data buzz

The Strategic Road

The eBook Issue

December 2006

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StrataVia was formerly called ExtraQuest. On 18 July, 2006 the company re-launched as StrataVia and launched its product, Data Palette (formerly called RoboDOC) to the market.

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Preface

In the same way that people mature, learn from experiences, grow from them, and become more adept at running their lives, IT functions must also continually improve themselves to ensure that constantly they offer more value to the organizations that they serve.

IT departments have to continually strive to add value and not become isolated entities that meet their own goals but get out of step with the needs of the business of which they are an integral part.

Throughout the year DataBuzz has been keeping you up to date on trends in database automation, and how it leads to a more operationally mature organization. In this compilation edition, presented to you in the form of an eBook, you can read some of the best articles of the year, articles that can help you determine where you should really be focused to help your organization mature and be seen as a leader, promoting positive change and exchanging creative pro-activity for tardy reactivity.

Read on…..

Database Administration is a Strategy

The DataBuzz eBook Issue
Part One The Strategic Road

Section 1 The Strategic R

Part 1 of this eBook provides articles about taking the strategic road to database administration. This first section of this part sets the scene through articles which analyze what's happening in the market that points to a need for a new model. At a market level, database administration is a fast growing area and the first 3 articles give information about how technological change is creating a new market environment for organizations. The next article drills down to the organization level and changes occurring there, followed by an article demonstrating how the DBA and the DBA's role are changing.

In *Automating Automation,* Brian Staff, StrataVia's VP of marketing, illustrates how automation develops and develops again becoming more sophisticated. He notes that standardization and automation are key to process improvement, as is a methodology that is constantly working to improve the operational environment.

In *Too Few Cooks in the Kitchen* you get more of Brian's vim and vigor as he discusses where the market is going. Brian talks about the latest trends in database administration and how they can provide you with operational and resource advantages.

A noticeable market trend is outsourcing. Brian reminds us in *Think Outsourcing, Think*

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Mercedes that the outsourcing concept is not new, but what is new is the need to think specialist rather than generalist. The market is changing as companies move towards getting the best possible service in niche areas, rather than accepting the "one size fits all" approach that has been prevalent in the past.

We then move onto the organization level and in *Automate to Save*, Venkat Devraj, StrataVia co-founder and author of *Oracle 24 x7* and numerous articles, shows automation is vital so that organizations can make cost savings, which are just not attainable if organizations rely on recruiting, retaining, developing and placing people. People are not scalable.

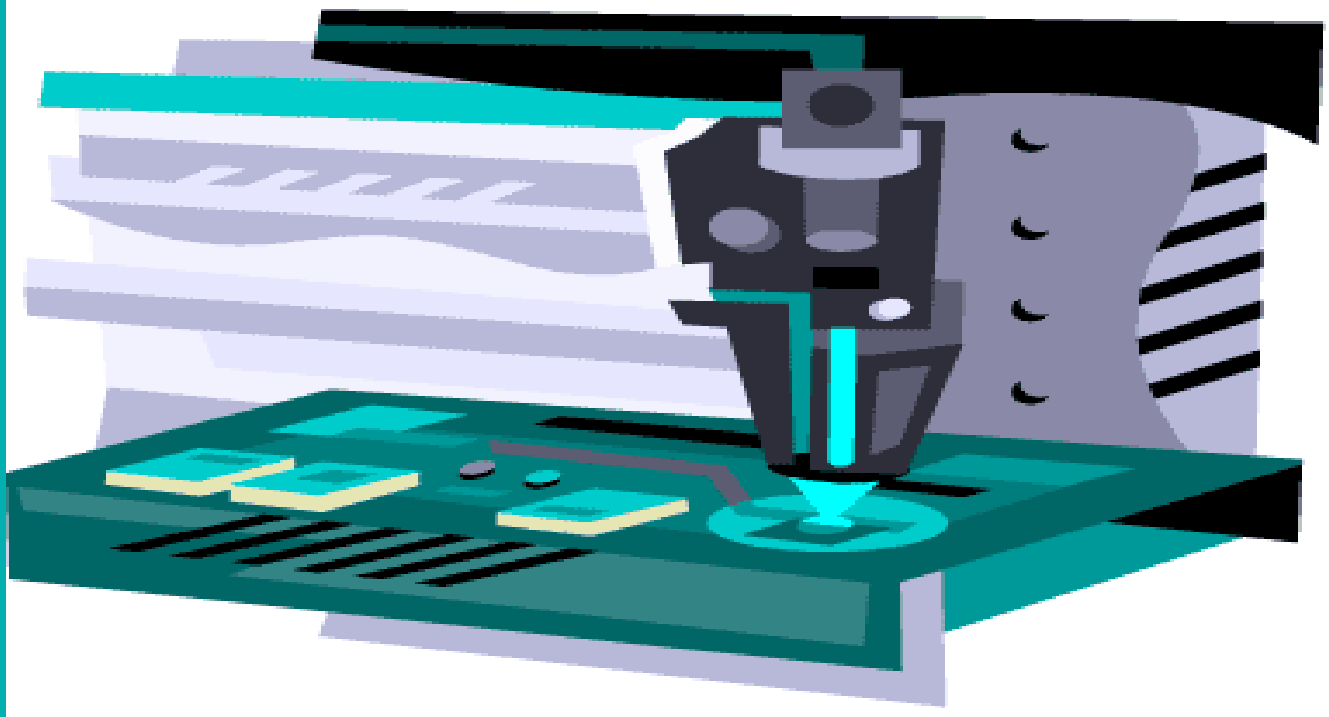
The final article in the section, *DBAs Need Electric Drills*, discusses the changes occurring at the DBA level. DBAs have tools that help them in their tasks. In many other professions, people also use tools. However, in these other professions the tools have been automated to ease the grunge work to free up the professional to be creative and add further value. Brian Staff illustrates why DBAs need to be powered up.

Read what leading analyst and best-selling author, Jill Dyche, has to say about StrataVia

Read Jill's article on the B-Eye-Network at:

http://www.b-eye-network.com/blogs/dyche/archives/2006/08/bi_its_not_abou.php#more

Automating Automation



Brian Staff, StrataVia's VP of Marketing and closet novelist, shows how it is automation of automations that has been the norm in the business world and he wonders why database administration has been so slow to catch on.

In the UK, where I come from, automating reflexes to change gears in the car is the norm. But here in the good old US of A, with automatic transmission the norm, who needs reflexes? It's automatic to automate and that's happening in all industries ...

It's tempting to think that once something has been automated, that's the end of the process. But really it's just the start. What follows is automating the automation. Industry took a huge leap forward with the invention of tools that automated tasks that had previously been performed manually, such as drilling, screwing, riveting and hammering. But when the automations were themselves automated, by replacing the human operators with computer-controlled robots that manipulated the tools, the industrial world made another giant advance.

DBAs have a rich tool set to work from and they can manage databases effectively. But the tools only give them the ability to fix problems when they occur, not store the best fix and have it applied automatically when the problem occurs, or even before the problem occurs.

Early computers required quite a lot of

manual intervention to start them up and keep them running. Loading programs from paper tape or card decks, and loading and unloading magnetic tapes were tasks that were eventually replaced with automatic ways of doing the same things.

No inventor should be complacent when they've introduced a new product, because it probably won't be too long before someone else automates what the original invention automated and consigns it to a science museum somewhere!

Most of us use word processing and spreadsheet software, and every now and again we find some new wizard has been developed to do something that previously was performed manually, such as converting data into graphs, automatically correcting our spelling, noticing that what we've typed in was a URL and making it into a web link, and so on. Speech recognition software is steadily improving, and although it still makes enough blunders (often hilarious ones) to make its efficiency benefits marginal, the day will come when we'll spend more time talking to our computers than banging away at the keyboard as I'm doing now.

Throughout the business world there remain many tasks that have only been partially automated, and more automation is possible, and generally inevitable. But how do you define a process that can be automated? I'm sure this isn't a definitive list, but let me be presumptuous enough to follow Isaac Asimov (who defined the "Three Laws of Robotics") and propose "Three Laws of Automation."

Firstly, you have to be able to completely define the process and cater for every contingency. For example, it's pretty easy to define all the steps involved in buying a can of soda, which is why drink vending machines are so effective. But defining all the steps involved in a more complex process, like heart surgery, is a lot more difficult, and when you add on contingency actions for all the unexpected things that could occur, the definition of the process gets too big to handle, so the robots that perform surgery nowadays are still guided by a skilled surgeon.

Secondly, you have to be able to automatically execute the process that you've defined. Again, pretty simple in the case of a vending machine, and although robots that can do intricate heart surgery exist, surgeons need to undergo extensive training to effectively use them.

Thirdly, the definition of the process and its automation have to be efficient enough to justify the effort of replacing the manual process. If the cost of designing, manufacturing and deploying a vending machine is more expensive than the cost of employing, training and managing an equivalent vendor, then what's the point?

Let's take a look at the two extremes, that is, where automation is a perfect fit, and where it is hard to imagine. We can stick with the examples I've already used:

- Would it be practical for the soda company to replace every vending machine with a person dispensing cans of soda? Hardly.
- Is it feasible for software and robotics to perform heart surgery, without surgeon control, taking into account all the variables that can change from body to body, and all the things that can go wrong during an operation and cope with them? Not yet - although the great thing about the human race is that we have a primal urge to make concepts reality, especially when they are based on improving existing technologies to the Nth degree.

Translating this to the world of database administration, we can say that the first level of automation has gone pretty well. DBAs have a rich tool set to work from and they can manage databases effectively. But the tools only give them the ability to fix problems when they occur, not store the best fix and have it applied automatically when the problem occurs, or even before the problem occurs. But that is changing. The next level of automation has come to the art of database administration in the form of Data Palette!

You can get more information on Data Palette here on the StrataVia website

Too Few Cooks in the Kitchen?

In the previous article, Brian Staff demonstrated how database administration will follow other business practices. In this article, he shows how the DBA market can learn from the restaurant market.

The database administration market is like the restaurant market. Both are huge and growing fast. There are about as many DBAs in the country as there are chefs. The US Department of Labor states that there were 104,000 DBAs in the USA in 2004. The profession is the sixth fastest growing in the country and is expected to shoot up by 38% by 2014, which means that there will be close to 145,000 DBAs in the USA by that time. To put it in perspective, there are about as many DBAs in the country as there are chefs, and although I don't mean to imply that DBAs in any way cook the data, they are as essential as the people who feed us. And so they should be, data nourishes an organization and without it the company starves.

But it's an expensive meal. In 2005 the cost of an entry level DBA in the USA was between $65,000 and $95,000 a year, which points to an average salary of around $100,000+ a year for an experienced professional. Add benefits, overhead, and the tools they use to do their jobs, multiply by 104,000 and you've got an awfully big number, a tens of billions of dollars a year number, and a number that's growing at one of the fastest rates that the US Department of Labor tracks.

This is, of course, great news for DBAs, who are part of a fast-expanding job market, and if demand outgrows supply, as it very likely will, DBAs are going to be very popular folks.

But for companies chasing a burgeoning rare resource, this growth is going to be something of a headache. Job slots will be expensive to fill, and increasingly they will go unfilled as DBAs get to pick and choose. And the DBAs themselves will be confronted with ever-growing workloads. They may land plum jobs, but they'll be expected to work all hours of the day and night to meet the mountainous tasks that are dumped on their plates.

One solution to this impending lack of DBAs is outsourcing to countries where resources are more plentiful, and many organizations are already using that route. But outsourcing isn't a universal panacea. Costs of labor in countries like India are rising, and DBAs there are also in demand. And some organizations have policies that prohibit them from using outsourcing, either for security reasons, or because of contractual agreements with unions that prohibit them from sending jobs overseas.

When looking for database administration solutions, focus on products that enable you to work towards these three goals: standardization, automation, autonomics.

So there needs to be another solution. According to leading analysts (such as IDC and Forrester) and other industry experts, pain relief for the DBA headache could come from database administration tools that deliver in three key areas of functionality. So here's the punch line of this article and the tip for the week: When looking for database administration solutions, focus on products that enable you to work towards these three goals:

Standardization - applying best practices across an organization's entire data asset, no matter the quantity or type of database. Most companies have a variety of ways of performing a single task, depending on who's performing it and what platform they're performing it on. Finding the best way, documenting it and applying it rigorously and

universally is the way to reach operational perfection.

Automation - automating as many of the repetitive tasks that DBAs perform (and up to 85% of a DBA's workload can be spent on tasks that can be partly or fully automated). Needless to say, automating the standardized best practices identified in the previous bullet is the way to go.

Autonomics - or proactive automation, which means finding problems before they occur and fixing them before they affect operations. Also, correlating the practices or events that lead to the best outcomes provides the ability to automatically tune the system for optimal performance.

To go back to our chef analogy, the most efficient restaurant has one standard way of making a cake, they automate as much of the process as possible, and they heat up the oven before they start mixing the ingredients!

For more from Brian on the changing market, tune into this interview on PRWebDirect

Denver, CO (PRWEB via PRWebDirect) April 17, 2006 – Dr. Brian Staff, Vice President of Marketing at ExtraQuest, in an exclusive interview with Claudia Imhoff and the Business Intelligence Network , recently explained how they are changing the way companies manage database environments by combining proven technology, senior-level expertise and a deep understanding of data management issues.

Think Outsourcing, Think Mercedes

Thinking of outsourcing? Think Mercedes - The British Empire, Japan, management gurus, cars... In this article, Brian Staff discusses the demise of the "outsourcing megadeal".

Outsourcing isn't a new concept; it's just a new term. When the British Empire was in full swing back in the nineteenth century, functions were "outsourced" to overseas colonies because it was cheaper to perform them there than back in the UK. Jobs such as growing crops and making garments were "sent overseas", or "outsourced" as we would say today.

In the 1960s, cars were being produced much more cheaply in Japan than they were in the US or Europe, which is what enabled the Japanese motor companies to get a foothold in these markets. Many Americans "outsourced" their car purchases to Japan, and then to the other Asian countries that followed suit and produced even cheaper cars than prosperous nations could build.

As management gurus like Prahalad and Hamel extolled the strategic advantages of building core competencies to gain sustainable competitive advantage, companies focused on their core mission, partnering with other organizations that focused on theirs - e.g. HRM, finance, widget making, storage, transportation, and IT.

But outsourcing has its limits. Sometimes the RE-source that is being OUT-sourced becomes just as expensive as it would be to do it yourself. And who thinks of Japanese cars as being "cheap" any more? They have moved their

focus to the quality markets (Lexus, Acura, Infiniti), and to key growth markets, such as eco-friendly cars (the Prius et al).

In the IT services industry, we've also seen the rush to overseas to find cheaper prices, and although cost savings will always be a factor in selecting an outsourcing alternative, organizations clearly understand that, at the end of the day, "you get what you pay for". As companies try to improve every part of their operation, they are now more carefully picking and choosing the areas they want to outsource, and they are also being more diligent about who they outsource to. An outsourcing company that's something of a "Jack and Jill of all trades", may be able to meet a wide range of requirements, but will probably only offer mediocre services - generally speaking, the wider the range of talent, the less the depth of expertise in any given area.

Recent analyst pronouncements have claimed that we are past the era of the "outsourcing megadeal". Companies have had their fingers burnt by outsourcing all or large parts of their IT operations to large managed services organizations, only to find that the skills in these organizations, although good on the whole, are lacking in key areas where high levels of expertise are simply essential.

Database administration is one such area. There are so many variables involved in the effective administration of databases that 'body shops' are seldom capable of providing an adequate service. Database environments are constantly changing. Database versions change, patches need to be applied, data files need to be added, backups and restores are constantly taking place, new applications come on line and new data feeds are always being added. Only a service that has built a core competence that can tune into the intrinsic DNA of the organization can hope to keep track of the constant environmental changes that render yesterday's situation as stale as yesterday's news. Read the brain behind the brawn in section 4 of part 2 for more on this.

When you're considering outsourcing your database administration, think Lexus or Mercedes - go for a specialist - it might be made elsewhere, but the quality is of the highest.

Automate to Save

Venkat Devraj, autonomics expert and StrataVia co-founder was asked how organizations can get the biggest cost savings. Here he explains that automation is the way to go.

Automate and you'll realize the biggest tangible cost savings in IT today. Everything else is a temporary panacea. You want substantial cost savings without degradation in service quality. IT services are delivered using three components: people, process, and technology. The cost of delivering and managing all three components has to be controlled effectively.

Organizations are finding out that cost savings are not sustainable when they rely only on personnel reduction and process tweaks to control them. The costs of human capital in places such as India and Eastern Europe are rising. Additionally, as increasing numbers of bodies in far-off places are leveraged, higher inconsistencies in quality of service develop. Furthermore, the practice of leveraging bodies just does not scale - there are just not enough senior technicians on the planet! Less seasoned technicians take longer to do the work and often cause more errors. This compromises the organizational service level agreement and degrades the end-user experience with IT.

The only real solution is automation. Your senior technicians need to categorize their daily work tasks into mundane and non-mundane/creative. The mundane need to be automated and run with little to no human intervention (lights-out execution). Your technicians can then take on more tasks, especially the non-

mundane/creative ones, without you having to hunt constantly for more and more of these scarce bodies at a lower and lower price to scale their operations.

Unfortunately, over the last decade automation has acquired somewhat of a bad reputation in database administration due to sub-optimal design and implementation by the early practitioners. Traditional automation routines were implemented via scripts, which were written for one application or database, without considering generic and mass deployment. For instance, these scripts had specific environmental meta-data such as database names, software and data-file locations hard-coded in them; they made several assumptions about the target system they were expected to run on. As a result, while they were reliable for the single job and server they were built for, they couldn't automate the same task across a multitude of servers and database platforms. When the target server environments changed, they couldn't keep up, so they would often break, requiring the DBAs to spend hours manually troubleshooting and cleaning up the mess.

The organization is injected with higher efficiencies, and the disadvantages of the old script-based automation are kept at bay.

Also, DBAs would tend to accumulate and carry around a tool-bag of 20 or so scripts to handle routine monitoring and alerting. Each of these scripts would need to reside on the database servers and be scheduled to run via cron or a comparable scheduler. As environmental complexities and the number of servers began to go up, maintenance of these scripts turned into a nightmare. Even changing one line of code would require the DBA to log into tens, or even hundreds, of servers to make the change manually, potentially causing human errors, and overworked and frustrated DBAs.

Some DBAs are partial to certain scripts, whereas other DBAs prefer other scripts. As a result, there is little uniformity and a significant difference in tribal knowledge. A single individual may know more about a certain environment and a set of scripts than her peers. If that individual parts ways with the company, they leave a huge gap that others can't fill,

causing rising costs and effort, and a decreasing bottom line.

The intelligent solution is automation, driven from a central/shared knowledge-base that evolves with the changes in the underlying environment. It uses generic and centrally located automation routines capable of running on a variety of target platforms. The organization is injected with higher efficiencies, and the disadvantages of the old script-based automation are kept at bay. Your people can then channel their intelligence and energies into strategic tasks.

The good news is opportunities for automation are staring us in the face every day. My rule of thumb is: if you have to perform any fixed sequence of steps more than twice, document the task and share it with everyone in the team.

Now, everyone can be on the “same page” and perform the task in a consistent manner. Subsequently, that documentation serves as a great blueprint for any downstream automation using a central mechanism, like the one described above.

In February, 2006 the Northern California Oracle Users Group printed an interview with Venkat Devraj. You can read it here.

DBAs Need Electric Drills

With his usual vim and vigor, Brian Staff, Vice President - Marketing, shows how the database industry and the job of the DBA can be powered up like the carpenter's.

The world of database administration is pretty well served by tools. Like a carpenter's array of implements, DBAs have their equivalents of hammers, drill bits and chisels of various sizes, screwdrivers, saws and mallets. If you asked carpenters a hundred years ago if they were happy with their tools, they would probably answer, "Yes, we've got all we need," although they might add "but a bit more time to do things would be useful."

For the carpenter the "bit more time" didn't come in the shape of more hours being added to the working day or more days to the working week, it came in terms of automation. With the arrival of the electric drill, boring, repetitive chores like drilling holes were done automatically so that he or she could focus on the more creative tasks of woodwork that couldn't be so easily automated. With the arrival of the powered hammer, the carpenter could not only drive in nails more quickly, s/he could save those aching muscles for the tasks requiring more finesse and precision. The carpenters of yore might have made wonderful furniture and fittings, but they wasted way too much of their time and effort doing things like screwing in screws and banging in nails that didn't use their creativity.

Give a DBA a problem and he or she can investigate it, find the problem, and fix it. There are tools for that. But some DBAs don't have the tools that let them get beyond the one-off fix. There is an automated tool, Data Palette, with the mechanism to "store" that fix, and have it run the next time without their involvement. Unlike the carpenter who has seen automation permeate their industry and take away much of the repetitive element, the DBA without automated tools has to "bang in each nail" individually, addressing the same fixes time after time, with nothing to capture the repeating element of their work and apply it automatically, thus leaving them free to get on with the creative stuff.

the DBA without automated tools has to "bang in each nail" individually, addressing the same fixes time after time

Like any other industry - be it carpentry, automobile manufacture, agriculture, or most others - the massive transformations are those that are brought about by technology and, more specifically, automation. When DBAs use a framework by which they can automate the mundane, they can focus on the elements of their work that add value to the forward progress of the organization. We're some way off from having a robot that can talk to the business user of a database, get to understand their specific needs, and bring the databases into line with what is going to help the company grow. However, in Data Palette we do have a product with an intelligent engine, or brain, that monitors and remembers specifics of your database environment, applies automatic fixes, anticipates issues and fixes them before they cause a problem, and provides you with the reports you need to make decisions on organizational strategic direction that you've often wished for but thought were a mere pipedream.

To maximize their value, DBAs should focus on uniquely human activities - which are the ones that can bring the greatest value. Data Palette can focus on "automatable" areas, which drain the time and energy of the DBA and really only contribute towards the status quo (i.e. keeping things running, not moving them forward).

Section 2 Benefits of the St

The market analysis in section 1 demonstrates one of the truisms of business: the need to change is non-negotiable. The articles in this section of the eBook describe specific benefits achieved by companies who take the strategic road. Strategy yields benefits.

We have been using Data Palette in our managed services business to enable the clients who outsource to us get joint benefits of outsourcing and automation. We automate in-house so that you enjoy best practice in your house.

There is another case study on our website that demonstrates the significant savings enjoyed by one of our customers, Heald College. The business career college is saving more than 45% on its database administration bills and its Microsoft SQL server databases have never performed better. Read the case study here.

trategic Road

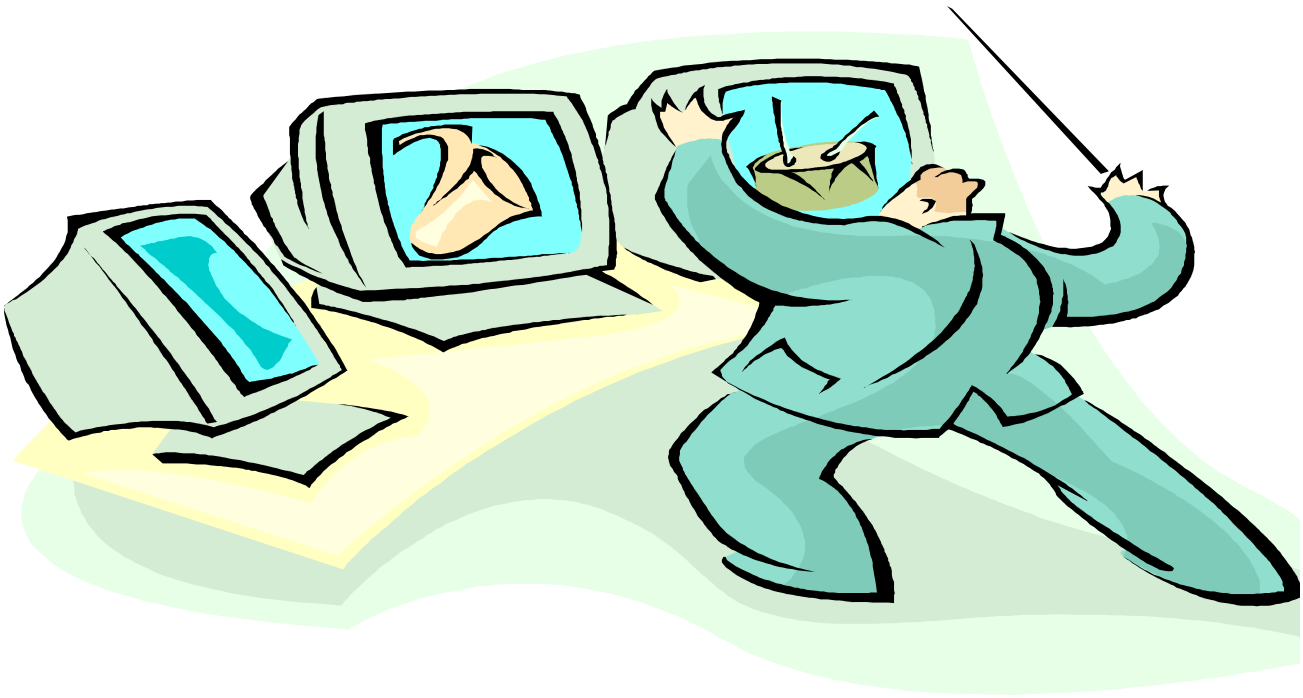
We are not the only ones convinced of the dual benefits of outsourcing and automation. IBM announced recently that it would expand significantly its ability to handle customers from its Indian operation (Information Week, June 12, 2006) … and not just by adding more bodies. Sure, IBM India now has 43,000 employees, up from 23,000 a year ago, and it is on a hiring pace that could take the workforce to 60,000 a year from now. But the work output of the operation is expected to grow much faster than the labor pool, and the catalyst that will make this possible is automation.

In *Consistency in DBA Service,* Venkat Devraj discusses 3 keys to competitive advantage, namely standardization, centralization and automation. You can then read about a company, Digital Reliance, which realized as much as 75% savings as a result of following the strategic road. In *Data Palette in Action*, co-founder Rainier Luistro, demonstrates how the automation features in our product, Data Palette, solve urgent business efficiency issues and stamp out firefighting.

On 18 July 2006 we changed the name of our company from ExtraQuest to StrataVia, and we launched a product, Data Palette. Headlines in publications such as InfoWorld and ComputerWorld simply said “StrataVia automates database administration work”.

You can read the press release here.

Consistency in DBA Service



Venkat Devraj, expert and co-founder was asked what you get using Data Palette that you don't get now. Here is his answer.

A guarantee that your DBAs and IT managers will attain higher consistency in DBA service delivery, giving your organization competitive advantage. Data Palette accomplishes this by enabling (a) standardization, (b) centralization and (c) automation of repetitive, yet time-consuming DBA tasks. Oh, you also get full audit capabilities, and your DBAs can sleep at night.

Let's look at each part in detail, starting with standardization. The typical DBA puts in closer to a 50 or 60-hour week than a 40-hour one. Despite working these extended hours, DBAs often find themselves in firefighting and reactive mode, and doing little to address the root cause of problems. Much of their effort goes into problem diagnosis and applying similar fixes over and over again to the plethora of servers and databases that DBAs are asked to manage today. Moreover, the organization unfairly begins to rely on specific individuals to address specific problems, so that 'DBA' and 'Vacation' are not spoken in the same breath and uninterrupted downtime when sick is something a DBA can merely long for.

But in reality, many of these repetitive work patterns can be reduced to pre-approved "task recipes", that can then be used by everyone in the team; in fact, even by less senior personnel such as Tier 1/Help Desk or night-time operators.

Standardization is key to making the environment more predictable and spreading the workload better across more individuals.

Next is centralization. By centralizing their task methods and utilities, DBAs no longer have to battle isolated scripts, arcane log/trace outputs and disparate GUI tools. Scripts are fine, provided the DBA has the time to write and maintain them, and the number of target databases and servers being managed are few. But with DBA-time being scarce and the number of databases and servers going in an upward trajectory, relying on scripts becomes a major handicap.

Scripts have to reside directly on the target server they are meant to run on. The average script has lots of hard-coded values so they need to change with every change in the environment. Even when a single line of code has to change in a script (out of the 15 or so scripts the average DBA juggles in her toolbox!), it requires the DBA to manually log on to each of the servers, make the change and re-test • no small feat for even a few servers. That wee typo can wreak havoc on the environment. With Data Palette's central console for rolling out and maintaining task recipes and automation routines, such heavy lifting and resultant accidents become a thing of the past!

When the typical DBA response is encapsulated into a process with a corresponding automation routine and executed autonomically in response to (or in anticipation of) a failure pattern, you get near-instantaneous response and resolution, and the DBA no longer has to sleep with one eye on the pager and one hand on the keyboard.

Then finally, automation. The higher the standardization and centralization, the higher the chances of automating recurring and complex tasks. Once automated, problem responses and resolutions can be expedited and, in many cases, negative impact on users averted altogether (by triggering of the automated responses before the problems become apparent to the users). Automation also frees and diverts DBAs' valuable time

towards many proactive tasks that would not only reduce the frequency and intensity of daily fires, but would also allow these senior technicians to work a more normal lifestyle, reducing the risk of eventual burnout.

No doubt, there are some great monitoring/notification tools out there that allow DBAs to react to problems faster. These tools are backed by pretty-looking administrative GUIs that are getting better at presenting a more robust alternative to command-line interfaces. However, these tools don't provide a platform for the kind of standardization, centralization and automation described here.

While an administrative GUI is useful to accelerate certain ad-hoc work via its nice point-and-click interface, someone still needs to get out of bed at 2:00 a.m. to respond to an alert regarding say, a nightly load process failure. The longer it takes to get out of bed and figure out the exact problem and apply the right fix, the more the business process is delayed!

When the typical DBA response is encapsulated into a process with a corresponding automation routine and executed autonomically in response to (or in anticipation of) a failure pattern, you get near-instantaneous response and resolution, and the DBA no longer has to sleep with one eye on the pager and one hand on the keyboard. And that peace of mind is exactly what Data Palette brings to DBAs and their managers, and what unfortunately, these custodians of complex production databases don't have today.

Venkat talks about the emergence of the new DBA in an article printed in the September 2006 issue of Database Tends and Applications. You can access it here.

75% Savings for Digital Reliance

Digital Reliance, a premium provider of wireless account management services, needed a better way to optimally manage its mission-critical Oracle 8i database in a highly secure environment. They chose StrataVia. In return, they realized savings of $190,000 (more than 75 percent).

How did they do it? Well, by automating data management practices and minimizing complexity they were able to focus on business issues rather than having to deal with technology-related challenges. StrataVia helped Digital Reliance to adopt the philosophy that Forrester Research, a leading market research firm, says is going to be standard by 2009. By that year, most of the database administration tasks such as migrations, upgrades, patch deployments, replication, data loading and performance tuning will be completely automated. StrataVia's clients achieve this level of automation today.

Mission Critical Data

Being a leader in wireless account management services, Digital Reliance process millions of mission-critical data elements. The company's data is highly confidential and needs to be maintained and managed in a highly secure environment. The database is subject to both near real-time transactions, as well as large-scale batch and reporting operations. In addition, the database is subject to high growth and usage and requires a robust, scalable, optimally

performing and highly available database environment.

Due to usage constraints and customer presentations, Digital Reliance could not tolerate any substantial downtime or slow performance and suffer the consequential direct loss in revenue and reputation. The database had to be up and running ceaselessly and had to offer lightening-fast response times. In addition, the company's database administration costs had to be kept to the bare minimum, without sacrificing quality of service or compromising security of data.

In conjunction with Digital Reliance personnel, StrataVia helped stabilize and "wire" Digital Reliance's Oracle 8i database environment. The "wiring" enables the company to perform proactive diagnosis, optimal configuration, rigorous monitoring and specific repairs, as needed.

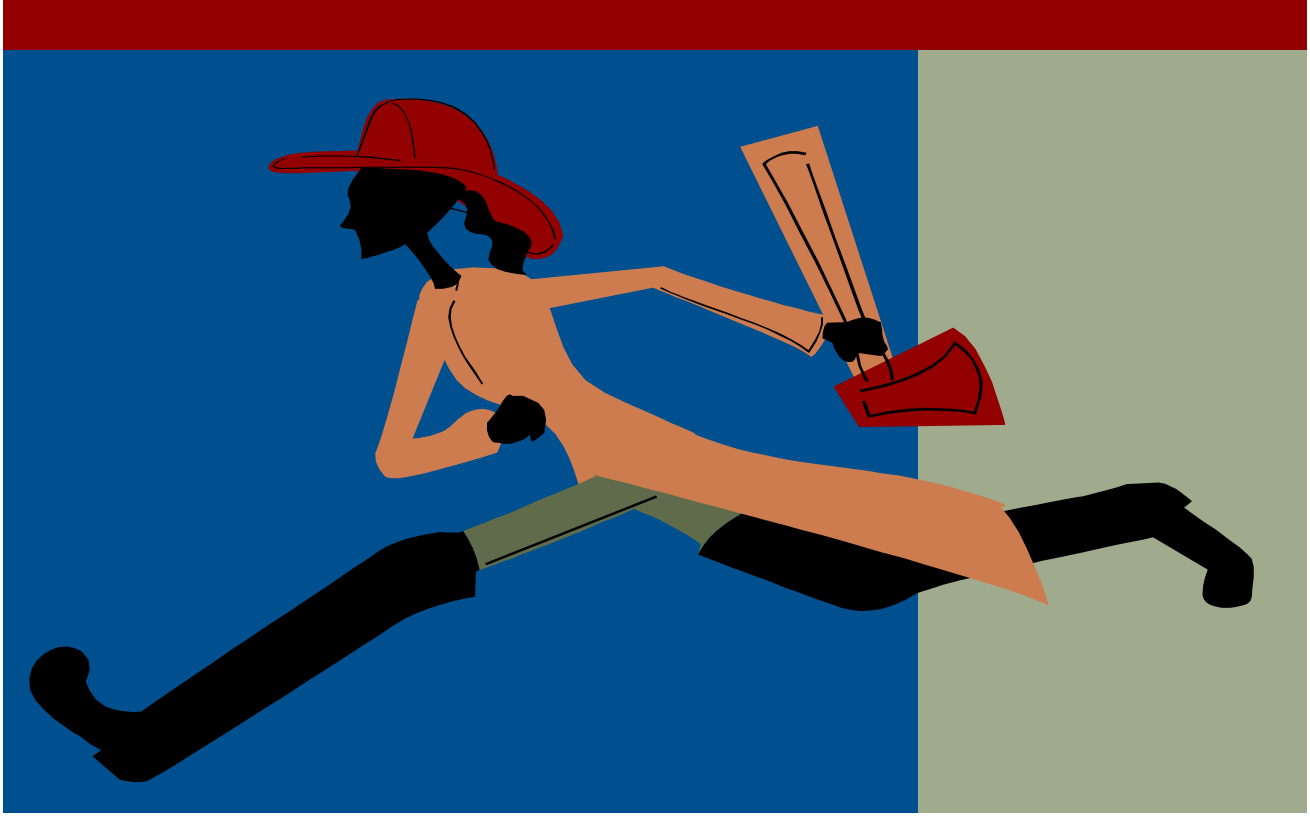
"StrataVia's expertise and professionalism, combined with the full-time coverage and cost savings associated with the outsourcing of this IT function to a team of professionals, made it an easy choice to go with StrataVia," said Digital Reliance CEO Brick Thompson.

The database had to be up and running ceaselessly and had to offer lightening-fast response times.

StrataVia is proud to have served an innovative market leader like Digital Reliance.

* Digital Reliance has been acquired by Vercuity

Data Palette in Action



Just how cool are automatic fire sprinklers and Data Palette? Let's see what Rainier Luistro, Co-founder, has to say...

Ah, the sanctity of your hotel room after a busy day of working breakfast, meetings, working lunch, meetings, working dinner and more meetings. Lie back, relax, light up a cool camel, draw in, blow the smoke out, watch three smoke rings expand and contract … get drenched when the automatic fire sprinkler system comes on, accompanied by a klaxon, screams and kafuffle as doors open and people start running, then the heehaw, heehaw, screech, troomptroomp of fire engines. Blast automation! But it's pretty efficient, right? Firefighters have fewer fires to fight.

Here is an example of how the automation features within Data Palette are solving urgent business efficiency issues and stamping out firefighting.

Client: A multinational online retail company

Problem: For the past few months, sudden and unpredictable spikes in CPU utilization have been causing response time problems. On-line customers are putting items in their shopping carts, but abandoning the site before the checkout because it's quicker to get the car out and go on down to the mall. It is not known whether the database is causing the problem, or merely suffering from the effects of it. Either way, the database is at the center of the issue.

Complications: Finger pointing. Your DBA is being sent around in circles. The manufacturers responsible for various parts of the IT infrastructure (the network, the database, the servers, the SAN) are refusing to take responsibility. When it has happened before, your colleague managed to get a work around and fix it, temporarily, but she's kayaking in Oregon just now and you can't find her records and don't know what she did.

Solution: Data Palette is set up to monitor not only the database, but also all other components that affect the performance of the database (OS, network, etc.). It tracks key performance indicators over time. When the CPU spikes occur, Data Palette spots them and captures a complete environmental snapshot, and records it in a central location.

Outcome: The issue is found to lie in a batch job that is responsible for issuing bad, resource-grabbing SQL. Data Palette shows up the problem SQL statements, which can then be re-written more efficiently, thereby resolving the problem. The issue and solution are stored centrally, a SOP is written to anticipate a future event, and it never happens again, because Data Palette fixes it before it has the chance to damage your business. Your on-line customers are happy. They know the site will respond to them quickly and efficiently, so they buy more, reach checkout quickly, and the transaction is over in an instant, freeing up bandwidth for many more customers to enjoy the experience of shopping with you.

Why Data Palette?: Unique ability to take a 360 degree view of the complete data environment, track data over any period of time, and drill down as far as needed to diagnose problems, implement a fix, automate it, and prevent it occurring again.

Section 3 Taking the Stra

Articles in the first 2 sections of this part of the eBook described the changing database administration market and the need for a new strategy and the benefits of following that strategy.

Here in Section 3 we provide articles designed to show how to introduce e and implement this strategy. We show what we, StrataVia, have done, how other companies have done it and how you can recognize what you need to do.

StrataVia has realized that automating operations will keep costs in check as growth spurts. We believe there is a key benefit to customers: the first step to automation is standardizing activities that make up a task, and "When you standardize, quality goes up," according to the IBM Executive responsible for Services Delivery in India, quoted in Information Week, June 12, 2006.

Companies who outsource are looking for more than body shops that take over their operations and simply deliver "business as usual", which is how organizations stagnate and slip out of business. When Accenture surveyed several hundred C-Level Executives on the subject of outsourcing ("Driving High-Performance Outsourcing: Best Practices from the Masters"), they observed that many companies "look for continuous cost reduction,

ategic Road

which implies continuous process improvement… While most are looking for upfront cost savings, what companies really expect are continuously declining costs. This simply cannot be achieved by doing today's process the way it is done today."

In *Right on the Mark*, Matt Wilkinson, VP Worldwide Services, describes the Discovery Process that we take people through to see if the automation and outsourcing route is right for you.

The next article, How Mature Are You, has a quick quiz that you can take to get a bit of an idea about where you are in the operational maturity stakes. See how you do in the quiz and decide if you would like to go through the Discovery Process.

In *Stay in Charge*, Ron Krubeck, VP Engineering, discusses with a skeptic the practicalities of implementing the strategic road.

These articles describe OMM or the Operational Maturity Process. StrataVia has developed autonomics software, Data Palette, which is the major tool in our OMM. We applied OMM with Data Palette to increase our own level of operational maturity. We use Data Palette with OMM when managing our clients' database operations. The whole purpose of OMM and Data Palette is to automate and improve your operations and bring them to a higher level of maturity.

The newest buzz in the IT industry is autonomics? The final article in this DataBuzz special illustrates why autonomics and mature operations are uttered in the same breath. Our expert Venkat Devraj, author of Oracle 24 x 7 and esteemed co-founder of StrataVia, shows why autonomics is the way to go.

Right on the Mark

Is that a superhero, I see? Yes ... it's a DBA in StrataVia's Managed Services group... Matt Wilkinson, VP Worldwide Services, shows how DBAs can retain superhero status.

In days of yore, all was bright and brisk in your stores and in your data processing centre. Buyers were coming in their droves, shareholders were happy, staff were happy, expansion was happening, you were investing in bigger and better databases and your CIO was building quite an empire.

But then something happened to your DBAs. Erstwhile upbeat superheroes, flying in, out and around, rescuing servers from overload, fixing crashes and correcting errant refreshes became slithering elastic bands, stretching and snapping as they catapulted from one problem to the next and back again.

Then the CFO became unhappy because she wasn't seeing the expected ROI from the technological investment. The VP of Sales started getting gripes from customers because items hadn't shipped when they should have, and he starts blaming the COO, who says that the database is not working again and why do we have so many DBAs but everything is broken.

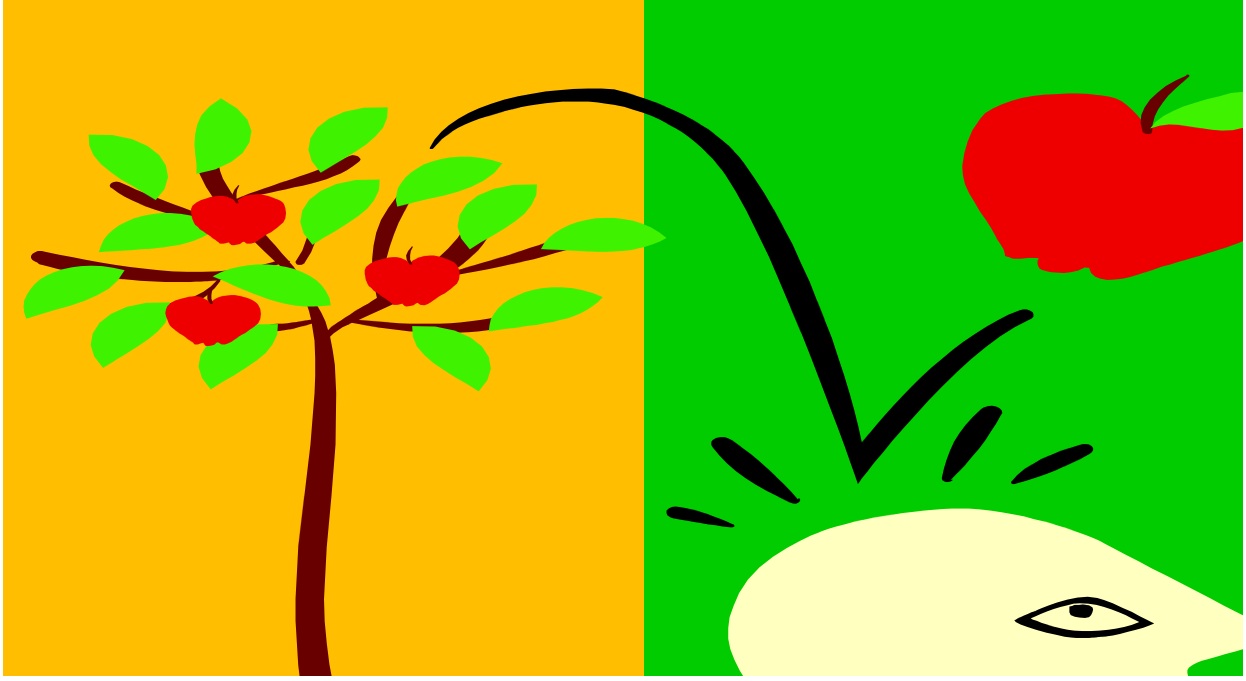
Could outsourcing and automation solve your problems? Here's what we would do to help you find out if it is right for you.

We can perform a discovery exercise to quantify the profile of your database environment. We can run a health check to see how well your databases are running against Key Performance Indicators and recommend actions for cleaning up and tuning the environment to get higher performance. We can show you what can be automated and make it happen for you. Tension will not only be released from your stretched DBAs, but also from your expensive infrastructure (and that means less money to be budgeted for upgrades). We commonly find that in a typical retail online transaction-processing model (OLTP), where you back-up and refresh POS or other transactional customer data nightly, that these large loads can cause a space crisis and breakdown in the middle of the night. That needn't be. We can implement SOPs (Standard Operating Procedures) that will automate the process, and part of that automation will include a fix to create space where needed. Our product, Data Palette, is also clever enough to heal your environment. anticipating problems and fixing them ahead of time.

a permanent, ever watchful DBA, who never goes sick, never has tantrums, never has bad days, never resigns, and performs what you define as best practices until the cows come home.

The StrataVia Managed Service solution is differentiated from other offerings by our use of our intelligent technology, Data Palette, which brings a permanent, ever watchful DBA to your site, who never goes sick, never has tantrums, never has bad days, never resigns, and performs what you define as best practices until the cows come home. We offload the mundane, repetitive tasks to Data Palette, which enables us to provide 30-60% cost savings and free up in-house DBAs to work on the tasks that you don't wish to outsource, or engage in those vital tasks such as capacity planning and liaising with the end users to ensure that future needs are met - tasks which so often fall by the wayside when the flames are leaping out of the database and threatening to bring meltdown to the company.

How Mature are you?



Just as children mature at different rates, so too do organizations. Editor, Alison J. Macmillan has developed a quiz to help you find out where your organization's operations are in the maturity stakes.

As they mature, some children seem to put on inches in height in a steady, hardly perceptible flow, and others seem to grow in fits and starts. Studies show how differences in the timing of children's growth spurts relate to the speed at which they process information. Early bloomers can process information more quickly. Organizations, too, grow at different rates and they, too, vary in their capability to process information.

Through a Discovery Process, StrataVia looks at how you handle your information to determine the maturity level of your operational processes. You can get an idea of your level of operational maturity by completing the following quick quiz, choosing only one answer for each question:

A Our workflow management …

1 is haphazard; documentation is non-existent and procedures inconsistent.
2 is based on planned workflow procedures, and mostly the plan is followed.
3 is automated, repeatable, and well documented.
4 gives us operational pro-activeness, processes are highly instrumented, and there is close to 100% automation.
5 gives us operations perfection. Processes are in a continual state of evaluating change and adapting to change at no cost and without manual intervention.

B Service level agreements …

1 are unheard of, or if they exist people do not have to adhere to them.
2 exist and are documented and people attempt to live up to them, but we don't know because we don't measure.
3 are lived up to because tasks are automated and repeatable to give consistent levels of service.
4 are surpassed because operational pro-activeness leads to 99.999% uptime and there are highly sophisticated contingency and failover plans, performance is controlled, and we go beyond proactive and reactive maintenance to adaptive maintenance.
5 are continually optimizing and there is never any downtime.

C Our DBAs …

1 spend most of their time on manual processes, and there are lots of human errors.
2 carry out operational tasks involving significant manual intervention, and there are errors, but they are limited.
3 make few errors and are freed up to focus on value added functions such as architecture, planning, analysis, design, and programming.
4 are freed up to focus on total quality management because there is close to 100% automation, and they are firmly in charge.
5 are hardly needed because the intermediary has been eliminated and end-users interact directly with the systems and services.

D Downtime/system failures …

1 are the norm, as uptime is very unpredictable.
2 are our "Achilles Heel" because when there is a disaster it takes more than 4 hours to get recovery, we lose revenue and productivity, and that's because our DBAs are good at general maintenance but trip up when doing disaster recovery.
3 are relatively infrequent and most recovery scenarios are anticipated and mechanized.
4 are prevented as failures are anticipated and steps are taken to prevent it.
5 are not in our vocabulary.

E Can you scale your operations?

1 You are joking aren't you?
2 With different teams protecting their own little corner? ...I don't think so…
3 We have automated processes, but we can't find the people to take us forward and taking on more people means we spend the automation savings on staff costs.
4 Our trend analyses help us and we're at the adaptive maintenance stage.
5 Full-blown optimization is our next step but it's unrealistic given today's technology.

How did you do? If you answered mostly 1s you are at Level 1, mostly 2s you are at Level 2, etc. The diagram shows what each level means:

A word of warning: if you are distressed to discover that you are at Level 1 or 2, and seemingly nowhere near 3, 4 or 5, then don't worry too much. It is a big jump to get to Level 3 from 2 and it is likely to be another year before Level 4 is fully attainable. Level 5 is operational Nirvana, and if you're there you really are in a state of perfection (just ask yourself if you're being completely honest or just naively complacent!). We find most organizations are at Level 1 or 2 and we can bring them to Level 3 with the Level 4 features of anticipating problems before they occur and fixing root causes by implementing irreversible corrective action.

During StrataVia's Discovery Process, you will obtain a clear idea of what level you are at. You will also discover what steps are needed to get you to your desired level (if you are not there yet), and the service levels and costs involved. The process can take between 4 and 8 hours involving meetings with your systems and development DBAs, Systems Administrator(s), IT Manager and/or Director. Your database infrastructure will be documented, including detailed information on high and low use periods, concurrent sessions, transactions, back up systems and methods, downtime statistics, change control procedures and security measures. You will be encouraged to consider the drivers and feasibility of what you can attain (given your cost constraints). StrataVia will help you to establish benchmarks, assess risks and determine what resources you need to

step up to the next level. Benchmarks and measurements, after all, are very important as you will want to see clear and measurable improvements. Otherwise the whole exercise is a waste of time.

The article *StrataVia grows up*, in part 2 of this e-book, provides a case study of our experience of attaining Level 3. We've matured and have scaled our information processing capability and now take others to new heights.

Stay in Charge

No need to shudder at the thought of how to introduce another tool into your organization. Data Palette is a strategy and Ron Krubeck, VP of Engineering shows that you don't need a blank canvas.

I have previously waxed lyrical about art and architecture. With a blank canvas and a vision artists can unleash their creativity and imagination and build their idea of perfection. "Dream on", said one of our readers. "In business rarely are we able to start from a blank canvas." You've got your existing tools, fine DBAs who have been loyal to you over the years, processes and systems that help you function. "I'm used to the quirks of my business, just like I'm used to hitting Ctrl-Alt-Del when my PC decides to freeze for no reason. We get by."

Well, at StrataVia, we believe businesses can soar. Let your competitors make do, while you standardize, automate and centralize your database administration so that it plays a strategic role in your organization.

"Sure, it would be great to document in Standard Operating Procedures (SOPs) what works, hold them in a central location and have the workflow reeled out automatically at 2 in the morning or whenever, and never worry again about letting down my customers", you admit. "But getting the time to work out the SOPs is my big problem. If our DBAs had the time or inclination to do it, it would be done already. They are so caught up with patching systems or installing updates all the time just to keep the system running and there's not a lot we can

do about that."

Well, that example gave me a great way in to explain how you can keep your baby and the water in the bath. Take the process for applying database patches. When these endless updates appear, you probably have procedures to verify the environment, operating system requirements and patch availability for the system version you are using. You have direct access to the host to download the patch, unzip it, verify the installation instructions and apply it. You test on a development server, quality assure and if everything is AOK go ahead. It's only taken a few weeks and then the next patch comes out…

Data Palette 'cans' regular processes like patch application, backups, refreshes, monitoring, reporting and alerting. You can roll them out off the shelf, so to speak. But your organization is not exactly like every other one, so Data Palette allows you to customize its SOPs or write entirely new ones ensuring that the right actions are applied to the right elements of your configuration.

But therein lays another objection! "We already have some best practices in our organization that work for us. Why should I use yours or someone else's?" Agreed, say I! Use Data Palette to capture those best practices in a standard, cross platform and automated way. Set your environment up how you want it and then let Data Palette notify you when one of your best practices must be performed or let it simply go ahead and apply those best practices in a "lights out" fashion.

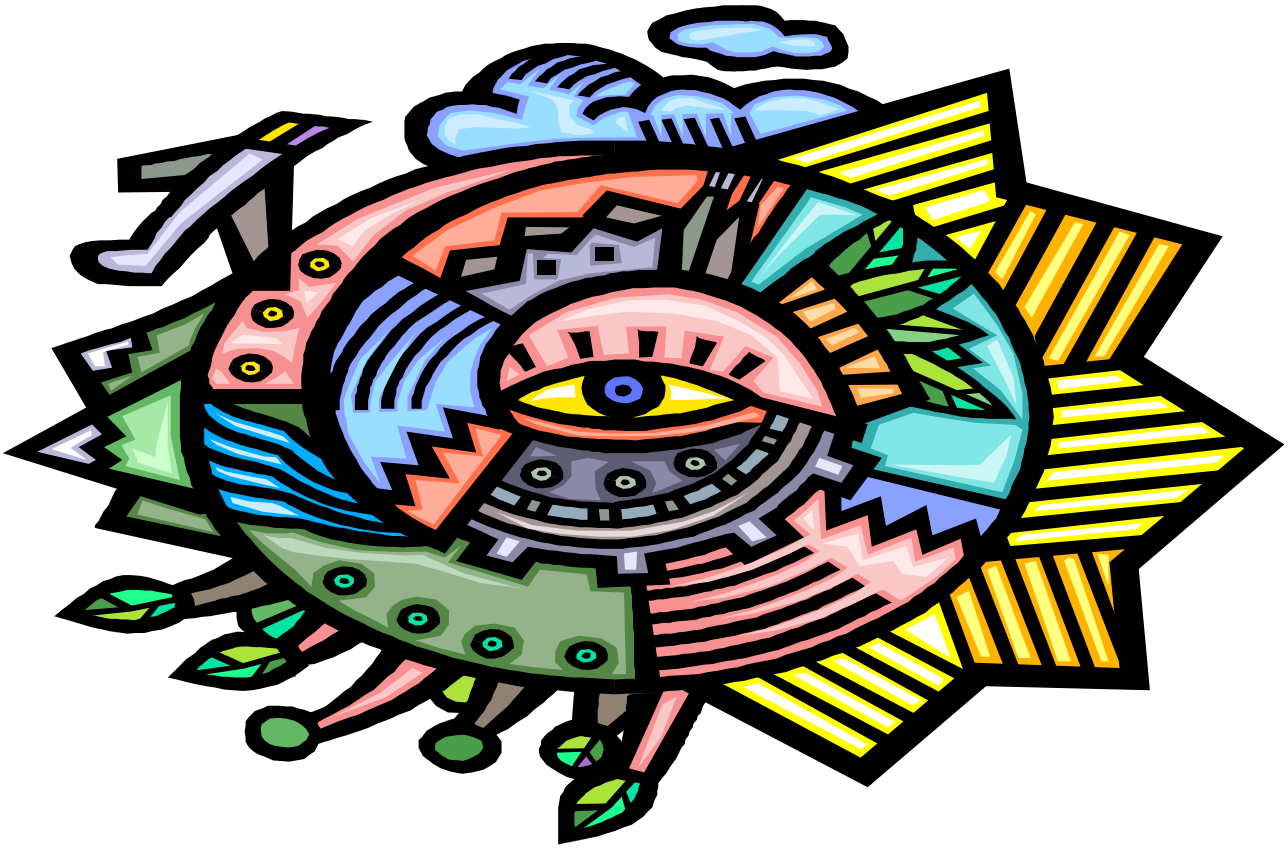
"Oh, my DBAs are gonna love this and buy into it - not!" says the skeptic. "They'll think they'll have nothing left to do and lose their jobs!" I have an answer for that, too. Once they have all the mundane tasks taken care of through automation, they can then start doing all of those tasks that they could never get around to before like application or performance tuning, writing additional SOPs to bolster your business, and a host of other higher value tasks.

Data Palette not only helps you improve the efficiency and effectiveness of your business as it is currently, it is a key tool to enable your company to grow and respond to 21st century challenges.

If you are a retailer, for example, you are probably seeing geographical expansion, requiring more subtle differentiation in your product lines, and an exploding trend towards online retailing. This has a big impact on your data environment. Your databases will be stretched for space, they will utilize multiple platforms, they will need to carry out additional tasks, manage more complex shipping logistics, integrate different suppliers and buyers. You have a special on-line offer and your traffic increases slowing down response times, thus driving customers away faster than your pages can load.

Rather than having your DBAs fight the response time fires, wouldn't it be nice to have them tuning your applications so that fires don't ignite in the first place? Data Palette, through SOPs and automation, allows them to do just that. Data Palette is the only tool that lets you do what you want to do, rather than what your data environment limits you to.

Autonomics Demystified



Our expert, Venkat Devraj, co-founder of StrataVia and author of Oracle 24x7 demystifies autonomics and explains how it applies to databases and operational maturity.

Autonomics, in a nutshell, refers to self-managing computer systems. You might think of the human body as self-managing, and mostly it is, e.g. when you cut yourself mildly your blood will begin to clot to stem the flow. However, if you cut yourself deeply then it is likely that medics get involved to make you better, and you may need stitches to help you heal. If you were truly autonomic you wouldn't need the medic or the stitches.

Autonomic software has the capability to involuntarily manage and fix itself and even anticipate when it might be about to need fixing and prevent the breakdown in the first place. Many of us get flu jabs at this time of the year so that we don't get flu. If we were autonomic, the inoculation would happen automatically without you having to make an appointment, journey to a doctor's office, and wait around for a while before your arm is subjected to the tortuous needle being pronged into it. Moreover, if we were autonomic our bodies would only give us the inoculation when we are likely to catch flu.

As you have seen from article 2 How mature are you?, in this DataBuzz, attaining full Level 4 operations maturity (proactive self-healing) is currently a challenge, but as autonomics develop, that is the future. That future is already here in some products. StrataVia's Data Palette, for example, can be set up to be autonomic, and when it is installed alongside your databases, it can make them autonomic. When Data Palette oversees your databases, your operational maturity increases, and the more mature you are, the more self-sustaining, self-maintaining and self-healing your databases can be. Wave goodbye to spending valuable person-time on mundane administration and fighting fires, to human errors, unanticipated performance dips and outages, to losing revenue, customers and credibility; and say hello to smooth running operations, optimum customer service, automation, and a team of DBAs with time to reach out to your business units and plan for future requirements. In short, converting database administration into a profit center from a cost center.

I'm sure some of you anticipate the day when your children will leave home, and will be able to look after themselves, manage their own homes and careers and mature. Autonomics software configures, maintains, updates, and heals your databases intelligently without your intervention. How mature is that?"

For more details around this subject, refer to Venkat's blog at http://vdevraj.blogspot.com.)

The DataBuzz eBook Issue
Part Two StrataVia and the 3 Ps

Section 1 The StrataVia Vision

Section 2 People

Section 3 Process

Section 4 Product

Section 1 The StrataVia Vi

ExtraQuest was born in 2001 as the brainchild of two IT industry experts, Venkat Devraj and Rainier Luistro. At that time they created a managed services business that took over all or part or their clients' database administration functions They built a solid company which delivered measurable value to its customers and gained a reputation as being a highly cost-effective outsourcing organization that enabled its clients to delegate a key and strategic function - care of their valuable data assets - to a trusted group of talented individuals who were united in the goal of improving the operational maturity of the entities with which they worked.

Since that date, the brainchild company and its product, Data Palette, have grown in size, stature and reputation, and ExtraQuest emerged on 18 July, 2006 as StrataVia.

StrataVia's journey from conception to maturity is described in this section of the eBook.

sion

In the first article, *After the Fire*, co-founder Rainier, Luistro, describes his vision and the main reason behind the birth of the organization: to provide companies with the best possible means of administering their data and increasing the availability (and therefore value) of the data to the company that owns it.

As an organization designed to enable other organizations to grow and mature, StrataVia, too, had to go through a maturing process. StrataVia takes organizations through a process, the Operational Maturity Model, to improve their ability to use their IT as part of business strategy. In the article, *StrataVia Grows Up*, co-founders Rainier Luistro and Venkat Devraj describe StrataVia's experience of gaining level 3 operational maturity.

In the third article in this section, Brian Staff, VP Marketing, provides background to the company name change, which reflects the strategic nature of IT and database administration. Companies must continue to evolve in order to keep up with the needs of the market and the demands of customers. Marketing, more than any other department, needs to adapt to change ahead of time so that trends are anticipated in advance. The re-launch of ExtraQuest as StrataVia and the initial launch of the company's product, Data Palette (formerly known as RoboDOC), were key events in the history of the company and its progression to a position at the forefront of the IT automation industry in general and the database administration market in particular.

You can read about StrataVia in the news here

After the Fire

After the fire, all was calm ... and smoky. But co-founder Rainier Luistro's vision cut through the smoke. StrataVia (then called ExtraQuest) was born and Data Palette (then called Data Palette) set about rescuing companies ...

I felt I was watching Bill Murray in Groundhog Day. He gets a plea for help from the Support Desk to fix Joe Blow's application because it's running slow. He heaves himself out of his chair, picks up a coffee and lumbers on round to the DBA room "Hey, guys and gals, that guy from yesterday says his system is still going slower than a tortoise after a heavy night out." And the roomful of DBAs gives him no end of solutions. All of them different. All of them highly recommended.

"Thanks, guys, I like Jinx's solution, I'll go phone Joe and get him off my back." Whistling to Shirley Bassey's Heh, Big Spender. The minute you walked in the joint..., Bill jives back down the corridor, and passes the lunchroom where he meets five more DBAs. They give him five more solutions that are different. Bill's not whistling now, he's scratching his head and thinking "wouldn't it be better if these people marched to the same band?"

As I saw this scenario played out again and again, I had a compelling desire to help the DBAs improve their lives. If they could stop fighting fires, their companies could reduce their DBA budgets and serve their clients better.

Wouldn't it be better if we got the best and most efficient way of resolving the issue, documented it, and put it in a best practice bag that goes with the DBAs wherever they go? We can gather all the best practices in the DBA world put them on a repository and share it with everyone. Even more, DBAs can instead do the more interesting fun part of DBA work like database architecture, performing trend analysis, checking and testing out new DB products and features to benefit the organization, and much more.

The seeds of this vision gave birth to ExtraQuest Corporation on January 10, 2001. We vowed to commit ourselves to reshaping the DBA world through standardization and process automation. This coupling produced Data Palette, the tool you can use to help document your Standard Operating Procedures, and the framework that automates your processes. On July 18, 2006, we launched Data Palette to the world, naming it Data Palette. Having turned database administration into strategic work for many, we relaunched the company as StrataVia. StrataVia knows it is not the tool alone that will ultimately solve your problems. StrataVia also supports your people and nurtures a mindset that believes in standardization and automation.

If your DBAs' groundhog days are pager calls in the wee hours of the night, upset vacations and family time, panic attacks when they can't contact the on-call person to fix something, and heavily pounding heartbeats when they miss the SLA deadline, then your temperature is likely to rise when you hear about it the next day. My vision is now a reality through StrataVia and I am proud to stamp out the groundhog days of the companies we serve. How's your day?

We can
gather all the best practices
in the DBA world put them on a repository
and share it with everyone. Even more, DBAs
can instead do the more interesting fun
part of DBA work

StrataVia Grows Up

Co-founders Rainier Luistro and Venkat Devraj talk about StrataVia's journey to operational maturity.

Incentives and rewards for a job well done are key ingredients that keep us going through thick and thin. StrataVia embarked on its quest for operational maturity because the reward was the incentive. The reward we wanted was our vision of StrataVia to come to fruition. We envisioned Data Palette in the hands of every DBA in the community and a product suite that transformed how database administration would be done in the near future. We wanted an organization breaking boundaries by using the autonomics software we'd developed. We would use it in our Managed Services business to enable others to gain the benefits of autonomics. As our business matured, we would also license the technology on a standalone basis. We would not only leverage economies of scale and metrics to give the highest, consistent levels of service in the outsourcing market, but also we would pass on to others the savings that would be derived from using automation.

We cycled through the same process that we now take others through. It involves four stages: Think, Build, Measure, and Evolve.

During the Think stage we made our vision a living, breathing mantra. We wrote it down and pictured it. However, the key thing was to identify

the business reasons behind it and the quality and cost benefits to establish a genuine business rationale to walk further up the OMM path.

It was essential we attained OMM Level 3 as swiftly as possible just to stay competitive in the DBA outsource market. Otherwise:

We could not attain economies of scale via consistent levels of service.
Administrative costs would continue to soar due to incremental involvement of more and more human DBAs as additional customers joined.
Correspondingly, human errors and occurrences of downtime would rise.
OMM Level 3 was the only way to attain a clear differentiation from other providers and also to derive metrics and pass on cost savings to customers.

Once the goals and a roadmap were set, all employees committed to step up and contribute towards reaching and retaining them.

During the Build stage, we worked from the roadmap, assessed where we were weak, and developed plans to get on board the components necessary to implement the process.

We needed to capture all the details - Primary and Secondary DBAs began documenting their standard operating procedures (SOPs) of daily tasks across their clientele. Once these task recipes were documented and uploaded into Data Palette, every team member, regardless of their location (US or India) and shift timing, could follow the SOP manually.

We needed to standardize - Once the final, optimized SOP was documented and agreed on across the board, it became a comprehensive blue-print for automating the task, as well as the corresponding test, notification and back-out procedures

We needed to automate - Our Engineering team and some of our senior DBAs that are "ace" scripters, began the task of automating the documented SOPs. Before automating them, the scripter would look at parallel SOPs across customers and optimize the

processes such that similar problems and tasks were handled in a consistent manner. The SOP framework within Data Palette was leveraged during this process to allow ongoing changes in the target environment to be accommodated in the automation code routines without hard-coding assumptions.

We needed to sustain motivation - It was hard work and our DBAs put in long hours, but our strong overall commitment to enhancing our own and our clients' operational maturity kept us going. We knew the hard work was all up front and once attained, everyone's lives would become easier via reduced errors, outages and unpredictable dips in performance. We announced periodic rewards to employees that were contributing the best SOPs. Team morale was high because more than the monetary rewards, they could see how the SOPs were positively impacting customer SLAs and their overall satisfaction ratings.

We needed to keep everyone on board - Not every DBA participated in this process right out the gate. Once we started making progress, the feeling was infectious and eventually resulted in more optimized SOPs, corresponding automation routines, workflows and events/rule-sets within Data Palette for autonomic execution of SOPs. All of these helped us get to a much more stable environment than previously.

We needed to use what we developed - One challenge was ensuring that all our DBAs were actually using the SOPs. Because of the software's audit capability, finding out was relatively easy. All we needed to do was compare the tickets in our Incident Management system with the corresponding SOP historical audit screen.

We needed to learn from what the DBAs were bypassing - We worked to understand "WHY" first, then ensured the SOP accommodated the appropriate corrective action. DBAs were trained to look for SOPs upfront in Data Palette's Knowledgebase.

As part of the Measure stage, we defined our KPIs and set benchmarks so that we could keep on track and measure and monitor via quarterly business review sessions the benefits we were gaining. When we hit a snag we had a basis for sorting it or changing

direction.

As we grew, we continually assessed what skill and knowledge gaps we had to fill, charted the necessary steps, and the time, people and budget involved. We realized that every new employee needed to embrace this operating model. Your operational maturity is only as strong as your weakest link. If an employee or group of employees do not follow the established process and use SOPs, then the whole plan is thwarted. Accordingly, we devised a Data Palette and Operations training and certification program that every new employee needed to successfully clear before he/she started supporting clients. Existing employees are encouraged to get re-certified annually. Our director of database services rolled out a Data Palette Users Group to get everyone trained, involved and continually motivated.

As we migrated towards our goal, we reviewed each step against the benchmarks to ensure our performance levels were increasing. One of our benchmarks was First Time Right (meaning that an issue was properly addressed the first time it was observed). Our problem diagnosis capabilities, therefore, had to be first-rate. With Data Palette these capabilities went up and we were able to diagnose symptoms and root cause rapidly. Even where a problem was a "one-off" and we had no SOPs built for it, we found that the problem diagnosis capability narrowed down the solution options such that even the right manual solutions could be applied quickly, thereby meeting related metrics such as On Time Delivery.

The maturity process didn't stop and has still not stopped - far from it. We are continually evolving and noting where more improvements can be gained and we pursue these relentlessly. As we identify new areas where we can evolve, these get properly thought through and the entire Think-Build-Measure-Evolve cycle continues.

You can access our White Paper on OMM here.

What's in a Name?

So, ExtraQuest is now StrataVia. "Why?" you might ask. "What for?" you may add. "Why should I care?" Brian Staff, VP of Marketing tells you what's behind the name and the changes, and talks a little bit of Latin.

With the launch of our product, Data Palette, we are opening a new chapter in the history of the company, and a new name is warranted to accompany this giant forward step, a purposeful stride that takes the company from the tactical to the strategic. Why strategic? Because database administration is one of the most complex and, therefore, one of the most expensive areas in the IT department. With the launch of Data Palette to the market at large, we are providing a solution that allows IT departments to improve operational efficiency in the DBA area and bring about substantial cost savings, which has to be seen as a strategic initiative.

By a happy coincidence, StrataVia also translates to "broad way" in Latin, and our new offices are on Broadway in downtown Denver, so the new name is doubly relevant to our new identity.

And why Data Palette for the name of our product? When you see someone using the product, blending the components - such as monitoring, alerting, reporting, ticketing - and building them into a framework where they can be run automatically in the future, it may remind you of an artist mixing paint, drawing different elements together to make something far greater than simply the sum of the parts.

Database administration is an art, and every artist has to do some boring and repetitive things so that they can go on to be creative. Artists have to mix paint before they can start, and they have to clean up after they finish, unless they're willing to be confronted by messy brushes the next time they begin work. Likewise DBAs have a lot of routine stuff to get out of the way, and Data Palette is designed to help them automate many of their day to day tasks, and also to "clean up after them" by auditing the tasks and leaving a clear account of what was done.

You'll see a lot of brush strokes on our website and marketing materials. They are there to remind you that we're automating the mundane and repetitive, freeing up DBAs to energize the right half of their brains, to focus on the creative part of their jobs, and to help the business users get more value out of their data. It's the strategic way to go to get more out of the data in your palette.

Section 2 People

StrataVia's vision is built around three Ps - product, people, and process. At the heart is our Product, which standardizes, automates, is proactive, and provides a 360 degree view of your operations. This heart is nurtured by our People, who are expert DBAs with an average of 10 years' experience. Industry standards are the platform for our Process, which keeps you at the leading edge of business.

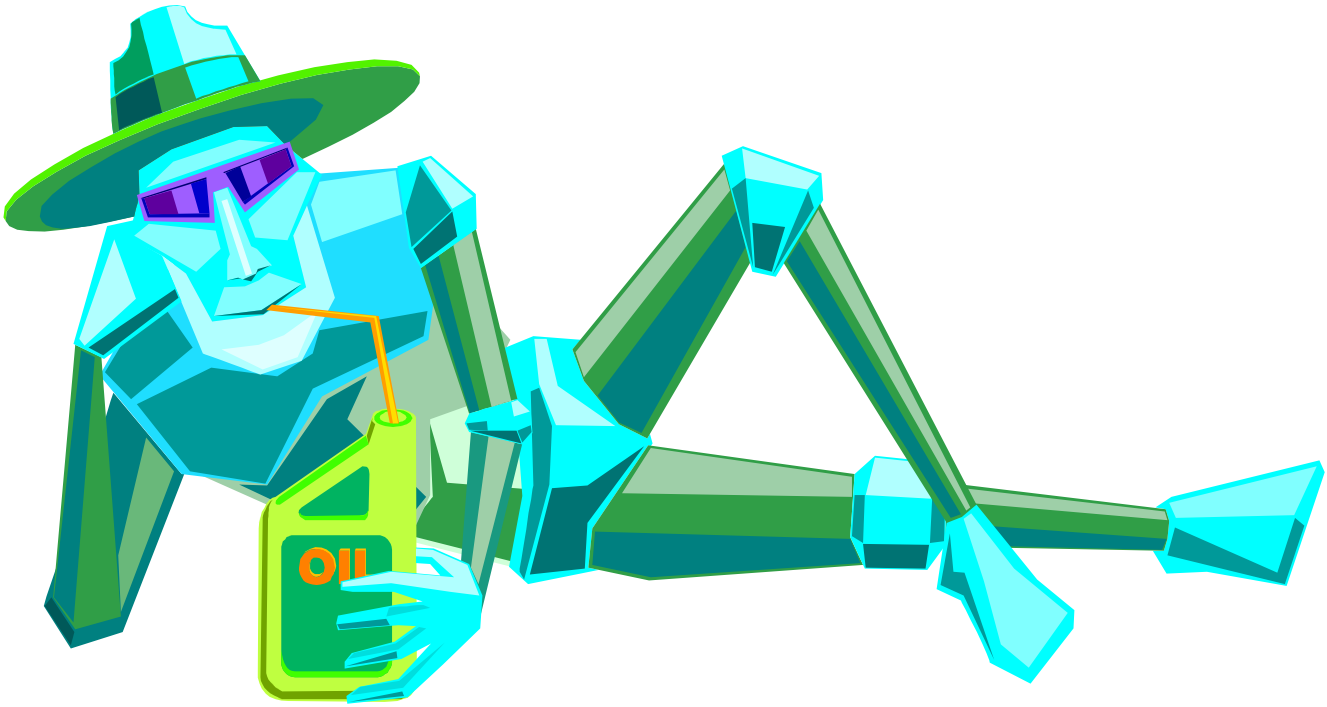
The next 3 sections provide information on the 3Ps

This section has articles on some of our key people - people that make it possible for us to provide service excellence.

The first article features Julie Johnson, an Expert DBA; the second introduces David Graham our Director of Software Engineering and the third profiles one of StrataVia's longest serving employees, Steve Schwarz, and expert engineer.

A view of StrataVia's offices in Downtown Denver, Colorado

Programmed for Success



At 8 years-old she wanted to program robots. Now, she is a Data Palette expert. Editor, Alison J. Macmillan met Julie Johnson and got to know one of StrataVia's expert DBAs,

StrataVia's black belt DBA, Julie Johnson, took a circuitous route to get here, but we're sure glad she did as she is one of a team who makes it possible for us to guarantee you service excellence.

In the article *Automate your way to cost savings*, Venkat extolled the virtues of expert DBAs who automate mundane tasks so that they can free up their time for more creative tasks. Well, Julie even filters her emails with automatic rules so that she need only spend about half an hour to get through more than 500 awaiting her every morning. She can then spend time being proactive and creating automated reporting scripts for push button execution. Julie's major clients no longer need to worry about their tablespaces being stretched to the limit and knocking them over, Julie is automating data file additions.

Julie says: "there's some things you can learn, and some that only comes from experience." DBAs at ExtraQuest get breadth and depth. "We have so much exposure to so many environments - from Oracle 8i to 10g, RAC implementations, online transaction processing, and data warehousing systems. We see it all," she says. That gives Julie personal and professional advantages. "We learn so much everyday. Working in a large team, we glean knowledge

from each other. If there were only 2 or 3 of us we wouldn't generate new knowledge, we'd have to search for it." Not only that, because the team works so closely together, documents everything and has a change control system, when Julie is on vacation, anyone in the team in India or USA can manage her clients expertly.

Proactivity could be Julie's middle name. She learned database administration on her own by reading documents when she was a software instructor. "I spent four solid months getting into Oracle. There are always caveats and exceptions to the rules and I learned that through experience." If she comes across something new, she knows she can get an answer on the Internet or at Oracle MetaLink. Julie says that the team at ExtraQuest "want to crack it, are persistent, resourceful people." She says "we need a sense of humor because it can be like a pressure cooker. DBAs have a notorious reputation for being arrogant and cocky, but not here, we are amicable and share knowledge."

Julie learned about web development in Japan when she was there teaching English. "There were no books in English so I ordered IT books from Amazon at $500 a shipment and learned on my own," she says.

But Julie's childhood wish to program robots was not something she automated. She took a degree in German and spent a year at University in Germany; was a ski bum for a couple of years, and went to Japan for fun. Ever innovative, rather than use her one-way ticket home from Japan, she came back via Tokyo, Hong Kong, China, Mongolia, Russia, and Europe. An intrepid traveler, energetic mountain biker, and busy mother of two daughters, Julie lives life and work to the full. "Things get messy with children and databases, but there's great rewards in the end," she chuckles.

The Art of the Engineer

Here the spotlight is on David Graham, Director of Software Engineering, an architect, who sees his work, leading the development of Data Palette, as an art. Alison J. Macmillan, Editor, spoke to him and found out why he is so special.

"A programmer takes specifications and types in code. An engineer designs a system, its architecture and components, and talks to users on usability. An engineer is responsible for the whole vision. We hire engineers at StrataVia, not programmers," says David.

It was a chance meeting with Venkat Devraj, through a mutual acquaintance, and an introduction to Rainier Luistro that marked David's move to a career where he could work with systems as a business element. "They were so excited about the company and product that I couldn't pass up the opportunity to be part of it," he says. "Now I am responsible for something that many people use, and I want to affect as many people as I can through my work."

David is pleased to be involved in something important to make the life of a DBA easier. "We are automating time-consuming, mundane administration tasks so DBAs are freed up for interesting design and performance work." He says he and the rest of the team are not "people who like to write 'clever' code that doesn't have an affect on anyone. We're here to make people's lives

easier." David's driving principle is 'usability', and he takes feedback from DBAs down to the smallest level so that even the design of the screen layout is right. "The team here is very open and relaxed and we have a great time creating the product. It's fun to work with really smart people who make each other better," he says.

Data Palette doesn't only help DBAs; managers at all levels in the business benefit as well. "With the report dashboards they can see the environment, whether it is overburdened, and then make business decisions," says David. "Without correct information executives can't make strategic decisions on, say, building up data centers. When the technician advises a new server is needed, Data Palette backs that up with information."

David gained his expertise at IBM and through spending many evenings and weekends volunteering on open source projects. "I gained lots of experience working with the Apache Software Foundation, one of the largest open source groups, and for a time I was a major contributor to Struts, the most popular Java Web application framework." He didn't have as much time to do these things when he started at StrataVia. He remembers "sleeping on the floor of the office, waiting to hear the email signal the arrival of new specs when Venkat and team were in another State, building the features for a pilot". Although David put most other things aside for nearly three years to work on Data Palette, he is proud of the way it has worked out. And he did find time to get married last year.

With the launch of Data Palette and a bit of a breathing space, David can spend more time on one of his other interests "researching new technologies and programming languages like 'Ruby' that was created in Japan 10 years ago. Learning new technologies and languages changes the way you think about problems," he says.

David drives through life. Once he and a colleague worked on a problem till 4 in the morning and then started the 70-mile drive home. "There was a snowstorm, I got home about 6, slept till 11 and then started working again." That kind of drive in a person has driven Data Palette, which, in turn, drives David again when Venkat forwards him a 'this really helped' email from a customer. "Those notes make it all worthwhile."

Rock Solid

Alison J. Macmillan, Editor, met and talked to one of StrataVia's longest serving, top engineers, Steve Schwarz, whose priceless experience is one of StrataVia's solid foundations.

Consider yourself forgiven if the names Frank and Lillian Gilbreth mean little to you. They were pioneers of job simplification, based on combining concern for doing things in the most efficient way possible and recognition of the importance of people in processes. But people tended to see the 'time and motion' bit of what they did, rather than the great benefit it had on individuals, so other gurus who concentrated more on people got more press. If you like to be entertained while you learn, then the 1950 and the 2003 movies "Cheaper by the Dozen" will tell you more and give you some insight into one of StrataVia's unique characters, Steve Schwarz. Though he insists "I'm not quite as bad as that".

StrataVia is not just about product and process, it is also about people. Steve recalls the early days in his database engineering career. "It was a real bummer to get called out in the middle of the night, but people accepted it as part of life. I asked my colleagues if it happened often and they shrugged and said 'that's just the way it is'." But that was not how Steve intended to spend his career. "I'm not putting up with it" he said. Just like the Gilbreths, Steve recognized that simply because that's the way things are done just now,

it needn't be like that always. There are better ways. "My goal is to ensure that databases are up and available all the time for everyone who needs them. If I use the tools at my disposal, I achieve my second goal, which is to have a life outside of work and to be more productive."

His first indication that things can change came when he and his colleagues once bit the bullet and asked their management for more disk space. They got it. "We had thought it was too daunting, but if we had asked 6 months earlier we wouldn't have had all our problems." The key to sorting out big problems and changing the status quo, he says is "to take it and nip it in the bud one by one". No-one needs to accept a bad deal. He gives an everyday example from the movies. "One of my chores at home is to make sure the floors are kept clean, my wife has far too much of everything else. I prevent them getting dirty in the first place. Me and my daughters (ed: he has three to the Gilbreths' dozen) have a schedule. The principle is about being efficient. Save time in one place and use it in others. It's about getting the end result rather than being tied up in a process that is not good for anyone."

This willingness to make things better, combined with his concern for people, is one of the things that makes Steve special. "I have twins, one of whom is quite methodical, but we're all different and have strong points in different places, so we identify who's strong at what so that we don't overlap." He sees the same thing at StrataVia. "Andy (ed: see building the library in this issue) has the most patience and is great at demonstrating how the product works. He can take frustrations and turn them into a fix."

Steve, himself, has a great strength in helping to demonstrate value. "Even when we provide evidence that there is a better way to do something, which helps the business and the people to grow, some people won't bite." It reminds him of how daunting a big change can seem. "I might take a small part, change that and show its value. People are more receptive to baby steps. I take another bit of the puzzle and make it less painful. I document it all, demonstrate and suggest they adopt it, but if they want to continue to do

A view of StrataVia's offices on Broadway in Downtown Denver, Colorado

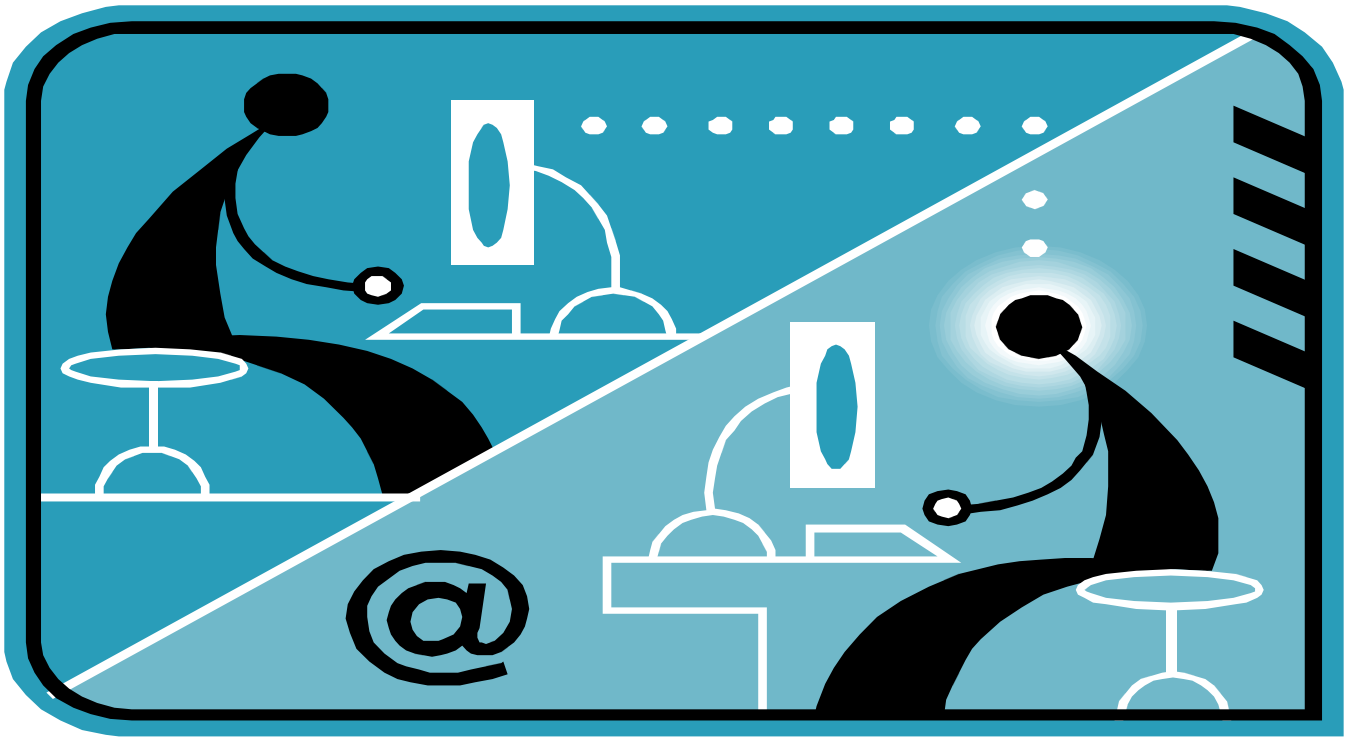
it manually then it's their money."

Steve's strong work ethic means that he finds it hard to leave something half done. "I try to make sure it gets completed. I have a hard time not taking ownership of things not being done properly. The end user needs to see the least amount of pain." Steve's solidity is reflected in Data Palette™ and in StrataVia's mission to change the database administration landscape of people, processes and products. When Steve took his geology degree at Colorado Mines, he also took computing electives each semester. You might think 'rocks' when you hear 'geology' and that might be a reasonable thought when considering what people like Steve work with at StrataVia. The rocks that Steve studies today to prevent disasters involve looking at a database environment, seeing how it has been formed, what it contains, what's happened in its history and how it is likely to evolve. He presents a solution to avert the earthquake.

"We document, we try it, adjust it, revisit after a break, start it afresh, give it to someone else to test for deviations, assemble it, and it's good to go when it's right and will bring results," says Steve.

You can get more information on DBA tasks in our paper on Development and Applications DBA Tasks and Functionality.

Section 3 Process



Another of the integral elements in the StrataVia is its processes, which are based on industry standards.

In this section, we're going to dive deeper into the methodologies that we follow to ensure that the right thing is always done at the right time in the right way. We don't follow industry standards because they look good on paper - we follow them because they enable us constantly to improve the operational performance of the databases in your environments. And better database performance means better response times, better use of resources, and a more efficient business.

In the first article, *Crash, Bang, Wallop*, Matt Wilkinson describes an all to unfortunate and familiar scenario in many organizations and then goes onto describe our services methodology.

The second article shows just how important it is to follow industry standards. Matt Wilkinson describes how to avoid catastrophe in *Unlucky Three*.

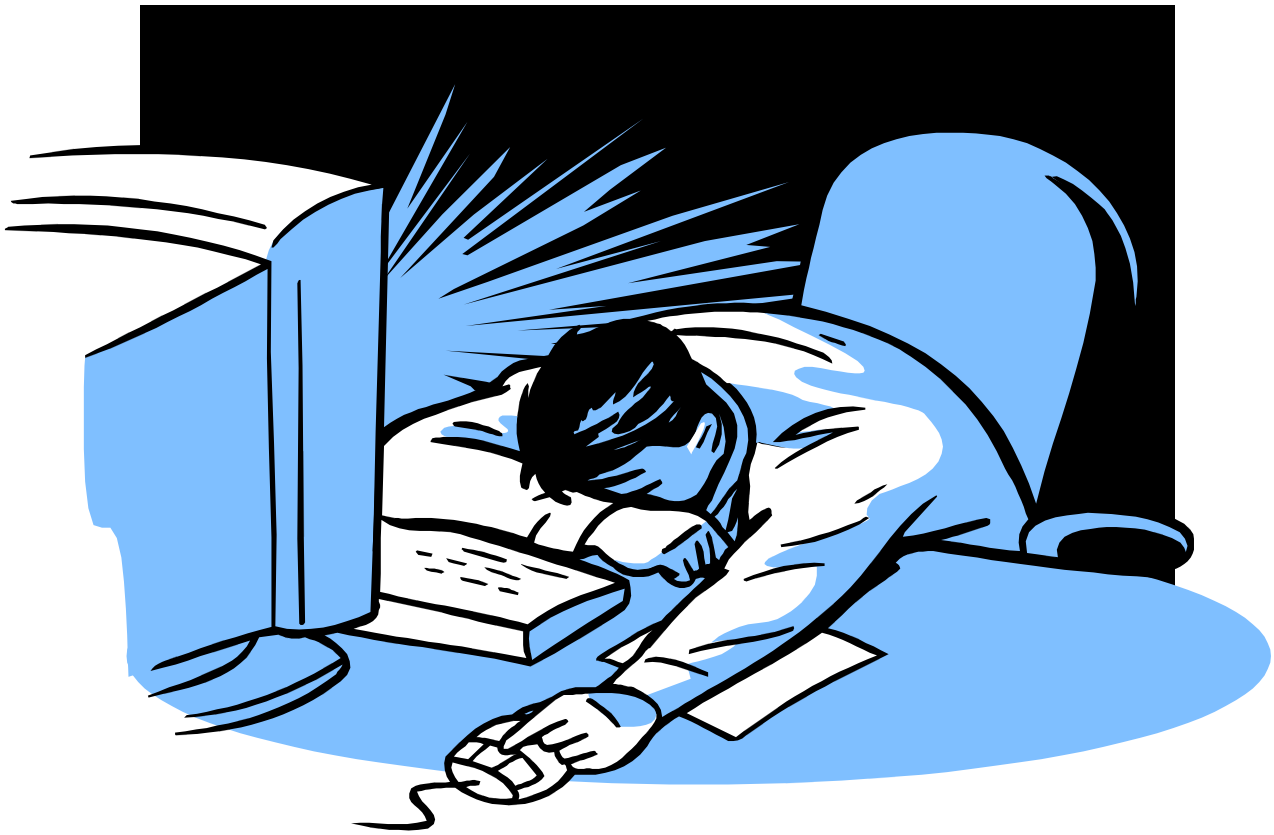
In the third article, Venkat Devraj describes the process features that

differentiate providers in this industry.

Our product, Data Palette, allows our outsourcing operation to increase efficiency and operational maturity through following assured processes with excellent people.

You can get an independent view of the StrataVia methodology in a white paper on Measuring DBA Outsourcing ROI: The StrataVia Customer Experience.

Crash, Bang, Wallop



You are in the middle of a restore. Your database crashes. Your adrenalin rises and your heart starts pumping. You apply the fix you did last week and everything calms down. The user stops complaining ... until next time. You have not learned, you have not automated, and you have simply reacted. Matt Wilkinson, VP Worldwide Services, explains how things could be different.

The StrataVia users get their issues fixed fast and the support system automatically learns from what has happened so that it does not recur. Our services methodology is based on three simple principles:

1 - When something breaks, fix it and fix it fast.

2 - Learn what caused the problem and make sure it does not happen again.

3 - Look for other potential issues and fix them before they become a problem.

It is as simple as that. Of course, the more you drill down into detail the more complex it becomes. Thankfully, we have some solid industry standards in place such as Six Sigma processes based on the ITIL (the IT Infrastructure Library –http://www.itil-itsm-world.com/) service framework that help us enforce best practices at all levels. At StrataVia we have another weapon in our armory called

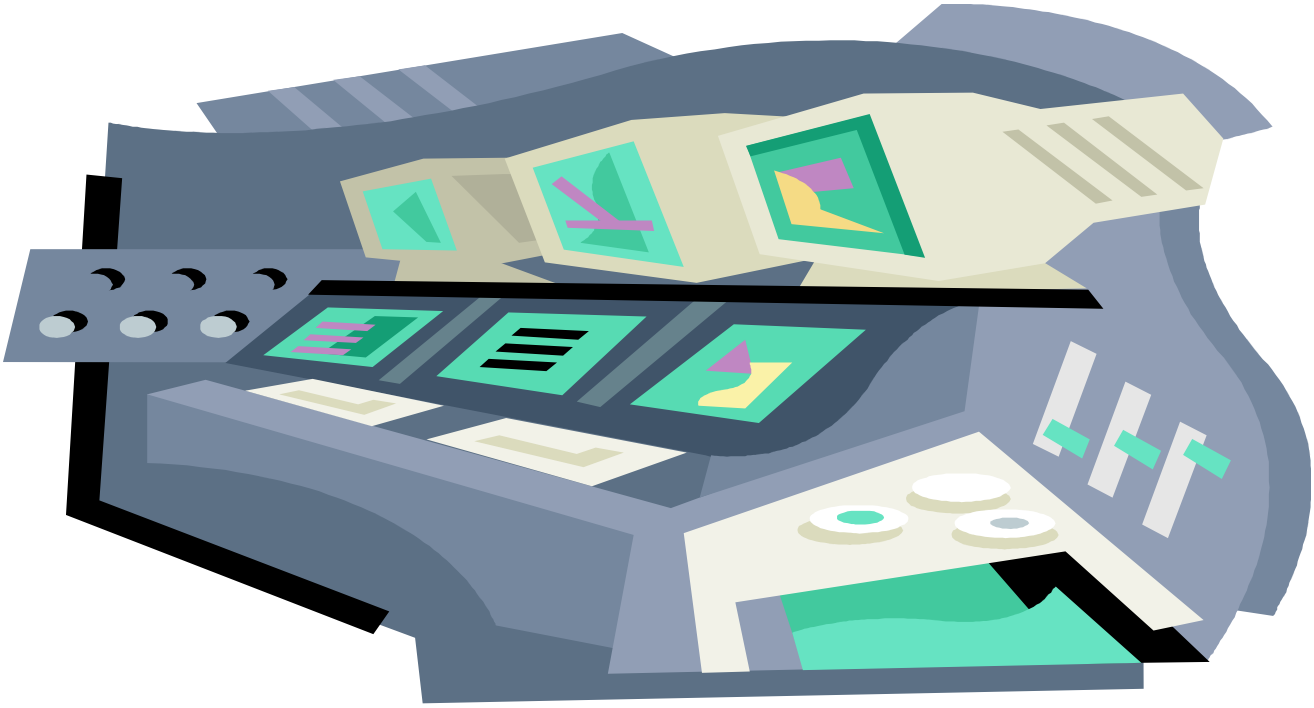
the Operational Maturity Model, which simply means improving the operational efficiency of our clients' database administration functions. Now I would like to focus on two particular areas that improve your database operations.

The first is standardization. Standardization around best practices means that we always apply agreed-upon and optimal procedures for the appropriate circumstances. As an example, in your Los Angeles IT Department your DBAs may do an Oracle refresh on Linux in one way, whereas in your Chicago IT department your DBAs do the same type of database refresh another way. For a StrataVia customer, on the other hand, these tasks are performed identically for each platform according to agreed-upon procedures. What this means for you is that you get a much more efficient and auditable operation.

The second area is automation. Up to 85% of a DBA's work consists of repetitive, mundane tasks and responding to crises. At StrataVia we automate as much of the client's workload as possible and in this way improve the efficiency of the operation. Nowadays, smart DBAs are engaged in capacity planning, architectural reviews, talking to the business units and helping drive the business forward, not just keeping things going. Enabling DBAs to participate in the strategy of the business adds major value.

Aligned with standardization, automation of common processes is a winning formula.

Unlucky Three



The processes at Three Mile Island led to a historic disaster. In this article Matt Wilkinson shows how following industry standards helps you to not only avoid calamity, but also achieve service excellence.

Your users want a great service. You can give them this if you can quickly find the rogue issues causing problems and fix them fast. On March 28, 1979, the maintenance crew at Three Mile Island was renewing resin used in water treatment. On two occasions before this, they had made a mistake, which caused water to enter an air circuit. This mistake happened again. This time, however, the ensuing sequence of events made history.

The automatic safety procedures were in place to fix the problems fast. It took time for the crew to notice warning lights on a control panel, but when they did they acted on them. A malfunction in a relief valve went unnoticed for two and a half hours. Almost the same thing had happened at the Davis-Besse plant near Toleda, Ohio - but they noticed the problem in only 20 minutes and they thwarted a catastrophe.

Three mile island had not put preventive measures in place to fix the root cause. Intelligence from Ohio had been gathered - and then rested in a repository rather than shared and acted upon. This was not just unlucky third time round fire fighting, it was disastrous.

OK, when your clients' databases have problems, such a disastrous chain of events may be unlikely, but if we do not focus on the root cause of the issue at

hand, and build in greater intelligence into the process of fixing issues then they are liable to recur, and more time and money will be lost fighting the same fires over and over, and providing service excellence will be a mere buzzword.

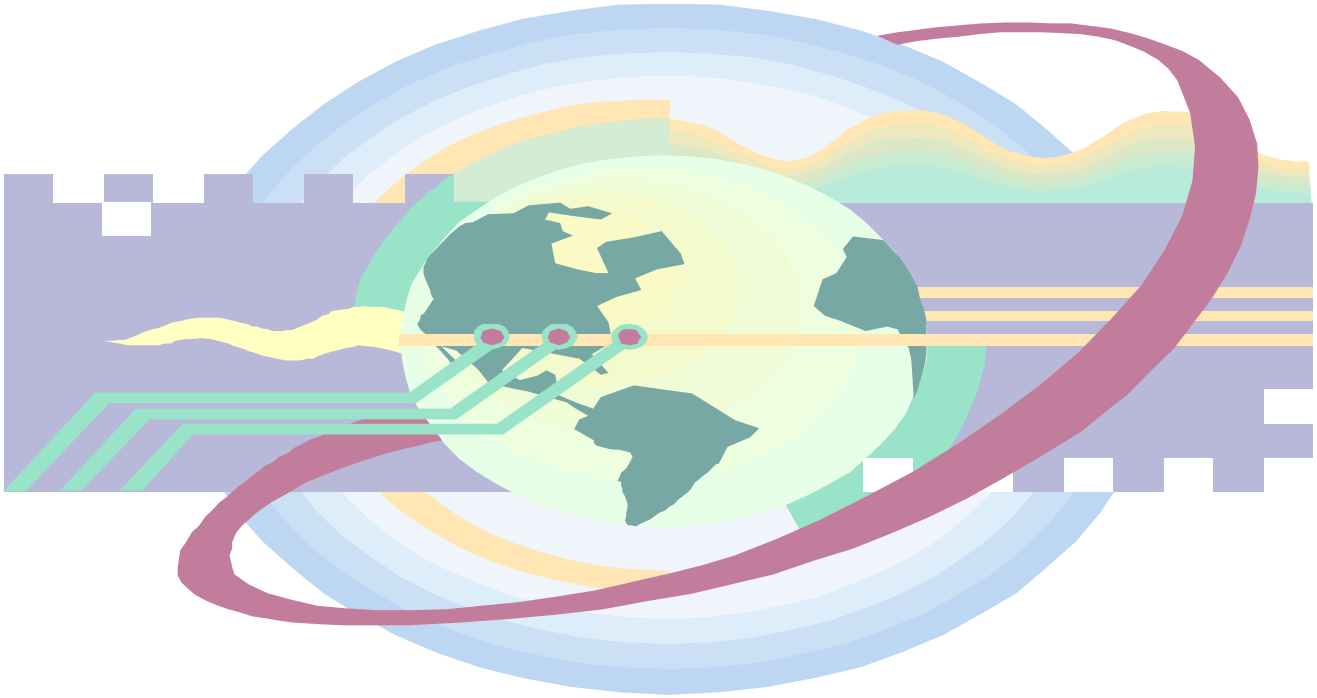
Using ITIL as a backdrop and process guide, there are two processes that work in concert to support a service excellence approach: Incident Management and Problem Management.

Incident Management is the process of using tools and skills to ensure that when something breaks, it is fixed immediately. Our DBAs use Data Palette to fix your issues, but it doesn't stop there. Our DBAs communicate with you and follow up to ensure that service is restored. This helps relieve the immediate pain but does not necessarily, by itself, address the core problem that occurred. By itself, this process would allow the problem to occur once again.

Problem Management is the process of deeper inspection into the root cause of issues to break through symptoms and understand exactly what happened. Data collection and correlation are critical to begin the problem management process. With the data, control charts and pareto charts are used to represent graphically what is occurring with the application, system, database, or network that caused the issue. By using graphical representation of the causes of an issue and continuously asking the question "Why?", we are able to break through symptoms and determine root cause This is an example of how Six Sigma processes are used to create very dependable, repeatable processes.

We don't follow these industry standards because they look good on paper, we follow them because they enable us constantly to improve the operational performance of your databases. We can clearly show that better database performance means better response times, better use of resources, and a more efficient business for our customers This is core to our model of service excellence.

What Differentiates Providers



Venkat Devraj provides his insight into what differentiates service providers, saying that it is the million dollar question in the IT services industry.

That is the million dollar question in the IT services industry, isn't it? The industry is rife with suppliers, including body shops and assorted fly-by-night operators, thriving in confusing messaging. These providers are an anathema to reliable services delivery. Most of them have a single, rather negligible, value proposition: providing labor at low hourly rates.

How can you tell if the outsourcer you are considering will give you service excellence?

Often you look at what the vendor says differentiates them from others. But if you want to avoid an unhappy marriage followed by a quick divorce you need to be able to recognize what a differentiator is. Be wary of vague and subjective statements. A differentiator can be measured. If you see statements such as "our customers love us", "we will take good care of you", "our technology is better", then look for the proof. You will know if a company is positively differentiated when you see a "because ..." with their statements. They describe exactly why they are better by explaining each facet of their delivery model and the resultant value for customers.

If the supplier says that the service you want is one of their core competencies,

then be aware that in this industry a core competence depends on having good people with that domain knowledge. Can they recruit such specialists, and keep them, and what happens when those employees leave?

You might think bigger and seasoned are better. But where will you fit in their overall scheme of things? Big does not necessarily mean indestructible - look at what happened to the energy and telecom behemoths at the beginning of the decade. Similarly, business longevity is also not a differentiator. It is very much possible to eke out a mediocre existence for years and years.

You may be beguiled by vendors who use sophisticated technology to automate their processes or say they are highly innovative. But it's level of service you want - technology itself doesn't guarantee quality, and there has only been negligible innovativeness in the services industry anyway.

A reliable supplier is a metrics-driven supplier. When such a vendor evaluates your business initially, they will produce a quantitative Service Level Agreement (SLA) based on an analysis of where you are starting from and where you want to get. All future work is measured from your baseline, rather than 'figured out' as you jolly along. Recommendations from evaluation will make their way into a formal project plan listing specific client and supplier personnel responsible for working on it, along with task dates and dependencies. As the plan is executed and solutions implemented, together you will compare results against the starting point to demonstrate quantifiable improvement. It doesn't stop there. Once the environment is stabilized, a new baseline needs to be established. The right monitoring tools need to be implemented to assess the ongoing state of the environment, any deviations from the SLA need to be dealt with, and dealt with proactively before they cause any business interruption.

When you're looking for a metrics-driven vendor you need to ask the right questions to evaluate how they measure up.

Section 4 Product

At the heart of our methodology is our product, Data Palette. It can provide DBAs with double the time they have now, freeing them up for more strategic tasks.

Data Palette provides an automation platform enabling standardization, centralization and automation.

The articles in this section describe the product feature and benefits.

In *Brain Behind the Brawn*, Ron Krubeck, VP Engineering, illustrates how DBAs and Data Palette work together.

Ron's next article, Art and Architecture, describes how Data Palette transforms database administration from grunge to art.

Continuing the theme of art and architecture, in Building the Library Alison J. Macmillan, Editor, describes how Andrew Wright, senior engineer is tackling the task of building Data Palette's SOP library.

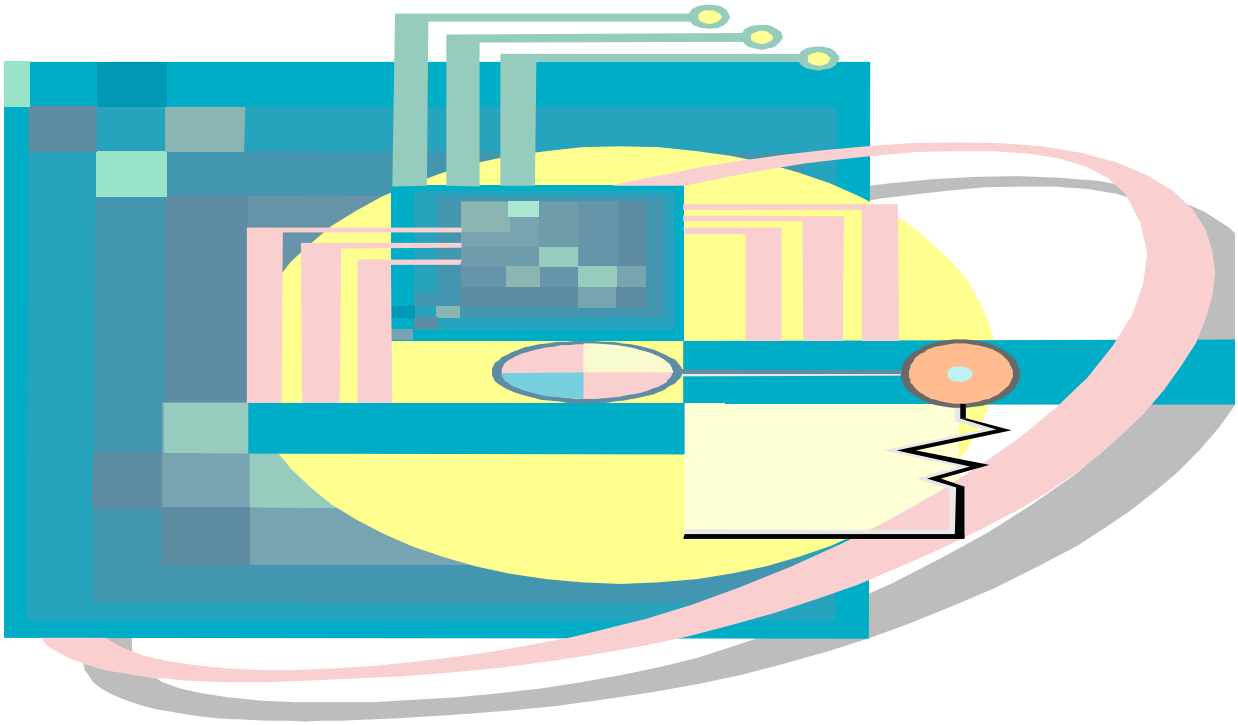
Venkat Devraj, then continues about SOPS demonstrating how they can be applied (and are designed to be applied) across the diverse configurations which many

organizations have today.

Maintaining security when outsourcing or using another product can raise a question, and in the article on *Ensuring Security*, Venkat Devraj demonstrates how your security is assured.

For an indepth look at Data Palette, you can use our training videos

Brain Behind the Brawn



Dancer Isadora Duncan once wrote to George Bernard Shaw enthusing that they should have a child together. “Think of it!” she said. “With my body and your brains, what a wonder it would be.” “Yes,” replied Shaw. “But what if it had my body and your brains?”

Ron Krubeck, VP of Engineering shows that Data Palette has both.

The Managed Services team has some of the brainiest DBAs in the world who also stretch their brawn 24x7, 365 days per year to support StrataVia’s client’s databases. And at the heart of the service offering is a very special software system, developed by StrataVia, called Data Palette. Our DBAs use Data Palette, installed on your site, to monitor and administer your databases. Data Palette’s brain maintains a repository of historical information that we use to be more effective and efficient in managing your data assets. It is both brain and brawn as it is constantly watching over your databases, remembering what it observes, and enabling it to take or recommend actions based on a wealth of prior experience. This coupling of brains and brawns produces service excellence for you.

Data Palette never stops monitoring each and every database in your environment. If it senses something amiss, it immediately generates a ticket, of appropriate priority, to alert our DBAs. Our DBAs answer its call as a priority and together they track all activities needing attention. Monitoring and

ticketing generate a wealth of information and knowledge that is retained in its central nervous system, effectively encompassing a mini-history of your environment, its issues, and their resolutions. Using this super-brain of information enables our DBAs to be highly effective and, in most cases, exceed your service expectations.

Another key feature of Data Palette is its intelligent reporting. Built on top of our DBA's years of experience, its reports represent an insight and knowledge that is not commonly found elsewhere. For example, our HealthCheck report provides a comprehensive and understandable view of the health of a data environment; and our User Irritation Quantification Report is unique in the marketplace. Coupling these reports with the historical intelligence gives our DBAs predictive analytic capabilities that are otherwise not possible.

It's a likely bet that your organization has a proliferation of different databases and techniques for managing those databases (and exceedingly high costs associated with DBA staffing). That's where Data Palette really shines via its SOP (standard operating procedure) mechanism.

Three important components make up Data Palette's SOPs: documentation defining the procedure; workflows and scripts, which automate the procedure; and an expert rules engine that triggers the automation. Virtually anyone can apply these business best practices, resulting in significant operational efficiencies for you.

For the most part you have very little to do with the software - you are simply aware of the benefits it provides in enabling you, for example, to get regular reports on the health of your databases, to observe how issues are addressed before they become major problems, to have databases which are always up rather than down, and generally to see issues being fixed fast and once and for all. The benefits of Data Palette can be applied to any organization, who must manage their valuable data assets.

Art and Architecture

Ron Krubeck, Vice President - Engineering, explains how Data Palette's architecture transforms database administration from grunge to art.

Imagine a world in which your databases are monitored 24x7x365. Imagine If something goes wrong, it fixes itself. Imagine that something is fixed even before it goes wrong. Imagine a world in which DBAs have information at their fingertips to enable you to make strategic decisions on your database budget spending. Don't imagine; that world is here with the launch of Data Palette.

This is an exciting era, where predictive analytics, coupled with standardized operating procedures, all driven by intelligent automation, revolutionize the art of database administration. Data Palette achieves this by a unique architecture and set of features unsurpassed in the marketplace.

The architecture is the foundation that transforms database administration from grunge to art. Mixing paint is grunge work. Using a vision and deliberately applying brush strokes to a canvas to create a masterpiece is an art. Fighting the same DBA fires day after day is grunge. Creating a SOP and allowing Data Palette to trigger that SOP before the system fails is an art. Data Palette's architectural components work together to remove you from grunge work and allow you to perform the art of database administration.

Just like a collector in the art world, Data Palette's Collector Module knows the

characteristics, significance, merits and attributes of different genres in the database environment. Moreover, just as art collectors and experts work hand in hand to assess worth and add value, Data Palette, too, has such an expert - the Expert Engine.

The expert's job is to know the overall business and significance of information and to evaluate and disseminate the information for wise decision making. The Expert Engine's job is to analyze data and apply its business intelligence to your data environment.

Data Palette's art gallery is in its Repository, where it stores information about your data environment. Art is easily accessed by visiting local museums, reading books and browsing Internet art galleries. Your data is just as easily accessed. If you need to know what is going on and want to analyze changes and predict actions, then you may do so through the Nerve Center. If you need advice or need to report for regulatory compliance, then you go to the Reports Center. If you're out of town you can manage from your Mobile Client. And just as an art gallery protects its masterpieces, Data Palette and its Repository protect your valuable data.

Each of these components combine to make Data Palette revolutionary. It houses the minds of masters, capturing their expertise in SOPs that are rolled out automatically. Automation frees your time to craft new work, aid in other areas or generate more income. Moreover, if your expert is away temporarily, you have an insurance policy. Anyone else can step into their shoes and use their best practices.

Data Palette is revolutionary through its predictive analytics capabilities, allowing you to see into the future, preventing problems before they occur. When a forthcoming problem is predicted, Data Palette's SOPs that encapsulate collective DBA knowledge and best practices in a repeatable, cross-platform solution are invoked to solve it. So, welcome to the world of Data Palette. Its functionality allows your DBAs to concentrate less on mundane problems and more on strategic business problems. The end result: significantly increased operational efficiency associated with your most valuable asset, your corporate data.

Building the Library

Alison J. Macmillan, Editor, spoke to Andrew Wright, who is designing StrataVia's SOP library and she outlines what she found out about architecture in practice.

The new Seattle public library, designed by Rem Koolhas, a Pritzker Architecture Prize Laureate, has a modern eclectic design. Koolhas's genius enabled him to sculpt an environment that overcomes height and setback restrictions and zoning codes so his library is not only creative, it also provides for creative uses, and maximizes the library experience to ensure the best for all.

StrataVia's Andrew Wright, a senior database engineer, is also designing a library. It's about best practice, too. In his words: "The library contains solutions for the most important, time consuming, and arduous database administration tasks facing businesses day in and day out. I start from the top 5 pain points, solve them, and then work on the next 5."

StrataVia's library is a library of SOPs (Standard Operating Procedures) for our product, Data Palette™. Just as the Seattle Public Library has a unique spiral bookway with a continuous run of nonfiction titles, Andrew's library has solutions that spiral across multi-environments. He is designing it, building it and filling in the gaps with his unique insight into the strengths of Data Palette, having been one of the chief engineers on the product with David Graham, who features in section 2. It is being built by focusing on what is most needed and shaping it

accordingly. But it's not a start from scratch job, bits of the jigsaw abound in StrataVia and in the toolboxes of its employees. Often we can ease a pain by tweaking an existing, proven procedure.

Aficionados of automation, who know that to automate means to reduce costs, increase effectiveness, and free up time to work strategically so that they can advance their business and employees' careers, will have their aims fulfilled when using the SOPs in the library. For example, it is painful for both the DBAs and the executives in a trading company when customers are trying to submit trades, but the database just does not have any more space to deal with the volume of business. If the system goes down for just the shortest period, the trader is likely to withdraw their business and go elsewhere. It takes hours for DBAs manually to add additional space. It's a mind-numbing repetitive task. It has to be done across multiple platforms. If one small detail is omitted the database crashes again.

There is a saying 'time is money' and many businesses know, to their cost, that when a time dependent transaction doesn't take place there is a huge impact. If funds can't be transferred at the optimum time, your customers lose money, you lose customers, and then you have to spend more paying more and more DBAs to watch, back up, restore and refresh your databases. What a waste of time and money.

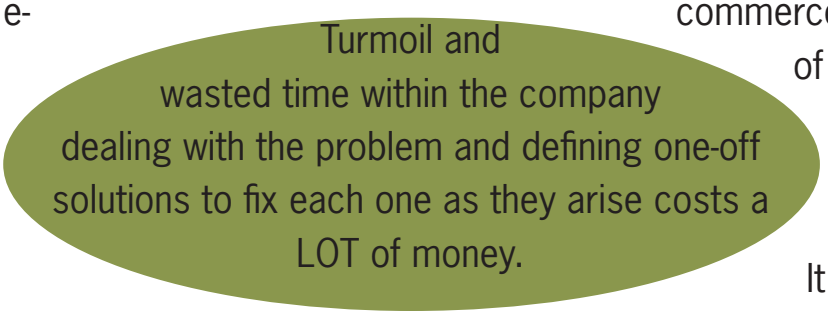
Automate. Automate in such a way that problems are fixed before they happen. Automate to reduce the user irritation level.

Let's take another example. It's vacation time. Sit back, switch on the computer and log in to your favorite bargain travel website. You browse, you collect possibilities in your shopping cart. The whole family joins in around the

And it's a catastrophic crash for the executives as they watch funds disappearing as customers vote with a mouse click to a competitor's site and take their business to a more secure and reliable

screen. “This one!” “No, that one, there’s a pool and a golf course.” “But this one also has free breakfast!” You can already feel the hot sun, taste the exotic cuisine, and smell the fresh country air. Time to check out, fill in the details, enter your credit card information, press submit and wait. And wait. And wait more. Hit back and back, again. What was the one we chose? Start over? After spending 2 hours already….? How high is your irritation level now? Recognizing and resolving the root causes of user irritation is one of the priorities for a SOP in the library. There is a SOP that analyzes historical data to determine what conditions lead to spikes in key performance indicators. When it sees the danger signals arising, it channels non-critical transactions to another time or place. The system is optimized. Customers are delighted. Your DBAs are doing better things to better your business.

It’s essential in e-commerce that your databases function 100% of the time. Take IBM, for example. IBM uses a website to manage its mainframe product upgrades and new product downloads It runs across 3-4 different databases at a time to accumulate the customer data along with product offerings and available upgrades. If any one of these databases or the databases that those databases rely on, or the servers that those databases run on goes down, the end user is unable to receive the online support they are looking for.

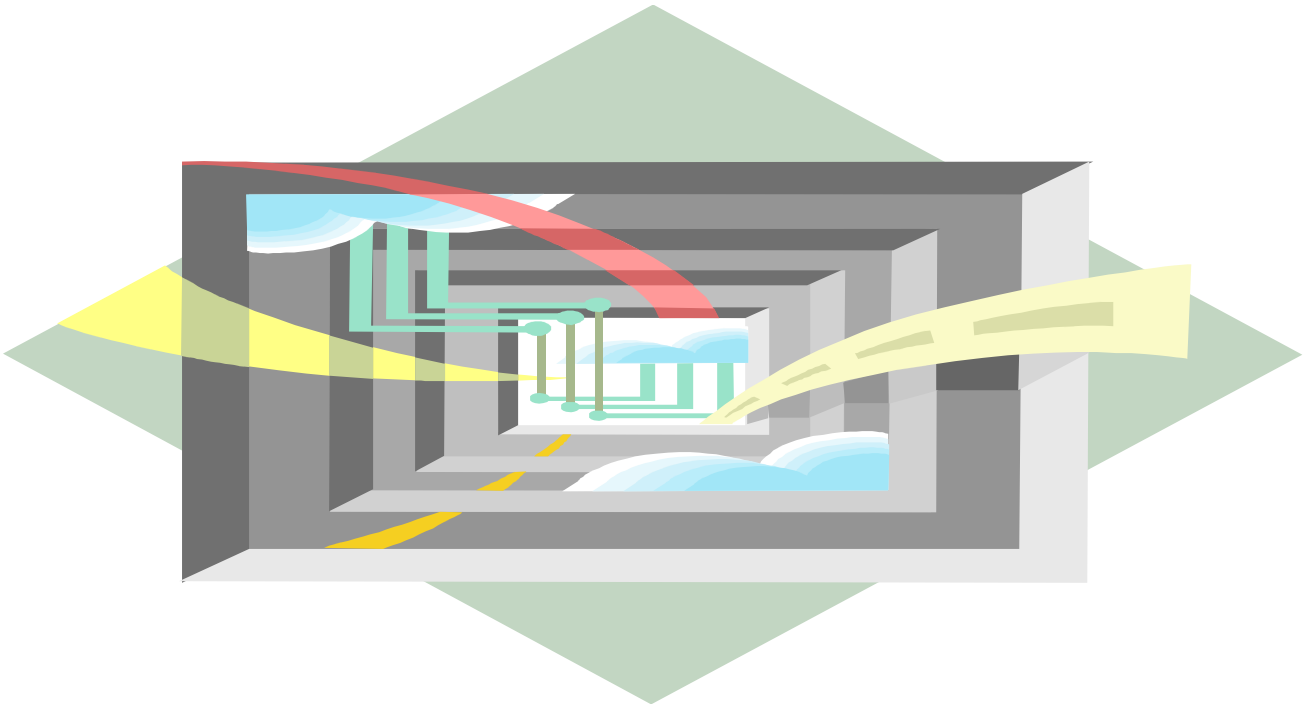


You need your databases all the time, and you don’t need customer complaints as your alarm bell, and you don’t want to deal with a flood of calls to the call center. Over time, these scripted solutions become unmanageable and forgotten, until the problem arises again. Your DBAs spend hours of time discussing root-cause analysis and repairing these production, change control restricted, systems. Additionally these “fixes” are typically

applied to one system, and are not available to the other projects which may teeter on the edge of failure. Data Palette intelligently monitors a wide variety of key performance indicators and adds data files or removes non-vital processes when necessary. Using Data Palette's access control constraints, corrective actions are decided upon and passed through change control, thus avoiding the change control process during critical situations. Teams of engineers, management and database administrators no longer live in worry that their systems could go down and can spend time on meaningful tasks other than root-cause analysis meetings and discussions and documentation.

Stop having to say: "We are sorry, the system is unavailable at this time, please try again later." You will have more customers transferring their assets to you.

Diverse Configurations



Venkat Devraj talks about how maintenance can be automated when you have very diverse database configurations. He asks first of all if you get a "yes" in answer to the following two questions?:

1. Does the task at hand need to be performed repetitively (i.e. more than once)? and

2. Is it likely to be carried out by multiple people in the team?

When it comes to database maintenance, the answer to the two questions, I wager, is a strong "yes" in both cases. As such, database maintenance is not only an ideal candidate for being automated, but in many cases, it can be automated with zero human involvement.

You have different setups and multiple platforms. That's exactly what Data Palette's SOPs (standard operating procedures) and automation are designed to deal with. You are likely to have staff deeply skilled in DB2 or Oracle or SQL Server but not all of them. One of Data Palette's strengths is that it rolls out SOPs that work across all platforms. The question is not how CAN we automate your maintenance tasks across multi platforms but how DO we.

Well. We know that DBAs expert in one platform manually perform their regular tasks all the time. We have captured what they do so that it can be rolled out

without their intervention. Which means that when your expert SQL Server DBA is on leave or sick, your maintenance still occurs as needed.

Gone are the days when companies only had a handful of databases to deal with. In these times of mergers, acquisitions and cheap disk space, companies have a multitude of applications and humongous databases that crave regular maintenance. Some of these databases are similar in terms of application/user access patterns they support, as well as the change control rules and maintenance window timings they share, whereas other databases are distinctly different. The ideal way to deal with maintenance of these disparate beasts is to have "maintenance plan categories", based on the type of database, and a corresponding standard operating procedure (SOP), documenting the series of maintenance activities in the requisite sequence under each plan category. That will ensure that no database is skipped or end up with the wrong maintenance plan being applied accidentally. Each database will receive the maintenance it requires in a timely and consistent manner.

The reality is, various objects in a database have distinct maintenance requirements and to make things even more complicated, such requirements vary from DBMS platform to platform and sometimes, from version to version. By relying on human DBAs to plan, document and implement the task across the entire array of databases, companies face the risk that the responsible DBA may not be aware of all requirements; and even if she is aware, due to other seemingly more pressing job functions may not do anything about it until a performance dip or outage occurs.

> Then these SOPs can be automated to occur in a lights out manner via a central console and applied during the appropriate maintenance window, week after week, across all the different database types.

Regardless of whether it's a weekly, monthly or annual maintenance plan, by having a generic SOP address each type of maintenance requirement and automating the SOPs,

you can ensure that all maintenance requirements are addressed in a timely manner regardless of the skill level, time-management capabilities, or the personal preferences of the DBA(s) responsible for that environment.

Whether cars or databases, maintenance is a necessary evil. And regardless of whether your DBA manages a single database or a few thousand, your organization cannot afford the maintenance plan to be manually implemented at the whim of the DBA. As discussed above, the risk of a task dropping through the cracks is too great. In the past, the DBA had no choice but to do maintenance work manually to ensure it was done right - mainly because the supporting database tools and infrastructure were too feeble and lacked the necessary implementation and audit functionality. But that is not the case anymore. Accordingly, the DBA has to embrace newer autonomics technology and maintain the environment via documented SOPs and referencable automation routines.

Only automation can come close to ensuring 100% reliability with the kind of mindless yet time-consuming chore that maintenance tends to be. Human DBAs, with their higher design and management capabilities, have far more important and creative things to do to ensure their databases are keeping up with the business.

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Ensuring Security

Our expert Venkat Devraj, author of Oracle 24x7 and co-founder of StrataVia. addresses data security - the number 1 priority in database administration - and shows how StrataVia and Data Palette assure it.

I'm often told that people like the "cost savings" message behind outsourcing; however, they cannot outsource DBA work due to security reasons. There is a solution.

Security is the #1 concern in the database administration business. StrataVia ensures the security of your data when you use our managed services, moreover if your business policies do not support outsourcing at all, then you also have the option to license the Data Palette product suite separately. This technology will provide your in-house DBAs with a 30 to 60% efficiency gain and give them most of the cost and quality benefits of outsourcing without having to actually engage in an outsourcing contract.

StrataVia addresses any security concerns of outsourcing in the following ways:

No storing of data outside your environment. Our employees do not view your data or extract/store your data outside your firewall. A lot of physical DBA activities such as performing backups, restores, refreshes, cloning, structural maintenance, performance management, including most types of problem diagnosis and troubleshooting do not require direct access to data. As DBAs,

we sometimes need to know what kind of data and transactions you have (OLTP versus DSS, etc.) and the underlying data structures for advanced troubleshooting – but direct access to data is rarely needed. Only if your employees want us to "clean up" any data such as duplicate records may we need to view the data to ensure the SQL we are writing to do the cleanup is accurate. But in high security environments, your personnel can themselves do any work that involves "data access" and have us do the other tasks. If required, our personnel can coach yours on SQL syntax to ensure they are building the right data correction routines.

Security screening and non-disclosure agreements. Our employees are screened thoroughly and we have an NDA (non-disclosure agreement) with you, and our employees sign a similarly structured "master NDA" with us so that you have an entire company standing behind that NDA with a stringent Service Level Agreement.

Strong audit tools. Unlike an employee who walks in with just a bag of scripts, or typical IT service providers that rely only on "expert bodies", StrataVia's service model includes key functionality from our automation technology, Data Palette. This product includes the capability to track database access and either report or take action on certain policy violations. , including your employees, contractors, or StrataVia personnel.

Such audit reports are tamper-proof and can be provided to customers to ensure security is not being compromised by anyone within or outside the company

Employee certification prior to assignment. Before we assign an employee to be your Primary or Secondary DBA, they undergo a certification process during which they review in detail the results of the Discovery done at your site. This allows them to be completely up to speed on your environment, along with your security requirements. All pertinent standard operating procedures including those for data security and access, are loaded into our Data Palette™ automation product's knowledgebase and can be accessed by all our personnel prior to carrying out any task to ensure they do not inadvertently use a task method that compromises a security policy.

Secure tools and log in. If required, our employees can be situated onsite for high security projects. When they log in remotely, they do so via encrypted connections such as VPN and SSH – using exactly the same model as your internal personnel when they need to log in remotely.

When you keep everything in-house and use Data Palette, security is also assured:

Installation location. The product is installed entirely within your firewall. We do not need to host or share the product, its repository, or any of your data or metadata.

Encryption. The product uses an encrypted connection to communicate database related information across its various components.

Detailed security model. The product has a robust user security model with read, write and execute privileges. Users with read and write privileges can view and modify the product knowledgebase, whereas those with execute privileges can only execute automation routines in the database environments they have been granted access to.

Audit capabilities. The product maintains an historical audit log of all automated actions and their results. It also collects information at frequent intervals about who is accessing which database, their database userid, OS userid, SQL statements they are executing (or not executing), etc. This audit capability helps identify and deal with unauthorized access. Further, the customer has the option to enable repository level auditing to see which user is carrying out changes within the repository itself.

Data management SOPs. The SOP (standard operating procedure) model built within the product offers a layer of abstraction for database administration and data management tasks. So if there are periodic (repetitive) data manipulation tasks that need to be carried out by DBAs and they are not allowed to view the data, they can just execute the pre-approved SOP(s) that performs the required manipulation. That way, they do not see the underlying data, yet perform the task required by the user effectively.

As you can see, both the product and the service model take a holistic view of security, especially data access and control. Either or both offerings can be considered by any company regardless of their industry to gain the benefits of outsourcing and automation, without worrying about compromising their security in any way. If anything, via the points listed above, the StrataVia offerings boost the level of security and accountability in any database environment.