632&lid=187883

Meet BSI I No. 2/12 I Keynote

BSI Business Systems Integration AG
Are there differences between the generations - keyword: Gen Y? New graduates are particularly motivated to throw themselves into their working life. Because of their ability to perform, which differs because of their age, they are in less danger of suffering from symptoms of overload. Middle age, between 40 and 55, is the most dangerous period. This age group tends to overestimate their own performance ability. This phenomenon is often enhanced by enormous performance pressure. After the age of 55, things get a bit quieter for most and life experience contributes to the ability to listen to one's own body and to accurately interpret the warning signals.

“FORTY- TO FIFTY-YEAR-OLDS MOST FREQUENTLY TEND TO OVERESTIMATE THEIR OWN PERFORMANCE ABILITY.” Prof. Dr. Ingo Froböse

What can companies do to support their employees?
Companies must create room and time for the recuperation that enables employees to take breaks during working time – particularly in view of the demographic shift. Through regular and active breaks, the organism generates new energy that motivates employees and lets them return to work productively.

In addition to recharging the batteries, it is important to pay attention to the performance of individual employees and to accordingly distribute work fairly without overburdening or under-challenging individuals.

Does that mean that being under-challenged also creates stress?
Totally! Not only do excessive demands on the job create pressure and stress, so does the complete opposite: being under-challenged. Rationalization and software innovations relieve employees of tasks, which can often make it difficult to meet one's own requirements in terms of work quality and this can lead to feelings of stress. People need to feel that they are challenged! This can be remedied with advanced and continued education.

Athletic type: Life balance through “active recuperation”
Sport, or better said, movement or so-called active recuperation should play a major role in our everyday lives - not least in terms of our life balance, which we can far more quickly bring into harmonic balance than we can laying on a couch. Those who regularly move around in the fresh air not only have a resistant immune system but also a clear mind. Running is especially suitable for this – the monotonous movement during an evening jog through the park enables us to relax and provides the necessary movements that desk workers, in particular, have too little of in their regular work day. And also other types of sports that help us work up a sweat offer an ideal way to actively recuperate.

Those who don’t take time to move will someday have to take a list of time to deal with their illnesses. While this doesn’t necessarily mean that active people will have a longer life, through movement and sports, they do have greater quality of life.

Sports reduce the risk of getting sick:

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Endurance activity (like jogging)</th>
<th>Combination of endurance and strength training</th>
<th>Strength training with and without machines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>~ 36 %</td>
<td>~ 32 %</td>
<td>~ 29 %</td>
</tr>
<tr>
<td>High blood pressure</td>
<td>~ 30 %</td>
<td>~ 30 %</td>
<td>~ 40 %</td>
</tr>
<tr>
<td>Chronic bronchitis</td>
<td>~ 52 %</td>
<td>~ 44 %</td>
<td>~ 4 %</td>
</tr>
<tr>
<td>Type 2 diabetes</td>
<td>~ 65 %</td>
<td>~ 49 %</td>
<td>~ 18 %</td>
</tr>
<tr>
<td>Heart insufficiency</td>
<td>~ 55 %</td>
<td>~ 36 %</td>
<td>~ 33 %</td>
</tr>
<tr>
<td>Coronary heart disease</td>
<td>~ 67 %</td>
<td>~ 36 %</td>
<td>~ 31 %</td>
</tr>
<tr>
<td>Hospitalization days</td>
<td>~ 29 %</td>
<td>~ 15 %</td>
<td>~ 5 %</td>
</tr>
</tbody>
</table>

What stresses you personally?
Personally, I don’t get stressed at all when I have a concentration of appointments, obligations and tasks. What particularly stresses me are people who treat one another with no consideration or who cling to traditional thinking despite knowing better. I am also uncomfortable with envy and distrust.

How do you slow down your daily routine? What does recuperation mean to you?
I recuperate physically and mentally through almost daily sports activities. I usually do sports with my wife or good friends. To me, this way of enjoying sports is a wonderful supplement to my people-filled life and also helps keep me grounded. Most important is to learn to take it all a bit less seriously, yourself included.

What motivates you to dedicate yourself to your health as well as to that of others?
To recognize that what I do is an important element for my wife, my friends and myself, which contributes to being and remaining healthy and happy. For people further removed from me, it is especially in eyes lit up with happiness that I recognize satisfaction and optimism. That’s because for me there is one essential recognition: To be healthy does not mean lack of illness, but to be able to live happily and filled with satisfaction despite minor health issues.

What would you like to give our readers to take along with them?
The work and sports worlds are not foreign, separated spheres. For both the employer and employee it is worth it to orient themselves in the direction of sports to benefit from what also makes athletes fit, ready to perform and happy. After all, both on the job and in sports: The dose makes the poison. !

“TO BE HEALTHY DOES NOT MEAN LACK OF ILLNESS, BUT TO BE ABLE TO LIVE HAPPILY AND FILLED WITH SATISFACTION DESPITE MINOR HEALTH ISSUES.”

Prof. Dr. Ingo Froböse
Clients”, states the head of AMAG Import.

This is why we not only need to know our clients, we also need to know what their mobility needs are, now and in the future. We can accomplish this only when we systematically record customer relationship knowledge and draw the right conclusions from this for our clients”, states the head of AMAG Import.

A big challenge, since up to that point no universal, coordinated customer handling had existed. Instead, various associates would service customers via different channels, sometimes even at the same time. “That is typical for the industry, but it needs to be changed. Right now, the brands and dealers only have a little bit of information about the true purchasing potential of their customers. This is why the brands are currently unable to actively adapt their product portfolios to customer potential early on. Additionally, AMAG’s IT system landscape is extremely fragmented and poorly integrated, which makes systematic and sustainable customer relations impossible in many cases. We are convinced that with coordinated and more efficient market development, we will be able to generate more revenue accompanied by lower costs”, says the industry expert.

Our corporate culture matches the chemistry. It is quite clear that BSI loves to build software for its clients!”

Jörg Stebler, director of CRM/Projects at AMAG

After an intense evaluation phase, AMAG decided in favor of BSI as its CRM partner. “Compared to other providers, BSI exemplifies genuine CRM, meeting all of our needs and demands. And the tool is simple to use. Furthermore, BSI has shown a willingness to continue to develop individual areas with AMAG”, states Bernhard Soltermann. Continuing, Jörg Stebler adds: “The high quality of the results delivered during the proposal process and the price, both in procurement as well as in maintenance and support, were important criteria for us. The good fit of the corporate culture and the chemistry between the partners were the final factors in the decision to award the project. It is quite clear that BSI loves to build software for its clients’ says Jörg Stebler. “In particular, the people at BSI were able to show that they understood our key challenges in the automotive environment. The close proximity of the BSI team at the Baden location allows for easy communication and collaboration with the developers. What I especially appreciate about collaborating with BSI is the strong customer orientation and the practicable, solution-oriented implementation in BSI CRM.”

Implementation in three stages

Jörg Stebler has pursued a three-stage strategy for the launch: In stage 1, AMAG focused on business with corporate customers. In stage 2, AMAG concentrated on the outside sales force tools for the staff members in Sales and After Sales. The recently started stage 3 is concerned mainly with the customer care process as a whole and how this is related to vehicle sales by AMAG partners to their customers and the closely associated management of customer information. Over the next 18 months, the “business-to-consumer” stage will replace the various decentralized legacy sales and information systems. This will have a large impact on the organization, since some 2,000 people, above all salespeople and management staff, will be affected. A big change for AMAG, reports Jörg Stebler: “The new IT application is the smallest problem we are facing here. The biggest challenge lies in the change in procedures used by all of the people involved. A change project that will prepare for and anchor the change both at the employee as well as the management level has been set in motion in order to prepare the organization for the new demands of systematic customer care.”

Benefits for employees and customers

Even in the short time since the launch of BSI CRM, AMAG has already been able to generate benefits: "With regard to fleets, we are now able to work together efficiently across disciplines, meaning between the importer and the individual partners. This has resulted in considerable improvement in the quality of customer care for fleet customers. For the outside sales staff, the visitation report has been simplified and management reporting has been converted from paper to online. The tool’s improved user friendliness is a significant step forward for our employees”, analyzes Jörg Stebler.

Focusing on people – that is the highest AMAG value. But for the AMAG Import Managing Director, what is the difference between a good and a poor experience for the customer? “The customer has a good experience when his or her expectations are in unanticipated ways, in other words, a positive surprise is achieved. The customer has a poor experience when the customer’s expectations have just barely been met or when they have not been met at all. In sales, but also in after sales in particular, we need to constantly surprise the customer with small, extra services. When I say this, I am thinking first and foremost of professionalism, outstanding friendliness, courtesy, understanding, and then secondarily of the added perks”, concludes Bernhard Soltermann.

One company gets Switzerland moving. As the exclusive Swiss importer of the popular Volkswagen Group brands VW, ŠKODA, Audi, and SEAT as well as VW utility vehicles, AMAG has been making car enthusiasts’ hearts beat faster since 1945. In order to know the customers and their mobility needs, AMAG systematically records customer relationship knowledge with BSI CRM. The goal: A happy experience for the customer, efficient market development, and more revenue accompanied by lower costs.
app2print (iPhone, free):
Sending post cards is finally fun again with app2print! You can send one post card a day for free with a personal photo and your own text on the back. The back of the post card has some advertising on it.

Kindle (iPhone, iPad, Android, Windows Phone, BlackBerry, free):
Ever since I got a Kindle eBook reader, I have been once again reading more books. It doesn’t take up much space in your luggage, and if you don’t happen to have it with you, you can continue to read right where you left off using your smartphone.

Aare Schwumm (iPhone, free):
“Aare Schwumm” displays the temperature of the Aare River in Berne. The user is notified of the temperature at three different times via push notification, which is just what you need in order to decide if you want to jump into the Aare at lunchtime. It’s a shame that there’s nothing like it yet for other cities and other lakes and rivers.

Tip: As with the iPhone 5, little things in iOS 6 have once again been enhanced and improved. The new card application appears very promising and the API remains the same, so there won’t be any additional effort for developers. Facebook is newly integrated into everything, though YouTube is no longer preinstalled due to differences between Google and Apple. Google did respond, bringing out an improved app. Another new app is “Passbook”, which gathers together tickets, boarding passes, etc. Could be practical.

Nicolas’ Apps
Software Engineer, BSI

BSI summer vacation 2012

On 1 September, around 200 BSI staff and their companions spent a weekend together in Munich.

The “BSI Oktoberfest” took place on Saturday, for which everyone received the appropriate traditional clothing (photos above and on the right). On Sunday, we had the chance to measure our strengths at the Olympic Park at the “BSI Olympics” and put our skills to the test in various disciplines (photos below).
ne of our users’ central requirements is the seamless consolidation of all customer data – a central hub that supplies relevant data and facts in real time; from internal sources as well as third-party systems, including relationships and networks; tasks to be completed, all correspondence, contracts, commissions, complaints and more. A functionality that BSI CRM has offered right from the start: all data is organized in the navigation tree, so that the user can explore the depths of any customer relationship using drill down.

Maintain perspective with the 360° view
BSI CRM 12.8 now offers this comprehensive view of all entities: For every company, person, task or communication, or every order or ticket, there is a 360° view that can be designed and configured. The administrator simply makes a few clicks and with no IT skills can compile for each entity the desired figures and the display format: scores, entries and graphics, which will be displayed to the end user as a graphic dashboard, when selected (see screenshot below).

On the company level, for example:
- Payments received by quarter as a bar chart
- Most recent contacts as a table
- Orders by division as a pie chart
- Key data as a profile

Close to customers at all times, from anywhere
Especially salespeople are often on-site with their customers. With its multi-front end strategy, BSI CRM supports the entire bandwidth of frontends, runs on desktops, smartphones, tablets and on the Web. All applications are based on the same business logic and the same source code. “In view of the wide diversity of end devices and form factors, along with the new possibilities presented by HTML5, we have decided to also make BSI CRM available as a browser solution. It adapts to the device in use and appears differently on a smartphone than it does on a tablet, or on a device with a keyboard differently than it does on a touch screen mobile phone”, explains Christian A. Rusche, CEO of BSI Business Systems Integration AG, and adds: “Last but not least, this single sourcing approach is also more cost-efficient for our customers, particularly when it comes to specific adaptations and upgrades.”

Task management for clear sales processes
Being mobile is just not enough. The sales department needs clear and easy processes. That’s why all sales functions were put to the test in this release. They are now combined in the new order management. Sales and service employees are guided in a process-based manner: from the potential to the offer and the order and on through delivery and quality assurance. The processes have a different appearance depending on the sector, because sales for an insurance company differ from those for a telecommunications company. The processes are matched to the customer’s product palette – so that different sales processes can also be run according to the division. As with all the other processes and dialogues, the administrator can make release-capable modifications without programming skills. In this way, no information is lost; no lead or order goes unprocessed; product managers know exactly what is being processed, which products need support and which products are selling well.

Branched processes for the Contact Center
The customer orientation in the Contact Center can also make the difference between success and failure. Complex customer inquiries must be handled quickly and efficiently. Guided processes play a major role here. BSI CRM’s Process Wizard guides users through the application.

It is within the nature of customer relationships that processes do not always take the same linear course. Processes can therefore contain branches, by which the answer provided by a customer can lead in another direction. These are graphically configured and administrated. If multiple processes must be handled for a customer call, then the new process bracket compiles these sub processes in a dossier.

Greater independence through upgraded configuration
Configurability – which means adapting the solutions to the customer’s individual needs without programming – was expanded in this release. BSI CRM 12.7 took a giant step in the direction of user independence with configur able columns, text templates and value lists. Now in BSI CRM 12.8, dialogue fields can be modified, and that goes for naming, contents, position in the respective dialogue and the authorizations. And the changes are all release-capable.

Time machine records all changes graphically
The new change history is also configurable. The administrator can configure which entity will be recorded in what degree – and depicted graphically. This time machine enables the user to visually see old and new situations for an entity and to reconstruct them if necessary.

BSI CRM 12.8: Completely customer-oriented
TEXT: CATHERINE B. CROWDEN

360° views, order management, processes, time machine – the new release of BSI CRM runs on mobile devices, is configurable and customized. Not only to better serve your customers, but also to offer you even more individualization. Meeting BSI presents several highlights.

Outlook for BSI CRM 12.9
The next development step is a technical one. The Summer Release 12.9, which shall be launched in 2013, is all about database independence.
Together with a team of software engineers that includes six Eclipse experts from BSI, the Rail Control System (RCS) has been improved to enhance rail traffic punctuality along with optimized energy efficiency. How this can be successful? Why, thanks to these projects, the SBB (Swiss Federal Railways) is at the cutting edge of technology worldwide; and why there is still much to be done – a look behind the scenes of the most complex scheduling project in the country.

The counterpoint to the air traffic control system that oversees Swiss airspace and coordinates flights is the SBB’s Rail Control System (RCS). This in-house development provides for rail traffic monitoring and scheduling through an in-depth architecture that sees the mapping of operating status and scheduling to topology management. All of the applications are networked extensively on the open Eclipse architecture and supply data and services to more than 20 other systems.

On track with trailblazing solutions

The rail network is even denser than the air route network. This presents a real challenge for the 200 dispatchers, 1,500 rail traffic managers, and 3,500 locomotive engineers who are responsible for punctuality and smooth flowing rail traffic. “When you are managing the densest railroad network in the world, there are two very important aspects in addition to safety: punctuality and capacity. The projected additional capacity is only possible by increasing efficiency, which is precisely where we enter the picture. With the RCS, the SBB’s dispatchers are able to monitor and manage rail operations in real time, allowing us to optimize punctuality while we are up and running. In turn, this increases the capacity of our network”, says Marcus Völcker, describing how everything comes full circle. His team is unbelievably precise when it comes to predicting rail traffic. Dispatchers are able to observe situations at the very second they occur and make the right decisions. “A train travels past a signal every two seconds, that means 300 to 800 status changes in the network per second, which we receive as notifications,” states the Program Director. 10,000 such notifications are processed per second and their impact is communicated to the client. “This near-real-time processing places a great demand on the software architecture. In addition to performance, 24-hour availability is also an important aspect”, remarks Völcker.

The RCS is a real-time architecture that has a direct impact on what is happening out on the railway. That is fascinating.”

Marcus Völcker, RCS Program Director at the SBB

On time thanks to conflict resolvers

In other words, ADL optimizes the individual train, but does not actually resolve the conflict. For conflict resolution, the SBB is working on another project called HOT, which is intended to minimize delays at heavily traveled conflict points. To do this, the software uses a very complex mathematical procedure to calculate the optimum order of the trains for minimal delays of all trains at the stopping point. “OK, punctuality in rail traffic is old hat, but it simply does not function at dense nodes. That is what makes the project so exciting for us”, says Marcus Völcker, laughing. With a real-time architecture, the SBB is the first railway in the world to be hot on the heels of a solution. HOT is scheduled to be implemented as early as 2013 at Switzerland’s densest nodes in Zurich. What is particularly fascinating to him about this project is “that the programming has a direct impact on this fascinating element we call the railway, and that we, as railway customers, can experience on a daily basis if we have done a good job. Being a part of this is a real motivating factor for many of us.”

Speaking of being a part of things

BSI team members have been participating in these exciting projects for more than a year. Marcus Völcker is especially appreciative of the Java and Eclipse expertise that BSI staff members bring to the table. “They are extremely good programmers with Scrum experience; a young crew with a good social and interpersonal vibe. We are on the same page. For me, that is extremely important because this is about building a team. We do a lot together and stick together – that makes us strong”, notes Marcus Völcker.

Milestones and discoveries

For Marcus Völcker and his team, each time they “go live” constitutes a milestone, since they only work with live data, never stored data. “It is much more complicated than you think. There are always special situations. The service life of outdoor rail equipment such as signals, switches, etc. is 30 to 100 years. We have to be able to simultaneously master both state-of-the-art systems as well as the oldest ones around”, states Marcus Völcker. But the success accomplishments spur the team again and again to great achievements: Since its launch in 2009, the RCS has improved on-time performance by three percent. “That is ten thousand minutes of delays that were able to be saved thanks to the right information getting to the right people”, remarks Marcus Völcker.

The RCS is an excellent basis for further projects. Marcus Völcker is already making new plans: “For example, we could control trains so that they function like a Smart Grid, in other words, generate energy in the locations where it is needed. When a freight train brakes, this energy can be used for starting up several commuter trains.” The innovator concludes the extremely exciting conversation: “Friends, there is a lot left to do!”

MEET THE CLIENT

“Friends, there is a lot to do!”

Text: Claudia Gabler
Photos: SBB

Marcus Völcker has been working since 2002 as a consultant for various international railways, mainly working on projects at the SBB, where, among other things, he had been in charge of if for the SBB’s infrastructure division. After the Hamburg native finished his university studies in Hamburg and in the US, he worked as a general manager and if director in the media industry prior to establishing himself as a consultant.

Switzerland has the densest rail network in the world. At the same time, the Swiss rail system is better known as the SBB – has one of the best on-time ratings worldwide. A contradiction in terms? No, says Marcus Völcker, Program Director at the SBB. He has been in charge of the RCS (Rail Control System), one of the SBB’s most complex software projects, since 2005.
SBB’s RCS solutions are based on Eclipse; why has SBB decided for open source?
The use of the Eclipse platform has proved to be a major advantage in our project in several respects: RCS was developed right from the start using Eclipse IDE, which enabled us to tap into a large, freely accessible pool of helpful extensions (Eclipse plug-ins). We have also developed our own extensions to meet our special requirements.

The RCS platform itself was extensively based on Eclipse technologies: The user interfaces, such as the workstations for the train traffic dispatchers, are based on Eclipse RCP. On the server side, we use the Eclipse OSGi Equinox implementation as a runtime container. The openness of the Eclipse platform has consistently enabled us to place bug fixes and feature requests that we needed for RCS.

Since we primarily attempt to use Eclipse design patterns and APIs with RCS, new coworkers who already have Eclipse know-how quickly find their way in our code basis.

Besides open source products, we also use various commercial solutions that are proven to be the best solutions for specific problems, such as in the areas of databases, real-time messaging or optimizing.

To what degree does SBB differ from other rail companies?
As a software architect, I have yet to find another company that identifies with its product like SBB does. The will to develop the best possible solutions for efficient and smooth management of train traffic is something we feel on a daily basis in the project. All RCS user groups, such as dispatchers, train traffic managers and locomotive engineers, are directly represented in the project and bring their practical requirements with them.

BSI is strongly anchored in the Eclipse world with the Scout open source project. What do you especially appreciate when working together with BSI?
Because BSI has a great deal of Eclipse know-how, all our BSI colleagues very quickly found their way in our existing code basis and were able to make valuable contributions to the individual project teams right from the start. Personally, what I appreciate, in addition to their comprehensive technical understanding, is the BSI staff’s solution orientation and dedication to the project.

How was quality control handled in the joint projects?
Quality control is solidly anchored in our development process. There is at least one tester on each Scrum team. Unit tests, continuous integration and continuous inspection (using Sonar) are used on the coding side.

Our development environments are deployed several times daily with the complete RCS software so that the user representatives can look over our shoulders and validate the implemented solutions.

Because with RCS we are dealing with a very sensitive system for train traffic in Switzerland, comprehensive integration tests and non functional tests are thoroughly conducted for each release. Each RCS release is tested from top to bottom for around two months before it goes into production.

What project method do you work with?
We established Scrum among all development teams two years ago. This development method has made project progress more transparent while also clearly revealing internal problems. After we incrementally solved these problems, we were able to design the development process more efficiently. And it makes working on the team really a lot of fun.

The Swiss Federal Railway (SBB) also works with open source. The use of Eclipse products has proven to be beneficial in several regards. For one, there is a large pool of freely accessible plugins available, and for another, the SBB has also been able to develop its own enhancements according to its specific requirements, quickly and without complications.
The central theme of the Eclipse Scout framework is to create added value for the client. Investment protection and independence from suppliers clearly speak for open source, especially for investment objects with a lifecycle of 30 to 100 years. It is impractical to program directly in Java code with the usual costs and timeframes. Only the use of a framework makes efficient software development possible and at the same time creates robust and flexible solutions. These are factors that play an essential role particularly in quick-lived sectors and among service providers. BSI customers can be found in both worlds.

Open and efficient
Matthias Zimmermann, Head of Framework Development at BSI, explains what these companies especially appreciate in the sophisticated and open Eclipse Scout framework: “Scout ideally augments our customers, technology portfolio on the client side. With service-oriented approaches, customers are frequently solidly set up on the service side. There are, after all, many well-established and open alternatives. Things look different on the client side. There are hardly any frameworks in the open source field that reach the necessary production sophistication and at the same time create efficient implementation of user-friendly applications.” He adds: “Unfortunately, an intuitive and beautiful interface is not always given the attention it needs. This involves offering an efficient tool to the people who must work with business applications on a daily basis. This is exactly where Scout makes a contribution.”

BSI has built business applications with the Scout platform for over ten years and constantly invests in the further development of the platform. By making it available as an open source resource, BSI creates future and investment protection for its customers. “We are currently supporting initial customers from the bank and insurance sectors that have decided to use Eclipse Scout as client technology and have built their own applications with it”, enthuses Matthias Zimmermann. “But we also see a lot of potential for Scout in the SME sector. Good Java developers find it very easy to get started with the development of Scout applications. Simpler and database-centered applications can often be brought to the prototype stage in just a few days, which can then be refined to the first productive release together with the future users.”

The Scout team has already gathered some initial positive experiences. After just two days of training an industrial company from Northern Germany subsequently created a pilot application for the management of special machines. “It is pleasing to see that with the Eclipse Scout framework we were able to exceed the high expectations and that the two new Scout developers went home at the end of the week satisfied with something solid in their hands”, according to Matthias Zimmermann.

Mobile and future-proof
The advantage of the framework is especially clear when it comes to the currently omnipresent topic of mobile CRM. Mobile solutions for smartphones and tablets can be efficiently implemented with Eclipse Scout. Scout applications like BSI CRM can run on end devices thanks to the integration of Eclipse RAP and HTML5 applications directly in the browser of a smart phone or tablet. “We write the software completely independent of a special GUI technology. The Scout GUI factories enable us to use the same code bases for every client type. Various frontends – whether on a desktop, in a Web browser or on a mobile device – are built through the Scout framework until they run and can be simultaneously operated without limitation”, explains Matthias Zimmermann. This provides two central advantages. On the one hand, the user immediately finds his/her way in the application, while on the other, the software does not need to be separately developed for each frontend. There is also another advantage on the Web and on mobile devices: The cost is entirely eliminated for the installation or upgrading of the software.

A broad bandwidth of different end devices is thus no longer a major challenge with BSI’s single sourcing approach. “With the multi-frontend strategy we are pursuing the goal of making uniform CRM solutions usable for different applications. In this way, BSI CRM can be used for mobile purposes efficiently and ensures that the solution will also run on future device generations”, concludes Matthias Zimmermann.

MEET THE TECHNOLOGY

Eclipse Scout: The framework for business applications

TEXT: CATHERINE B. CROWDEN

SBB is not the only company that works with open source. Growing numbers of companies are excited about the advantages of open technology. BSI supports this development with Eclipse Scout, a client-side framework for business applications, that is also suited for mobile applications.

Paolo Bazzi has just returned from Mongolia. He took a six-week timeout so that he could participate in the Mongol Rally with his brother. For him, this rally has a lot in common with BSI.

**Why did you stick with BSI after completing your studies?**
Because of my work. I like the dynamic mix of software development, consulting, customer contact and technical project management. BSI also offers me the possibility of flexible working times and unpaid vacation to take a timeout now and then.

**Moving on: Germany**

**Start: London**
Paolo, when did you start working at BSI?
In April 2005. While I was studying at ETH, I found out about BSI through the society of computer science students and applied for a job right away. I started with a half-year internship and then worked part-time. After I was done with University two years later, I then decided to work for BSI 100 percent.

**Home: Switzerland**
Despite your love for travel, you like Switzerland best. Why is that?
Because I feel at home here. When I travel I learn to appreciate a lot of what I have here. There are many things from outside the country that can also be found in Switzerland, though on a smaller scale. That’s why I am always happy to come back.

**Challenge: Romania**
You had to take your car to a mechanic in Romania and you were in danger of not being able to complete the rally. What was your greatest challenge at BSI?
When I first got involved in the Swiss Post project, I was aware that a programming error would impact 10,000 counter workstations. Luckily we haven’t had any major breakdowns so far.

**Detour: Iran**
Sometimes the fastest route does not deliver the best result. Have you also had to take detours at BSI?
Of course. The job prolonged my studies, which turned out to be an important enrichment for my future. In terms of projects, perhaps you have to meet the customer one more time in order to find the best solution.

**Goal: Ulan Bator**
You reached the rally’s goal after 42 days and nearly 18,000 kilometers. Would you like to have kept going?
Certainly, I would have liked to have spent a bit more time in the various places. But in the end, my brother and I both had a certain feeling of fullness. In a short period of time we got to know many cultures, gained a lot of experience and were happy to come home to process it all.

**Energy: Mongolia**
You recently returned. Are your batteries recharged for work now?
Yes, my batteries are definitely recharged. Every day was a surprise and completely different from the day before. I forgot work, forgot everything about computers and forgot all about meetings. The headaches from my work day were so very far away.

**Favorite country:** Switzerland
**Favorite food:** Shashlik
**Favorite car:** BMW M3

**Links:**
Travel blog: www.idrivethereforeiam.ch
Facebook Page: www.facebook.com/idrivethereforeiam
Mongol Rally: http://www.theadventurists.com/the-adventures/mongol-rally

**May we introduce?**

**Paolo Bazzi**
Born in: Zürich
Birthday: 4 November 1981
Astrological sign: Scorpio
Nationality: Swiss
Diploma: Master of Science ETH in Computer Science
Lives in: Spreitenbach
Works in: Baden and Zürich

**Text:** Claude Schuler
**Photos:** Several sources

Paolo Bazzi was born in Zürich on November 4, 1981. He completed his studies at ETH Zurich with a Master of Science in Computer Science. He lives in Spreitenbach and works in Baden and Zürich. Paolo has just returned from Mongolia, where he took part in the Mongol Rally. He spent six weeks with his brother on this journey, which had a lot in common with his work at BSI. Paolo enjoys Switzerland, which he considers his home. While traveling, he appreciates the many things that can also be found in Switzerland, albeit on a smaller scale. His greatest challenge at BSI was the Swiss Post project, where he was aware of a potential programming error that could impact 10,000 counter workstations. Luckily, they avoided any major breakdowns.

Paolo’s journey included a detour through Iran, where he had to take his car to a mechanic. This detour taught him the importance of meeting the customer one more time to ensure the best solution. Despite the challenges, Paolo feels that the Mongol Rally was a fulfilling experience.

Paolo strives to maintain a balance between his work at BSI and his passion for travel. He enjoys Switzerland’s diverse culture and the many experiences it offers. While on the road, Paolo finds joy in appreciating the things he takes for granted in Switzerland. His experience with BSI has prepared him to overcome obstacles and find creative solutions.

Paolo’s love for travel and his passion for his work at BSI are evident in his commitment to the Mongol Rally and the flexible work arrangements offered by BSI. He finds it refreshing to take a step back from work and appreciate the beauty of everyday life, which he loves to do in Switzerland. Paolo believes that the Mongol Rally was a unique opportunity to explore different cultures and return home recharged and enriched.

Paolo’s story highlights the significance of personal interests in complementing professional experiences. His dedication to his work and his love for travel create a harmonious balance that enables him to enjoy both aspects of his life.

**BSI Business Systems Integration AG**
“While IT projects cannot be 100% planned, with BSI we can count 100% on excellent reaction time and solutions.”

Andreas Beinat, ABB Switzerland Ltd.