

Sidler GmbH & Co.: Meeting the Millennium's Challenge¹

Light means orientation and safety. We give you the best possible lighting in today's most popular means of transportation: the automobile.

Sidler Brochure

Sidler was a leading European supplier of interior lighting and trip products for automobiles. It was 1997 when Dr. Helmut Rapp, Sidler's managing director, decided to address the challenges of operating under Europe's new common currency, the EURO, addressing the millennium's Y2K problem, and upgrading its information systems to deal with the company's rapid global growth. Since joining Sidler in 1994, Rapp had successfully grown the company from 85 million deutschmarks (DM) to over 210 million DMs in 1998. Sidler's existing data processing system no longer provided management with the information needed to determine the profitability of its products, or timely data from its geographically disbursed operations. In attempting to minimize disruption to his organization, Rapp had continued working with R&H², its existing software supplier. Unfortunately, R&H had been unable to provide assurances that its new software version would meet Sidler's needs.

Sidler had relied on R&H for its key EDP software needs. But R&H had not developed new software to address the needs of the EURO, or to address the growing complexity of global operations. They worked on a new release but exact details were not available. Since Sidler also had a limited EDP staff, they had relied on outside vendors for their software needs. Mr. Kaltenbach, the primary EDP professional at Sidler, was skilled at keeping the company's AS/400 computer running R&H's systems on a day-to-day basis, but to address Sidler's future needs, Dr. Rapp asked a team, headed by Kaltenbach, to find a solution to Sidler's needs in the new millennium. Sidler felt that its current AS/400 computer system could continue to provide the platform for the future operating system. Firms like PSI³, a respected ERP (enterprise resource planning) supplier, SAP, and R&H, Sidler's current supplier, had software systems that would run on their existing platform.

A visit with IBM, a key SAP vendor, did not go well. In contrast, a visit with SLIGOS-Industries (now called Atos⁴) went quite well. In fact, the **SLIGOS R/3 Automotive Supplier**® software (Appendix 1) had adapted SAP for the automotive supplier industry. In addition, SLIGOS was one of the major SAP consultants in Europe and promised to provide adequate support for the implementation of SAP. SLIGOS also arranged for Sidler team members to visit a number of SAP users. Sidler's management board now had to decide on the best course of action.

¹ Certain numbers have been modified to protect competitive information.

² Rembold + Holzer, Breisach; now Brain AG, <http://www.brain-ag.com>.

³ PSI AG, Berlin, <http://www.psi.de>.

⁴ See <http://www.atos-group.de>.

Sidler's Management History

Since 1925, Sidler has been a family-owned business that produced all types of metal work. In 1951, Sidler's owners began making decorative chrome for automobile headlights and windows. As plastics replaced chrome trim, Sidler developed simulated wood trim products and entered the interior lighting business. By the early 1990s, when family members wanted to move out of active management, Dr. Rapp joined Sidler. At that time, Sidler had annual revenues of DM 85 million. Dr. Rapp explained:

I found that Sidler was looking for someone to build a non-family management. I liked the business and joined the company in early 1994. We have more than doubled the size and have gone international. It was not very dynamic when I joined, and it was necessary to push forward or fall backwards. Sidler had manufacturing processes in two-color molding that nobody could copy, but they needed to move more quickly. They have learned to do that.

Dr. Rapp had earned his PhD in engineering in 1975 at Stuttgart University. He explained his experiences prior to joining Sidler:

I worked with Rochester University to develop a 3D CAD system and then joined the consulting arm of the Ingersol Milling Machine Company in Rochford, Illinois called Ingersol Engineers. It was a good education for five or six years, but you never stay home. It was interesting, but hard on the family. I was officially based in Düsseldorf, but was never there.

As a consultant, you never get to take something to the end. When I decided to leave consulting, Krupp gave me an offer. They had just bought a company in Stuttgart and hired me as the assistant to the new CEO. I stayed until my division was DM 250 million, but because of the corporate politics, I decided to go into small businesses.

My first firm was nearly bankrupt, with debt equal to sales. They could not pay it off, but had a market and product that was needed to build cars. They did things that nobody else could do. That was challenging. A team of three turned it around. I did the consolidation of manufacturing and reduced the headcount from 1600 to 900 with positive cash flows in nine months. We could then get new equity and bank support. It was then sold to a US firm, but I didn't want to work for them.

The Sidler Group

In 1995, Sidler became a group structure after acquiring a firm in the US. It was in the same business as Sidler, but the cultural differences caused some communication problems. That acquisition made Sidler a small global player having operations on either side of the Atlantic Ocean. The Sidler group now includes three locations in Germany around Tübingen called *Sidler*, *Sico*, and *Smig*. Sidler had two *Rivoret* factories in France, plus a *Sidler Apag* R&D and sales department in Paris. *Apag* was its Swiss electronics company. *Sidler Ltd.* was a new factory located close to Birmingham, England. It also had three factories in the US in or near Detroit: *Sidler Inc.* and *Sidler Plastics*, and the Laotto Division in Indiana. Sidler had a new facility in Brazil, *Sidler Ltda.*, in Sao Paulo. The company was working to establish operations in Portugal, the Czech Republic, and South Korea. (See Appendix 2 for Group information).

By 1998, Sidler had become a DM 200 million supplier to the automotive industry (see Exhibit 1 for company information). Dr. Rapp explained the changing role of the headquarters operation:

We have had substantial growth rate though our projections are always low. We try to keep projections low. Last year we had group revenues of over DM 200 million. Headquarter's revenues are declining as we make it a marketing and engineering support center. We also do the development and testing of production processes here. It is a big playground for engineers. Of 16 machines located here, only two are doing production and the others are for testing. The last four months of last year, we started an annual

business volume of DM 50 million that included over 200 tools to receive, to test, to optimize, and to ship to France and England for normal production.

Sidler's Business

Sidler was the market leader in interior lighting, ashtrays, and other interior trim products for cars. Rapp's goal was to be a world class supplier in its business niche, and to have open cooperation with its customers in R&D and production. Rapp explained:

Sidler is a leader in interior lighting in automobiles. Small lights and lamps account for 70.1%⁵ of our business. That includes interior lights, comfort lights, small indicator lamps, stop lamps, and license plate lamps. We are rated as everybody's "best of".

Interior trim accounts for 28.6% of our business, including ashtrays, coin boxes, deposit boxes, and cup holders. For example, we supply Mercedes interior trim includes ashtrays, cup holders, and coin boxes. Other business includes fuse boxes, motor compartment, off delay units and dampers. We do some of the electronics for interior lighting in Switzerland. We do some innovative things like integrated headliners with lighting and boxes and neon lights.

Exhibit 1: 1998 Information for Sidler GmbH & Co.

Group Sales: 210.3 million DM	
Sales in Lighting Products: 127.6 million DM	
Sales by Product Group: 63.4% lighting, 17.6% interior trim, 19% electrical/electronics	
Sales by Region: 55% Germany, 25% rest of Europe, 20% rest of world.	
Sidler Strategy: Become a total global player in lighting and interior trim while providing complete customer service. Sidler will supply all carmakers to spread the risk of dependence on any single customer or region. Sidler has five engineers charged with developing 12 new patents per year. Key technologies include Ruby Optics ¹⁾ (low voltage with low light), rail light systems ²⁾ , clip and fit lamps ³⁾ , and behind the surface lighting ⁴⁾ .	
Group Companies	
Sidler GmbH & Co., Tubingen, Germany	
SMIG GmbH & Co., Reutlingen, Germany	
GHS Stanz+Montage GmbH, Riederich, Germany	
Rivoret SaRL, Brumath at Garches, France	
Sidler APAG SaRL, Haguenau at Garches, France	
APAG AG, Dubendorf, Switzerland	
Sidler Ltd., Telford, UK	
Sidler Inc, Madison heights, Michigan, USA	
Sidler Plastics Inc., Rochester Hills, Michigan, USA	
Laotto Manufacturing, Laotto, Indiana, USA	
Sidler Ltda., Sao Paulo, Brazil.	
Sales by Customer	
24.4% DaimlerChrysler	6.7% Ford
16.5% Audi/VW	6.6% Volvo
10.3% BMW/Rover	4.3% Toyota
8% Renault	3.5% Sogendac
¹⁾ A special optic for LEDs which we use in high market stop lamps with the effect to reduce the number of necessary lights	
²⁾ Used in light pick-up-trucks where we snap lights etc. on rails at the roof so they could be moved as required.	
³⁾ Special design of cheap interior light.	
⁴⁾ Fakewood on transparent material with signal lights behind which is used in dashboards with the effect to reduce necessary space in the car.	

⁵ In contrast to the exhibit 1 these number refer to the 1999 plan.

Sidler's Customer Base

Sidler was the market leader in Europe with roughly 35% of the interior lighting market, and roughly 12% of the world market (Exhibit 2 and 3). Sidler had been successful in continuing to expand its market share. Rapp explained:

Our customer base has been with us a long time. It includes everybody who builds cars. Our share of sales is very balanced, except for Mercedes Benz since they are located very close to us. Normally we try to keep any single customer below 25%, since I want to be able to walk away should they start asking nasty questions. That happened with a Mr. Lopez who told us what the prices should be. We stopped working with VW for some time, but we are back in now.

Having a wide range of customers is our form of diversification. We are only in the automobile business, and don't sell product for trucks or busses. We know how much our customers depend on quality, delivery and total value; on zero-defect manufacturing and sound, economical logistics even within this small market segment. In quality, we have QS9000/VDA 6.1 and ISO 9001 through the entire production chain.

Exhibit 2: Sidler's Global Market Position

Market	Competitors	Sales	Market share
France	Sidler	20 Million DM	55%
	AXO ¹⁾		25%
	SLI ²⁾		15%
	Other		5%
Europe	Sidler	150 Million DM	35%
	Hella ³⁾		25%
	SLI		10%
	OLSA ⁴⁾		10%
	AXO		5%
	Other		15%
USA	Sidler	20 Million DM	10%
	Prince ⁵⁾		35%
	Donnelly ⁵⁾		25%
	Hella		10%
	Other		20%
Japan	I.I. Stanley		75%
	Other		25%
¹⁾ family own business in France ²⁾ small french competitor ³⁾ see http://www.hella.de ⁴⁾ an italian competitor ⁵⁾ Prince and the interior lighting of the lighting division of Donnelly has been bought by Johnson Controls, see: http://www.johnsoncontrols.com/ .			

Competition varied by country. Hella was a major supplier of lighting products and a key competitor. Prince and Donnelly had been acquired by Johnson Controls, a major parts supplier in the auto industry. AXO was a family owned business with sales of between \$60 and \$80 million in France and Italy. OLSA was an Italian firm that worked in cooperation with a university to develop products. SLI primarily provided lighting for license plates and some interior products. FER was a VW/Audi joint venture in Eastern Europe. Eaton was a switch company that had produced lighting products, but was now out of the business. Stanley was the primary lighting supplier in Japan.

Sidler provided interior lighting and trim product (Exhibit 4). Sidler's strategy was to provide excellent service to its customers. Rapp explained:

We sell to everyone in automotive and try to speak everyone's language, in terms of EDI protocols and CAD systems. We operate different CAD systems in different countries, but they are all on one network.

We use Catia, UniGraphics, Euclid, PDGS or whatever CAD systems the major manufacturers use. We have established permanent customer teams to stay in contact with customers.

But the goal is to provide the best in quality, price and service. Our interior lighting and ashtrays meet the highest standards of quality, ergonomics and design. We integrate complex electronic systems and storage compartments into dashboards and consoles that please the eye and are simple to use. We are happy when the driver does not notice our products, though our products add to their comfort.

Exhibit 3: Sidler's Customer Base

Producer	Supplier	Market Share
Renault	Sidler	65%
	AXO	30%
	Other	5%
Fiat	OLSA	90%
	AXO/SEIMA	10%
	Sidler	Introduction
VW/Audi	Sidler	30%
	SLI	25%
	FER ¹⁾	25%
	Other	20%
Ford	Donnelly	30%
	Hella	25%
	Other	25%
	Sidler	20%
Opel	Sidler	50%
	Hella	25%
	Other	15%
BMW/Rover	Sidler	35%
	Hella	35%
	Eaton ²⁾	10%
	AXO/SEIMA	10%
	Other	10%
Mercedes	Sidler	50%
	Hella	50%
Japanese Transplants in Europe (Nissan, Toyota, Honda)	Sidler	65%
	Hella	30%
	Other	5%
¹⁾ joint company of BMW and VW as an go east initiative		
²⁾ an original manufacturer of switches		

Industry Evolution

Sidler's business focused on the interior parts of an automobile that are visible to the customer who buys the car. As global automobile competition increased, interior features were becoming increasingly important in the car-buyer's decision to purchase new cars. While some people were limited to buying the lowest priced car, the aging baby boomers wanted much more. For example, Audis were gaining popularity in Europe. Baby boomers wanted more comfort and safety. Rapp explained the trend:

Since people spend more time in their cars, luxury lighting, fresh air and more functions are gaining importance. In an automobile, light and air have to be right all the time. Everything should function smoothly without having to consult a bulky owner's manual.

As a result of changing driver needs, the vehicle manufacturers have to address these issues. They are trying to outsource more module-type business to their suppliers. For example, in 1994, we supplied 100% to OEMs. Today, 30-40% of our business goes to large first-tier suppliers. For example, all of the interior

of the BMW Z3 that is produced in Spartanburg, South Carolina, is supplied by Lumiere Allibert, a French firm. They had not worked in the US before, and needed suppliers that were local there and knew the market. They also wanted suppliers that knew BMW design engineers and produced in the US. In the area of interior lighting, we are the only firm with sales, R&D and production in both the US and EU. Large firms like Donnelly⁶ are centralized in the US. If there is a quality problem or design change in Europe, Donnelly must go back to the US.

Exhibit 4: Sidler Product line

<p>INTERIOR Dome Lights Reading Lights Cargo Lights Courtesy Lamps Puddle Lamps Door Reflectors LED Illuminators Luggage Lamps Glove Box Lamps Overhead Console with Electronics</p>	<p>EXTERIOR License Plates Indicator Lamps Side Repeaters Side Markers Reflex Reflectors</p>
<p>TRIM Interior Trim Exterior Trim Appliques Bezels Manual Ashtrays Damper Ashtrays Deposit Boxes Coin Boxes Cupholders Radio Flaps Consoles</p>	<p>SURFACE DECORATION Common Paint Soft Paint Photo-Repossess Design Molded Color/Texture Vacuum Metalizing</p>

In 1998, there were over 350 automotive suppliers that changed ownership. It was becoming difficult to know owns suppliers today. Sidler was involved in a SAAB 9000 project in which its business partner changed names four times over the project's life. It now belongs to Johnson Controls. Delphi, the spin-off from General Motors, now belongs to Johnson Controls.

For Sidler, the market was huge. As manufacturers moved to platform strategies to reduce costs, an increasing number of parts were identical between different models of the platform. For example, all of the models developed from BMW's new 3-series were identical up to the dashboard. Automakers are also trying to introduce more niche cars, including speedsters and roadsters, or MPVs. Mercedes modified its C-class to make the CLK coupe in order to reach more niche markets. While the exterior might change slightly, the interior would change a lot. Rapp explained:

Mercedes added more fake wood or chrome. You need another handy holder, cup holder, or gimmick that you can push. They don't make sense, but people want them. We make those nice things. Every face-lift gives us a new business opportunity. We don't have to wait for the next generation platform, because our products are not under the hood. Light green is very popular in Italy right now, so we make a lot of parts that color. We are only limited by our ability to swallow growth. We are trying to slow growth down. We have grown 20 to 25% per year. That stretches people and capital. You have to follow it with the EDP

⁶ see <http://www.donnely.com/>

systems. Email is standard here, but consolidating our parts cost data seems to be very difficult. You need systems in place, and we are working on it.

The need for technical solutions to design was also increasing. Technical functions were increasingly being included in the car's lighting components. For example, the BMW internal lighting system stays on and slowly dims after the passengers leave the car. The lights also come on when the remote key is pressed to show the driver the car's location and make it easy to see inside the car at night. Design aspects are also becoming more important as consumers realize the importance of lighting for the internal décor and function. Rapp explained:

We have developed simulated woodtrim that includes lighting behind it. New developments have new economic consequences to customers, like "clip and fit" small lamps, and special optical effects to reduce voltage requirements, but not light levels. Finally, there is a trend to reduce the total number of parts used in products. Today, the value added from purchasing is around 60% for automobiles.

The amount of lighting and products also differed by vehicle size. Larger vehicles often had up to three times the requirements of small cars as shown in Exhibit 5. The most expensive lighting system was in the BMW 7 series, where two back-seat reading lights cost 175 DM each.

Exhibit 5: Lighting Requirements by Vehicle Class

Vehicle Class	Installed Wattage	Average Wattage	Price in DM
Small cars	5-30 W	16.1 W	3.30- 20.00
Mid-sized class	15-100 W	34.1 W	10.00- 40.00
Large-size class	20-150 W	57.6 W	33.00-667.00
Large Vans	20-50 W	41.5 W	16.00- 60.00

Organization

Sidler was functionally organized into sales, logistics, quality, technical (R&D, design, tooling, and production), and finance departments. But Rapp used teams to overcome the formal structure. He explained:

In real life, we operate a matrix organization. Since nobody understands the concept of a matrix organization, we have established customer sales teams that include design engineers, logistics people, and quality people. They report to their functional area, but are located in the customer team area.

Sidler's EDP Challenge

When Rapp joined Sidler in 1994, it had one computer system to run its operational systems, including PPS⁷, purchasing, and sales and distribution. A second computer was used for accounting. The control people who compiled the financial results used a third computer. To some extent, having fragmented systems was the philosophy of the family owners, who preferred the security of not putting all information together. At the end of each month, the owners would look at the three reports and, if they were close, considered it all right. One of Rapp's first challenges was to improve the EDP capabilities of Sidler. He explained:

We had problems handling growth, and we had hardware that needed to be replaced. So in 1994, we went to one computer system with a higher degree of integration on one platform. It was all serviced from outside and we had no internal EDP group. Even if the machine was down, we had somebody from outside fix the problem. When a law changed in payroll, we called somebody to change the parameters in the program and we fed in the changes.

⁷ PPS =production/manufacturing planning and control system usually includes demand planning, capacity planning, material requirement planning (MRP), production order processing

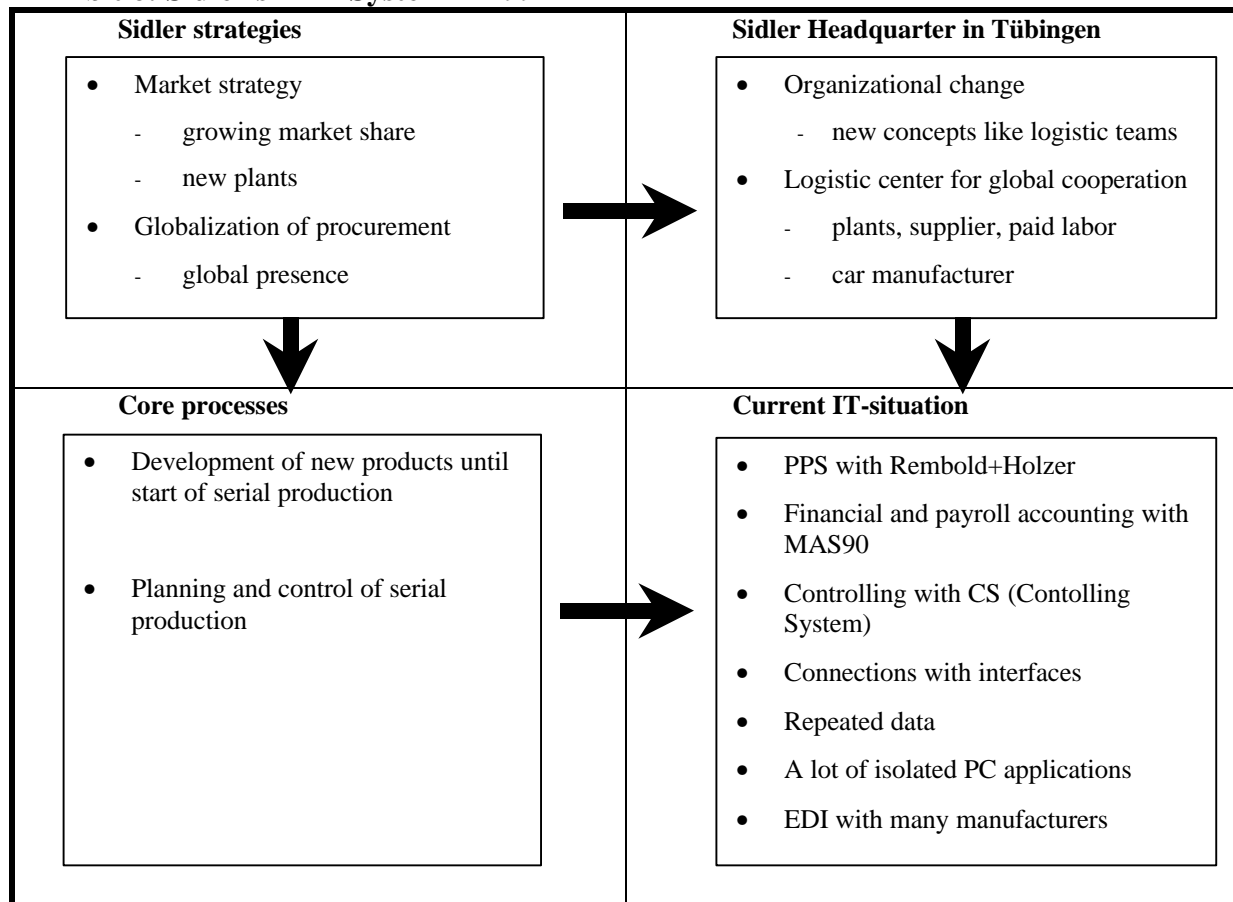
With such a weak EDP knowledge base, I couldn't change the MRP system. We kept the old MRP system and linked it with an IBM MAS 90 module for accounting and CS Control module⁸. That was our first EDP project. We brought in some people to do that and kept them so we could build our expertise. We lived with that situation until the beginning of 1997.

In early 1997, we began discussing the Euro and Y2K issues. Our partners for the IBM MAS 90 system told us that IBM was planning on dropping that product. Its support would be outsourced. While the manufacturing modules were also supposed to be upgraded to handle the Euro and Y2K problems, our vendors didn't know exactly when.

In early 1997, Dr. Rapp put together a core team of three plus seven outside experts to evaluate Sidler's options. They described the existing system and software as shown in Exhibit 6. They then looked at possible solutions on the market, such as SAP and Baan. Rapp explained his strategy:

I wanted those working with the systems to tell me what they wanted. If I made the decision, they would tell me every day why it was a bad decision. They evaluated several new systems while looking at the future release of our current PPS system. We discovered that the new PPS release was totally new, including the user interface and hardware platform. When we saw the cost of the upgrade, we felt that it was a new system and felt that this was the right time to consider a change, since nobody liked the current system anyway.

Exhibit 6: Sidler's EDP System in 1997



⁸ CS is a vendor of cost accounting software, see: <http://www.cs-controlling.de>

Kaltenbach identified the problems with the company's existing EDP software (Exhibit 7), combined them with the Sidler's needs to meet the new millennium, and questioned to what extent potential vendors could meet the company's needs. Sidler was transferring 500,000 records per month with up to 80 connections per day. Sidler's major customers were also adding growing demands for rapid EDP communication and data transfer as shown in Exhibit 8.

Exhibit 7: Current situation in different application areas

Actual Situation	Weaknesses	Potential of improvement by R/3¹⁾
Human Resource (HR) - payroll accounting with MAS90 - time-management with R+H	- different systems, no integration, repeated master data - reliance on two vendors - manual efforts for external statistics	3
Sales and Distribution (SD) - scheduling agreement processing with R+H - no tool-handling - delivery schedule processing via EDI - 150 kinds of containers for distribution/shipping - self billing	- no commission settlement - no container oriented inventory management - repack is necessary - bad overview about returnable transport packaging (own/provided by customer) - manual import/export reporting - manual effort self billing verification - manual effort for custom's service processing	1
Material Management (MM) - normal purchase orders - master agreements	- quality management not integrated - no vendor evaluation according the German Automobile Manufacturer Association - complicated flow of provided material for subcontractors	3
Production Planning and Control (PP) - material master data, bills of material, routings and work centers are processed with XPPS of R+H - variants are handled with single level BOMs - PC-based management of production resources and tools (PRT) - MRP is based on forecast delivery schedule	- Support of alternative production is bad - validities are not supported - inconsistent data - no overview about the availability of PRTs	2
Management of development projects (PS) - basic dates planning with MS-Project	- no current planning - no overview about budget and actual costs - no cross company reporting - no standard work breakdown and procedure	3
Finance accounting (FI) - A/R and A/P with MAS90	- high manual effort in AR - no proposal list for open items	3
Controlling (CO) - CS-Software is flexible and is well accepted by users (http://www.cs-controlling.de)	- a lot of effort is necessary to get the data via interfaces - high effort for primary cost planning per cost center	2
General	- bad documentation and help facilities - inflexible printer allocation - bad service of the vendor - bad training	3

¹⁾ 3 high, 2 middle, 1 low

Exhibit 8: The EDI-support is a key success factor in the operation of a component supplier

EDI Partner	Forecast delivery schedule	JIT delivery schedule	Shipping notification	Billing and self-billing	Forecast delivery schedule with supplier	SAP R/3
DaimlerChrysler	✓		✓	✓		✓
BMW	✓	✓	✓	✓		✓
Ford	✓	✓	✓			✓
Porsche	✓		✓			✓
VW/AUDI	✓	✓	✓			✓
Opel	✓		✓			✓
Nissan	✓		✓	✓		Planned
Honda	✓		✓	✓		Planned
Peugeot	✓		✓	planned		Planned
Renault	✓		✓			Planned
Saab	✓		✓			Planned
Volvo	✓		✓			Planned
Rover	✓		✓	✓		Planned
SMIG					✓	Planned

The investigation focused most heavily on overcoming the weaknesses of the current system. As shown in Exhibit 9, Kaltenbach listed the core problems confronting Sidler, and addressed the ability of the software supplied by R&H and that of SAP to solve those problems. The results suggested that SAP was a better solution than their current software. Knowing that SAP was a complex software package to use, the team members also visited a number of existing users of SAP (Exhibit 10). The results of that survey suggested the need for additional staff to help with the implementation of the SAP system. According to one company that was adding to its SAP system, "In order to progress in the network (office communication), one additional person (beginner) for network is needed. Two people are required on a full-time basis for conversion."

The SAP Decision

By October 1997, the decision was made to move to SAP for its added functionality (Exhibit 11). Rapp had to be absent for its introduction, but had a letter read to his staff concerning the introduction (see Exhibit 12). He explained the basis of the decision:

We knew SAP was a big elephant, but we had to do something with the new factories in France, Switzerland, and England. We decided to leave the US on their current system since they had other problems to solve first.

We have many products being handled by more than one factory within the group. The purchasing is done from headquarters. We develop the purchase sources and do the quality monitoring of subcontractors for the French and English operations. We add some further value in the product by building the logistics chain.

Our subsidiary then orders from the subcontractor, does some assembly, includes some parts from Switzerland, and sell it via the French factory because the customer doesn't want any new supplier codes. If he opened a new supplier code for our German factory, it would add a supplier to his statistics and he has been told to minimize the number of suppliers. We solve that by selling through our French factory. But

Exhibit 9: Aid to decision-making for future data-processing systems

1. Comparison of core problems

	R&H Release 1.6	SAP R/3
Data exchange transaction with Edifact (required by Opel)	Following purchase of a new data exchange screen (Seeburger ⁹).	
Data exchange transaction via ISDN	Following purchase of a new data exchange screen (Seeburger).	
Dealing with the EURO	Nothing definite.	Yes
Millenium-bug solved	Yes	Yes
Data integration	-only via interfaces -only by the month -high degree of checking (partly by hand) -multiple data storing	Yes Current data positions
Quality safeguard		Yes
Project system		Yes
Changes in the manufacturing process (e.g. Production cells ¹⁰)	Difficult conversion of production due to control of type of parts (e.g. Production cells)	Yes
Modification possibilities of the software by Sidler e.g. stock keeping via laser pistol.	Problematic R&H is not co-operative	Yes Must be programmed to facilitate switching to new releases.
Documentation	Disastrous	Yes
Multi-lingual	Supplementary charge	Yes
Export settlement for Customs, Interstat	Insufficient Must be bought in	Yes
Server platform	AS/400	AS/400, Windows NT, Unix
Transfer to subsidiaries	Yes They require AS/400s if our system is not used	Yes
Consolidation of data (group invoicing)	Explosion of interfaces	Yes
Future partners	No statement as to future development. Capital base? Turnover per head	Financially sound Good future prospects
Future of administrative programs	Continued maintenance for MAS90 is secured up to the year 2001 by selling the servicing to BIW. What follows? By then, IBM should have "San Francisco" on the market and there will be	

⁹ Seeburger is a vendor for EDI manager software, see: <http://www.seeburger.de>

¹⁰ Production cells are a local aggregation of different machines and workers to produce a component or a product completely within this center. The logic of the production planning differs because of the autonomy within the center

	conversion aids.	
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now everyone tells me that they are not making money on the sales, and hope that someone else does. I would like to find out, from time to time, if we are making money within the group on that product, or not. I can find it out now, but it is a puzzle. That is why we decided to eat this big elephant. That is the only system that gave us the possibility of integrating those subsidiaries. All the other systems were single installations for each factory. That would leave us to do the integration. The greater effort and cost of SAP helps us within the group.

Exhibit 9 (Continued): Aid to decision-making for future data-processing systems

2. Comparison of investments

		R&H MAS 90, CS	SAP/R3
Seeburger		3,500	
Update of the current quality system	*	100,000	
Purchase of a project system	*	50,000	
Integration of the Sidler modifications	*	50,000	
New programming of the interfaces	*	50,000	
Buy-in of export settlement (PC solutions)	*	5,000	
Software upgrade price to R&H when upgrading hardware	*	15,000	
Training PPS	*	150,000	
Software			608,350
Consultants		110,000	637,000
Hardware AS/400	*	150,000	300,000
PCs and 17" screen	*	150,000	150,000
Total Costs		823,500	1,695,350

- = estimated prices

In charging his staff with the task of introducing SAP to Sidler, he further described management expectations:

We all know that our business is no longer possible without data processing. A functioning data-processing system is the backbone of our company. Its integration and flexibility in communication is an important competitive factor.

In project QS 9000, we rethought and rearranged our business procedures. Now we have to copy these procedures in a data-processing system, which will become a model of our company. We must therefore immediately correct any discrepancies we notice.

The introduction of this system must take place within the limits of time and expense. To do this it is necessary to use the best brains our company has for this project. It goes without saying that such people do not have limitless time at their disposal and for this reason we must create time. Everyone involved in this project must consider what tasks they can delegate and how management can help them to devote that necessary attention to this project and still ensure that our customers are in no way neglected.

Think about it. Talk to your superior. Ensure that we are working for the future of our enterprise to the best of our ability without endangering the present.

Sidler signed a contract with the SAP certified systems supply house in the beginning of November 1997. The target was to have the SAP installation completed by January 1, 1999.

Rapp explained the unexpected problems:

We selected SLIGOS-Industries because they were large and had an automotive supplier package. SAP was not very strong in automotive suppliers or in the integration of EDI. We need the German, American, and French EDI standards, since each has something different. That was the beginning of a nightmare, of which we are now in the middle.

Exhibit 10: Summary of SAP Visits

1. What has been done so far:

1.1 New functionality of SLIGOS

1.2 New offer: Estimated total costs

Software	608,350
Consultants	637,000
Hardware AS/400	300,000
17" screens for existing PCs	150,000
New PCs	?
Total costs	1,695,350

1.3 Visits to SAP users:

	<u>Application</u>	<u>Comments</u>
• SSA* at CS	logistics, PPS	QM missing, project system
• Seyfert Wellpappe	payroll acctg.	SAP is the Porsche, Paisy is the Rolls Royce
• Rhone-Poulenc, Lucerne	logistics, PPS	Supplier handling missing, Two employees were hired, team members were relieved from normal duties. Project took 15 months before Big Bang introduction 1/1/97.
• Heinrick Schmid, Reutlingen	FI, Control	Using AS/400. Has 90 independent companies, domestic and foreign (Sweden, France, Thailand, Switzerland). All will be connected via Intranet. Test was successful. Initial problems with IBM. FI is OK. Production data missing for Control.
• United Parts	Project system	<p>FI, Control, wages introduced in 4-6 months with ten projects in real-time operation since 1/97. Development and model construction includes 50 employees. Every employee is a cost unit and reports daily. It is outsourced into a separate company. Projects are sold to production.</p> <p>Currently, PPS is being introduced. Project head is the key user (a Polytechnic graduate) giving 3 half-days per week. System is being customized with external consultants. Business process in production was reorganized. Master data is input for every business process. Every item is assigned to a process and then copied.</p>

2. What remains unresolved?

Controlling
From LAB to production order, existing offer for test installation.

3. Overall concept for integration of subsidiaries

Intranet
Direct link

4. Introduction of Software

Time Schedule: Project systems
Payroll accounting and time management
FI
Controlling
PPS

Note: *System Software Associates provided logistics, production planning and financial accounting modules in competition with SAP. In 1999, they had over 8000 installations.

Exhibit 11: Pro SAP Arguments

Company size	Datex-P
Available for clients	ISDN
International	ATT
Computer platform	GE
AS/400	Supplier-specific forms
PC-network	Supplier assessment
Connections to the locations; Direct line, Intranet	OS-system
Project management	Loading-facility management
Data exchange audit trails	Empties management
VDA	EDL management
Odette	Export management
Edifact	Customs
Data exchange links	Intrastat

In 1997, we obtained QS 9000 certification for all our subsidiaries. We had a project with a consulting company and a new quality manager to prepare our QS 9000 certification in the beginning of 1997. This project was a vehicle for business process reengineering. As we described each business process, we discussed whether it was the right process or whether it could be done better. That was a big project that gave everyone the chance to contribute to the question, "How do I want to make what I do today better?"

That was described in QS 9000 with flowcharts. There was a family of 12 parts that represented our processes, beginning with one made here, one from the Czech Republic etc. We handed this process information to the SAP people to describe how we work and what we wanted. We wanted them to set up the appropriate SAP system. We gave them our "A" team from the company. I didn't want to be dependent on consultants, so I established our own A-team do the work and be able, afterwards, to make the modifications. We wanted their support to connect the first subsidiary into the system, but we would then try to do the second with minimum support.

Our plan was to go live with our Tübingen headquarters' plant on January 1, 1999 and follow up with our British plant in June 1999. I am afraid that we won't be ready with headquarter by the end of June, to be ready for July 1. That is when the real problem begins, since we cannot fulfill the Y2K problem with the system we have. With all of our automotive customers, we are classified as yellow. That becomes either red or green on July 1. VW came yesterday and will send us the audit organization to check if we are going to become red or green in July. Most of my customers will be coming here within the next several weeks to also determine our status.

The top employees were assigned to the "A" team. They had the personal incentive to learn about leading edge technologies. They are not completely out of day-to-day work, but spent half their time on the SAP project.

Problems with SAP Implementation

In March 1998, German firms discovered that they might have problems with the Euro and Y2K after a German power company failed its Y2K experiment. The SAP partners began experiencing rapid turnover that affected Sidler. Rapp explained:

We started with a good project leader from SLIGOS and made good progress until March of 1998. The project leader left the company along with 4 or 5 other experts. We then got people who were not experts and started learning again about Sidler. They were trained in only one SAP module. They found that the customizing in the CO module did not correspond to the customization of the MM module and they would not work together. There was no more integrator for the project. They had all left.

We tried to change our SAP vendor, but the market was empty. You couldn't hire anyone. We then tried to hire those experts that had started on our project. There is one still here, but this is the third company he has worked with since he started here. We just pay his new employer for his services. By mid-1998,

progress declined. I hired a rare expert for the market price. We now have a project leader to help our consultants get along and tells them how to do their jobs correctly. But we have lost months.

There was no way to complete the project by January 1999. Only one incoming "call off" of dispatch and delivery to one customer has been installed and it worked 90%. Over the last several months, they have been working to develop a concept to move our old database into the new systems. But every time they developed a concept, the systems integration test has failed and has required redefinition of the features and copy programs. It is a nightmare.

Exhibit 12: Dr. Rapp's charge to Sidler staff for the SAP introduction

To Sidler GmbH & Co.

November 24, 1997

It is over two years now since we launched a project, which, with considerable involvement of energy and expense, saw the integration of the data-processing system then in use. Everyone actively involved in that process knows just how difficult it is to realize integration in practice and what disastrous consequences even the slightest mistake in data input and data maintenance can have. In the meantime we have become used to this situation and are now ready for the next step, which is intended not only to solve some of the problems here in our business, but to take integration a step further beyond the factory gates in Tubingen. We are preparing for the integration of our data-processing systems in the Sidler Group.

Two years ago the first step was necessary in order to break through the limitations set by our previous data-processing system. We could not get any further with our teleprocessing nor did we have the possibility of combining the PPS and controlling systems with each other. At that time, we had already considered introducing a fully integrated interface-free program package, but considering the state of processing know-how as it was then, none of us had the courage -- and it would have been irresponsible anyway -- to throw all the systems overboard and install a totally new PPS system with the existing manpower. So we dug deep in our pockets, demanded additional commitment from you, our staff, to achieve this first stage of conversion from which we were to advance and to learn. And we have advanced and we have learned.

But at the same time we still have, as was to be expected, our problems with the many interfaces, which connect our present systems. We want to change this. At the same time, too, we are no longer producing an ever-increasing percentage of parts ourselves, but share the work with other subsidiaries in our Group without being able always to say exactly whether an article in the Group will be profitable overall or not. This has to be changed.

We have therefore decided once more to dig really deep into our pockets, appealing yet again to your personal commitment and we plan now to introduce a system, which will facilitate this next step. Following the recommendation of an in-house team of experts we have come down in favor of the SAP system and today's meeting sees this introduction.

This particular system is gigantic, but it does everything we need. Having said that, I must warn you not to be tempted to start wanting to use such functions as we would perhaps quite like to have, even if we do not really need them. The SAP-system is capable of overtaxing by far our newly gained data-processing experience and we do not want to risk that. Expert guidance during the introductory phase is intended to prevent this happening, but I would nevertheless ask everyone to be very careful.

We realize that this project will once again put a considerable burden on our key staff. It is like playing a pinball machine: those who try particularly hard and long achieve a high score and win a free turn. That means they can repeat the whole process to win another free turn. And this is what we see as the positive element of this situation: only success will produce such tasks, and only a successful enterprise can set you such tasks, and only by tackling these tasks successfully can we ensure that there will be a basis for the continuation of this success. With this recognition, I do not intend to anticipate the next data-processing conversion, but I am certain that there is life beyond SAP and that there will be more changes in store.

I would very much like to have been with you at the outset of such an important project, but it is my thankless task today to convince a customer that he is doing us an injustice if he has lost faith in our ability to produce quality. I have therefore asked Mr. Krauser to read this statement for me and to oversee the introduction of the new system today. Wishing us all every success with this project.

H. Rapp

They have been customizing SAP since October 1998. We will have to use SAP release 4B, but only release 3 has been available for development. There was not supposed to be a problem in copying to the new version, but there is a serious problem. Things didn't fit any longer. It was a qualification problem. We tried to get the best supplier, but they turned out to still be weak.

Larger firms have build their own SAP staff and expertise. We tried to do that, but by last year the market dried up after SAP consultants were in high demand. The SAP specialist that I hired has been offered DM 280,000 plus car. That is no longer realistic for Sidler. I have him in a contract until October, but after than he will likely move on. New consultants have three days training and are a specialist in only one module. Business processes cross four or five modules.

The SAP system is very powerful. There are so many switches that can be set. There are millions of possibilities for doing things wrong. You do everything at least twice to get it right. We are trying to get the experts from SAP Waldorf to help. If you know them personally, you can get them for a Sunday night, but they are fully booked. It is not a good time to be doing this. We have no choice but to move forward. We will tell everyone that we are working in SAP, even if it is not fully implemented.

Appendix 1: SLIGOS-Industries SAP Offering

R/3 Automotive Supplier®

IBM

The all-round solution for car component suppliers

Car manufacturers and suppliers are moving closer together. The reason can be found in the fast changes in the car component supplier market and the aim of car manufacturers to produce and assemble less and less themselves. Logistical contracts are being increasingly reduced and suppliers are already being involved at the development stage of a component part.

The concentration of the systems suppliers on their core competencies and the strengthened link to sub-suppliers requires an integrated approach and optimization of the value-creating processes.

These aims can only be achieved with the help of an integrated software solution tailored to the special requirements of the suppliers

In partnership with the sector-specialist SLIGOS-Industries, IBM offers a fully integrated solution package, which supports the whole life cycle of a component:

R/3 Automotive Supplier® Integrates business processes

- from development to purchasing release
- from inquiry, pilot production to production stage
- from production launch to end of series
- from end of series to guaranteed spare parts supply.

Costs and deadlines

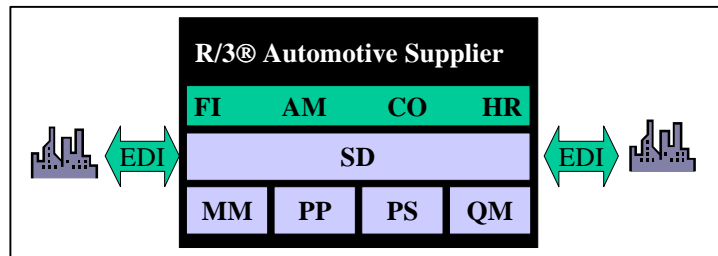
At each stage costs and deadlines can be kept under review and controlled. Costs are taken over into the next processing stage. The total life of a product can be presented at any time in terms of value and amount. The automatic representation of logistic amount flows into value flows of accounting and controlling results in online transparency between budget, calculation, costs and receipts - important information for decision-making.

Sector-specific extensions

R/3 Automotive Supplier® combines the universally applicable R/3 from SAP with the sector-specific extensions for the car-manufacturing supplier industry. Tailored to the needs of the car-manufacturing suppliers, R/3 Automotive Supplier® is the all-round solution for all commercial and logistic tasks.

The sector-specific preset and extension make the introduction of the system easier and support corporate conversion measures. R/3 Automotive Supplier® can be complemented by:

- CATIA for DAD/DAE/CAM
- EDImanager for electronic data transfer with clients and suppliers
- ICAM for stock management, control and production management system.



Appendix 2: Silder Group Companies

European Headquarters

Sidler GmbH & Co.
Bismarckstraße 72
72072 Tübingen, Germany
Telephone (49) 7071/938-0
Fax (49) 7071/938-201

Divisions

SMIG GmbH & Co. KG
Hauffstraße 7
72762 Reutlingen
Germany
Telephone (49)7121 38620
Fax (49)7121 38622-2

APAG Elektronik AG
Ringstraße 14
8600 Dubendorf
Switzerland
Telephone (41)1/8026700
Fax (41)1/8026767

GHS Stanz + Montage GmbH
Siemensstraße 4
72585 Riederich
Germany

Sidler APAG S.A.R.L.
1, Passage du Clos
92380 Garches
France
Telephone (33)14741 3200
Fax (33)14741 6345

RIVORET S.A.R.L.
B.P. 74
67172 Brumath Cedex
France
Telephone (46)31/412460
Fax (46)31/418422

Germany

Karl Wengeler oHG
Ottostraße 3
50859 Köln
Germany
Telephone (49) 2234/71031
Fax (49) 2234/74422

Sweden

Interopa AB
Kapplandsgatan 96
41478 Göteborg
Sweden
Telephone (46) 31/412460
Fax (46) 31/418422

Great Britain

A.T. Redding
The New House
Malvern Road,
Malvern WR13 5DZ
Great Britain
Telephone (44) 1886/833653
Fax (44) 1886/833654

D.A. Atkin LTD
Cambridge House
3 Newbold Street
Leamington Spa.
Warwickshire CV32 4 HN
Great Britain
Telephone (44) 1926/427591
Fax (44) 1926/315537

Wall & Knight
The Cottage
Chester Road
Castle Bromwich
Birmingham B36 9DF
Great Britain
Telephone (44) 121/7492727
Fax (44) 121/7767067

North American Headquarters

Sidler Inc.
1155 E. Whitcomb
Madison Heights, Michigan
USA 48071-1414
Telephone 1- (248) 583-2710
Fax 1- (248) 583-2723

Divisions

Laotto Manufacturing
11654 East 400 South
P.O. Box 378
Laotto, Indiana, USA
It has added two component molding presses and presses for In Mold Decorating. This QS 9000 facility uses "Impact" programs for continuous improvement.