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# IoT > ERP

Björn Dunkel, Managing Director of GIB, brings together what belongs together: IoT and ERP. An end-to-end path based on an infinite amount of sensor data from Industry 4.0 into consolidated ERP finance. The holistic picture of Supply Chain Excellence expands, and GIB becomes part of the ifm group.

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To ERP**

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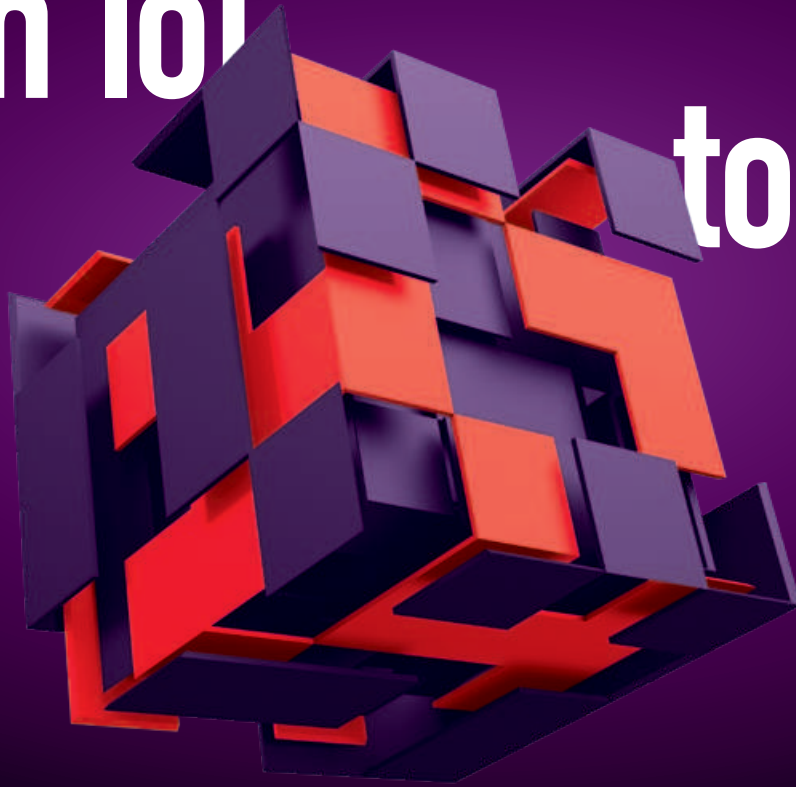
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# From IoT to ERP



SAP's ERP revolutionized the structure and process organization of many entrepreneurs. With Industry 4.0 and IoT, the next step is a holistic view of product, service, and financial cycles. SAP partner GIB and parent company ifm are at the epicenter of this promising development.

*By Peter M. Färbing*

**F**rom IoT to ERP is the new mantra in the service sector and industry. The reason is obvious: on the one hand, almost all companies have an ERP system and the vast majority have one from SAP; on the other hand, there are sensors, actuators, and electronic switches in almost all technical devices. Combining these two sides of the same coin is now the order of the day. GIB is a successful SAP partner from the procurement and supply chain sector and has been part of the global ifm group for several years.

This year, GIB and ifm set out to accomplish what the market dictates. The two companies will become one consistent provider for the concept of „From IoT To ERP“. The technology company ifm is focusing on complete integration of business and production processes. On a horizontal level, ERP-controlled supply chain processes will be optimized and accelerated; on a vertical level, the shop floor and business processes will be linked. The data are evaluated with on-prem or cloud-based software, visualized, and fed into the ERP system with special integration software. Ultimately, „From IoT To ERP“ is about efficiency and resilience. According to a new study by IBM and Ce-

lonis on supply chain resilience, Chief Supply Chain Officers (CSCOs) see hybrid cloud, AI, process mining and execution management as critical tools for addressing the challenges they face due to the disruptions of the past two years. 72 percent of CSCOs surveyed expect to automate their processes in the next three to five years, and 69 percent plan to accelerate cloud adoption to improve real-time access to data. This is where GIB and ifm come in: with sensors, the public cloud, and SAP software.

## Supply chain modernization

For the study by the IBM Institute for Business Value in collaboration with Celonis and Oxford Economics, nearly 500 CSCOs from ten industries were surveyed. The results show: Companies are currently looking for ways to modernize their supply chains - and are increasingly relying on data and hybrid cloud strategies to do so.

Modernization and automation require a holistic view of the organizational structure and corporate processes. In an E-3 interview, GIB Managing Director Björn Dunkel says, „A stable procurement process requires a holistic view of the supply





*Björn Dunkel is Managing Director of GIB and part of the ifm group including extended tasks as product manager. His professional career began with an apprenticeship as a car mechanic in a mid-sized family company, then he worked as a contract soldier in the supply squad - where he first came in contact with IT and logistics -, followed by training as an IT system clerk, sales manager, and Managing Director at GIB.*

chain, transparency, and communication between departments instead of silo thinking. This must also be reflected in the software. An ERP system alone is not enough; it needs other solutions to support it. On a strategic level, SAP Integrated Business Planning for supply chain, IBP, can provide exactly that. IBP is a highly complex and comprehensive tool that digitizes the supply chain process end-to-end, and, as a complex planning tool, can show the chief strategists in the company the way into a successful future."

### Supply chain tools

However, in order to get the strategies on the road, a tactical and operational tool is needed. Björn Dunkel also knows this and explains, "The tools must be usable for supply chain and logistics managers, for planners and MRP controllers. This is exactly what the GIB software provides. It is natively integrated into SAP, so that we are in some way already part of the SAP standard."

But what happens in the public cloud? SAP's maxim, "Keep The Core Clean," ensures that there can be no more integrated solutions, including in-house SAP IBP.

"Data are thus outsourced to subsystems and processed there," says Dunkel. "Sounds a bit like the good old days of relational databases, where that's exactly what happened for performance reasons. Back then, we complained that this approach leads to data inconsistency due to no longer current evaluations. Consequently, the meaningfulness and actionability of all evaluations and recommendations decrease and the discord between the involved parties increases, since there are several truths, depending on how up to date the data are."

The advantages of moving to the public cloud then lie almost exclusively in IT considerations: speed, maintenance, security, and scalability. Says Björn Dunkel, "This means that the innovation driver in supply chain management would not be the business, but rather the IT department."

When it comes to moving applications to the cloud, companies' preferences tend to be for both minimal and major architectural changes. That's according to Information Services Group's latest study on cloud buyer behavior. According to the study, enterprises can simply move and restructure their applications to work better in a cloud architecture, rewrite them as

"cloud-native" applications, or decommission them and move them to a software as a service (SaaS) provider.

### E2E procurement and logistics

A comprehensive end-to-end process in procurement and logistics is orchestrated across many areas. What is the optimal architecture for this? On-prem, hybrid cloud, or even public cloud? "We are open to all architectures and can already offer supply chain solutions for any ERP variant. Not fully everywhere, but we are working on covering more and more application areas and improving more and more of our customers' processes, whether in the private cloud or in the public cloud, as a hybrid or on-prem model," explains Björn Dunkel in an interview with E-3 Editor-in-Chief Peter Färbing.

### On-prem versus cloud

"In the end, it's the application area that dictates the architecture we need for it," says Dunkel, describing the situation. "Let's take supplier integration as an example. Here, we are forced to leave our safe haven, the on-prem world, because we need to make



ERP data accessible and, of course, we also want to receive data. Here, without question, a cloud solution is the better option. If the data remain in the ERP environment, I still prefer an on-prem solution. Now, of course, you're wondering why we don't just create a cloud solution that can be integrated with both on-prem systems and cloud ERP systems. That would indeed be an exceptional solution. Unfortunately, however, there are still too many question marks regarding SAP's Business Technology Platform, BTP, which we want and need to use as a basis for development. For example, the billing system is not clearly defined, the technical foundation is not really transparent, and even the choice of programming language is still up for discussion."

How would Dunkel define this challenge? „The topic of supply chain and logistics, with the sub-sector procurement, has always been autonomous in the ERP world in my opinion," defines Björn Dunkel. The relevance of this sector to SAP is shown by the fact that the ERP world market leader has already dedicated a separate solution to it in the past: SAP APO. „Unfortunately, APO has not been a real success story. Why? Because SMEs unfortunately did not see the relevancy of it. In general, supply chain management was not integrated into everyday business at all," GIB Managing Director Dunkel knows from his professional experience. In many companies, supply chain management was limited to material requirements planning (MRP), in which structured planning was replaced by diligence, commitment, and gut feeling. However, current events are causing SMEs to rethink their list of priorities, and the topic of supply chain management with all its sub-processes is suddenly rocketing to the top of that list.

## More agile, more efficient, VUCA

„The confluence of post-covid challenges, inflation and supply issues, changing security requirements, and the demand for greater sustainability has created a complex business environment. This is forcing companies to rethink and redesign their supply chains to become more agile, efficient, and sustainable," said Jonathan Wright, Managing Partner Finance and Supply Chain Transformation, IBM Consulting. „Technology, along with data-driven automation and artificial intelligence, are key to not only identifying inefficiencies in current workflows, but also identifying new opportunities." VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) describes characteristics of the modern world that summarize the challenging business management environment.

„Due to the influence of VUCA on the supply chain, a different kind of supply chain management is required," explains Björn Dunkel. „The key here is to let strategy and execution learn from each other. The constantly changing reality must be factored into strategic planning, preferably in real time. Complexity needs to be kept to a minimum." Thus, users need an intelligent system that follows the CLUI (context-based, location-based, user-based information) principle to guide each supply chain manager to do the right thing at the right time. „And that is exactly what ifm's purpose is and will continue to be," says Björn Dunkel, who is delighted with the latest step of the merger of GIB and ifm. „With Supply Chain Excellence, we offer our customers a two-in-one solution: the SCM planning tool for managers and the tool for simplifying the daily business of employees."

## Supply Chain Excellence

GIB comes from the procurement sector and for some time now has also been involved in supply chain management, or more precisely Supply Chain Excellence. Now GIB will be merged into the company ifm: What does this mean for GIB itself and for existing customers as well as the SAP community? „With ifm and GIB, two very innovative know-how carriers - ifm in the area of operational technology, GIB in the area of information technology - have found each other. We are thus combining the OT level with the IT level and creating vertical digitization in addition to the horizontally digitized supply chain. It is therefore a win-win situation for everyone, especially for our customers and of course for those who want to become one," says Björn Dunkel.

Can volatility, uncertainty, complexity, and ambiguity be solved by one vendor alone, and will we see heterogeneous communities in the future? „A clear no," emphasizes Björn Dunkel in the E-3 interview. „It is always important to keep the big picture in mind. Holistic SCM consists of four pillars: demand planning, manufacturing, procurement, and inventory management. If these processes are not seen as silos but as part of SCM and the supply chain manager aligns the sub-processes like cogs in a clockwork, the result is a resilient supply chain."

Put simply, GIB has always been a very successful add-on supplier for SAP R/3 and Business Suite 7. Björn Dunkel: „To better paint the picture of the role that GIB and Supply Chain Excellence, SCX, play, I would say we shifted from add-on to value-add-in. Unlike most other SCM solution provi-

ders, including SAP itself, SCX runs in the digital core of S/4 Hana. That's exactly what we're taking advantage of. We access the SAP core directly, which is where we find the customer's treasure trove of data, including all past and current master and transaction data."

The IBM study mentioned above found that Chief Supply Chain Officers can take concrete steps to develop and operate data-driven and sustainable supply chains. Nearly 9 in 10 of the CSCOs surveyed are implementing execution management and 77 percent are implementing process and task mining to optimize their operations. By 2025, 83 percent of CSCOs plan to implement AI-powered real-time inventory management, and 74 percent say hybrid cloud integration is critical to digitally transforming their supply chains.

Björn Dunkel confirms these survey results, „Based on this data, the complex supply chain is analyzed realistically at sub-process level with the help of system-internal intelligence. We offer users a transparent picture of their sub-process quality and show how the sub-processes perform in the complete end-to-end process. We then incorporate our extensive process know-how, which we have gained from decades of consulting, countless projects, and coaching in a wide range of industries. Based on this, we derive concrete recommendations for action that, with constant improvement and optimization, will lead to excellent supply chain processes."

## Opportunities and change

Eliminating inefficiencies in core supply chain processes represents a tremendous opportunity. Chief Supply Chain Officers know they need to make these adjustments, and in many cases, they are already doing so. However, they often don't have the insight into the data and systems they need to understand where changes need to be made. Furthermore, they lack the tools to drive that change. „This is how we do our part to help our customers achieve a resilient supply chain, despite VUCA. In this way, we make successful companies even more successful. So, it's actually quite simple," describes Björn Dunkel his work in the SAP community.

This raises the question of whether the complexity of procurement and logistics can still be managed using traditional IT tools, or whether users will need a digital twin of their supply chain in the future. GIB Managing Director Dunkel says, „The ERP world is basically already an attempt to create a digital image of reality. This di-

gital image is then used to forecast, plan, and control reality with all the variables, influences, and all the knowledge of the past. However, for this to be truly successful, it is also necessary to harmonize, compare, and analyze the data in ‚near real time‘. This is not possible with paper, pencil, and gut feeling.“

## Track, trace, quality

It’s the same in procurement: Is the part or material available or not? If so, where is it? Where should it be? Where is it going? It’s about locating and tracking as well as quality assurance. In other words, it’s about track, trace, and quality. That means integrating the physical world into the ERP system, integrating OT and IT. And what about the use of machine learning and AI in procurement and logistics in general? „In Supply Chain Excellence, we have already integrated machine learning and artificial intelligence. For example, we calculate safety stock based on neural networks or determine the best-fit forecast process. However, that’s not enough for us. We are currently working on a machine learning solution for optimized, detailed production planning. A first version is already being delivered in Release 23. For big picture SCX, we have anchored ML and AI as a fixed component. We’re working on using artificial intelligence as a decision support for a wide variety of operational topics around procurement.“

Another trend in the SAP community besides ML and AI is the discourse around a future cloud model. According to a recent survey by the German-speaking SAP user group DSAG, use of public cloud is not yet very widespread. What risk does ifm take with this concept? And why? „I

can certainly confirm that,“ comments Björn Dunkel. „The public cloud is still a bit exotic. And two years ago, we would never have dreamed that today, we have a customer who has decided to go down exactly this route - with us, of course. There are clear arguments in favor of the public cloud, for example data security, maintenance, up-to-date systems, and, of course, the return to the standard and away from sprawling customizations. Moving away from on-prem can also be a means of ensuring a company’s future competitiveness.“

## Public cloud and SCM

Gigaset, a German manufacturer of communications products and solutions, has decided to move to the public cloud when it switched to S/4. It was important to the company that certain functions from the external solution for improving logistical processes in SAP could also be used in the public cloud. In close cooperation with its trusted solution provider GIB - in future ifm - which has many years of experience in the supply chain sector, the functions are now being transferred to the cloud. „Apps in the public cloud are ultra-modern in terms of design and usability, stylish, and can be operated from any mobile device,“ describes Björn Dunkel the current situation.

The Fiori look and feel has really set milestones here. For management considerations and strategic evaluations as well as for finding basic structural problems in the process, this is a clear and intuitive solution. However, how MRP controllers get the information from their cockpit, with which they control all materials from one application, onto their screen, is a questi-



Björn Dunkel, Managing Director, GIB: „Our solutions are so popular because we are so good at creating transparency.“

on not only asked by GIB Managing Director Dunkel. „In this case, the Launchpad quickly becomes unmanageable. We took on this challenge and, true to the Fiori premise of ‚three clicks to the finish line,‘ developed an application that uses the advantages of the new world but takes the expressiveness of the old world into consideration. This has encouraged our pilot customer to continue on the path to the public cloud. And we realized that we could combine the best of both worlds, creating a way to gradually bring our proven suite to the public cloud.“

Björn Dunkel sums up the discussion as follows, „Our solutions are so popular because we are so good at creating transparency. For the day-to-day business of materials requirements planning, we have developed cockpits that display all the relevant information an MRP controller needs on one screen. No tedious transaction hopping. No twenty clicks to see if action is needed, and another ten clicks to unravel the mystery of what you’re supposed to do.“

Please also have a look at our Community Info entry

**GIB**  
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## Challenges for Chief Supply Chain Officers

The IBM Institute for Business Value, in partnership with Celonis and Oxford Economics, surveyed 500 Chief Supply Chain Officers (CSCOs) from a variety of industries, including automotive, manufacturing, and pharmaceutical. The goal of the survey was to gain a comprehensive understanding of how recent disruptions in global supply chains are impacting their short-term and long-term strategies and performance. CSCOs from ten industries were surveyed: Financials, Consumer Products, Healthcare, Electronics, Telecommunications, Insurance, Industrial Products, Manufacturing, Automotive, and Life Sciences,

each representing five to fifteen percent of the total sample.

- 80 percent of CSCOs surveyed in the study said demand volatility was one of the biggest challenges, while 77 percent cited increased transportation and logistics costs.
- 76 percent rated bottlenecks in transportation and logistics as the biggest challenge.
- 71 percent said lower inventories of raw materials and goods have led to supply shortages and lost sales.
- 60 percent had to speed up product deliveries for customers, resulting in higher transportation costs.



# Fit To Standard

Cloud or no cloud? This question arises for many companies when it comes to converting their ERP system. Cloud technology is considered to be the driver of digitization - yet companies often shy away from the change and overlook the advantages.

By Claudia Ballhause, IT author for ifm

Gigaset, a German manufacturer of communications products and solutions, decided to move to the public cloud while migrating to SAP S/4 Hana because it wanted to further standardize and streamline its processes. In doing so, it was important to the company that certain functions from the external solution it had already been using for ten years to improve logistical processes in SAP could also be used in the public cloud.

In close cooperation with their trusted solution provider GIB - in future ifm -, which has many years of experience in the supply chain sector, the functions are now being transferred to the cloud. Both companies, Gigaset and ifm, have been working together successfully for a long time, whereby the manufacturer of the communications products has benefitted from the external consultant's in-depth knowledge in logistics optimization.

The willingness of German companies to switch to cloud-based ERP systems has so far been low, according to a study by German-speaking SAP user group DSAG. In many companies, the idea is still firmly anchored that central business processes must be managed in a separate IT landscape, i.e., in traditional on-premises IT.

The biggest and most important argument for this type of ERP system is usually that companies do not want to relinquish control, especially when it comes to data protection. Furthermore, the data can be accessed at any time. However, local administration also has disadvantages that prevent the streamlining of pro-

*Standardization was a must for us, which is why we opted for the public cloud.*

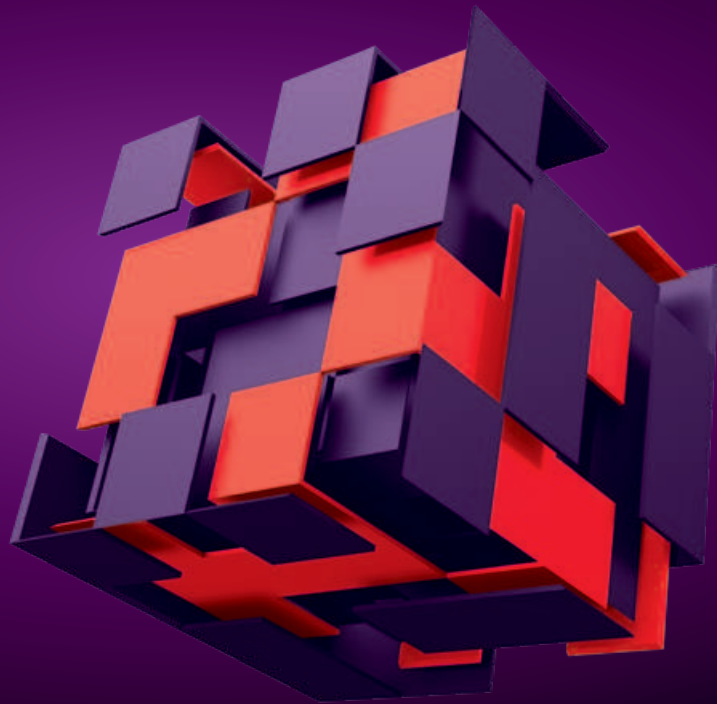
*Gunther Schlingemann,  
Senior Vice President IT,  
Gigaset*

cesses and an associated increase in efficiency. These include high costs for infrastructure, personnel, and maintenance. In addition, trained IT staff are needed to guarantee data backups, install updates, and quickly fix bugs.

Finally, the upcoming updates and release upgrades for established ERP systems such as SAP have become immense in scope, which is associated with a large amount of work. In SAP S/4 Hana, there is one new release per year, so the update cycle becomes even shorter. High staffing and management costs for on-premises models are thus a given. Companies that

want direct control over their environments often consider moving from on-premises systems to a private cloud in the form of SaaS, IaaS, and PaaS as an alternative to gain benefits such as self-service, scalability, and elasticity while maintaining control and customization. Through enterprise firewalls and internal hosting, this gives them a high level of security and privacy, yet the corporate IT department is still responsible for costs and liability in managing the private cloud. So staffing, administration, and maintenance expenses cannot be reduced with this option.





*The support from GIB Operations is very important to us because it significantly increases our work speed.*

*Dirk Lörwink,  
Senior Manager  
Logistics Controlling,  
Gigaset*

Contrast this with ERP systems in the public cloud. Instead of high initial costs, companies pay rent for a service, use the provider's IT resources for rapid support, do not have to worry about maintenance, data backups and updates, and can access their data around the globe if required.

Data security in the cloud is ensured by regular penetration tests, among other things. In addition, in the public cloud, it is no longer possible to assign individual authorization rights to individual employees, but only to assign firmly defined roles. This serves to prevent unintentional data leaks.

## Cloud for standardization

All these advantages led German communications products provider Gigaset to opt for the public cloud version when it converted its SAP on-premises system ERP/ECC 6.0 to S/4. Based in Germany, Gigaset has been producing communications products in Bocholt on the Lower Rhine since 1941. More than 550 employees develop, design, and produce innovative phones, smart home systems, and smartphones. As a reason for the switch, Gunther Schlingemann, Senior Vice President IT at Gigaset, cites the desired standardization, „Standardization

was a must for us, which is why we opted for the public cloud. It forces us to standardize. As a mid-sized company, we think that this approach offers us the greatest advantages for the future. We will be able to stop worrying about so many things - such as hosting, security updates, system maintenance, and implementing workflows for new laws and regulations. Our new SAP system takes care of all of these things.“

## Supply chain into the cloud

Despite the important position that standardization holds for Gigaset, it was clear to the company that certain functions from the GIB Operations solution were indispensable. For more than ten years, Gigaset has already been working in primary MRP with the software from the licensed SAP silver partner previously known as GIB. From June 2022, GIB, which has been part of the automation specialist ifm group since 2016, will operate under the name ifm. The familiar product names will remain unchanged.

„A few years ago, we noticed that the planning of finished products, i.e., primary MRP, was getting more and more complex. However, we didn't have any more personnel available and needed to increase efficiency. Therefore, we replaced SAP customizing with GIB Operations. This opened up advantages for departments like operational procurement, production control, and assembly control. We now work with the software across departments and have recognized the portfolio

overview and the focus on the core as a cockpit as a great benefit. The MRP controller can now handle a much larger portfolio, even if it changes two to three times a day," says Dirk Lörwink, Senior Manager Logistics Controlling at Gigaset.

The cockpit-like view is particularly helpful, as it gives employees quick access to individual items and allows them to act promptly, for example, to change pre-planning or coordinate orders with suppliers. From there, the entire MRP process can be controlled, and it is possible to view all details and jump to all relevant transactions. The time and cost savings resulting from the efficient display and analysis of the inventory development of materials are enormous. At the same time, both shortages and surpluses are identified at an early stage and appropriate measures can be initiated immediately. „The support from GIB Operations is very important to us because it significantly increases our work speed," says Lörwink.

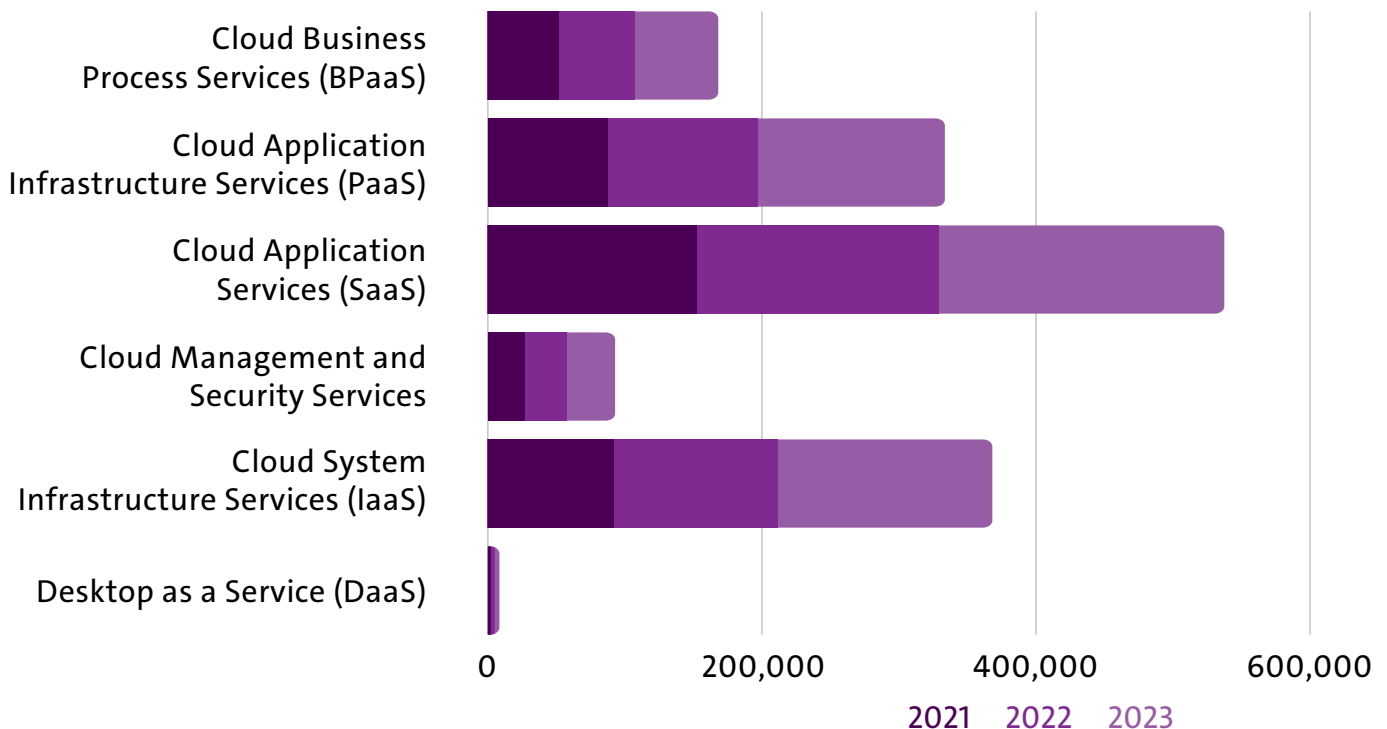
Once Gigaset had made the decision to switch systems and take the path into the public cloud, the question of how to integrate the current subsystems and interfaces quickly arose. After analyzing the scope of functions in the cloud, however, the company noticed that it was precisely the tool with a cockpit-like view that was not included. Instead of being available in a clear dashboard, the functions in the cloud are available in the form of apps. „This would force us to



work in a more small-scale way, and we would lose speed," explains Lörwink.

„When it became clear that operations important to us were not included in the cloud standard version, we contacted our long-term solution partner ifm. Because it was a no-go for us to operate without the additional support that GIB Operations offers us in dispatching. The ifm experts were quick to agree to accompany us on our way to the cloud and to transfer

the most important features from GIB Operations. ifm grasped the problems of discrete manufacturing very well and was able to really understand our tasks. We appreciate that very much," explains Andreas Tourneur, Vice President Order Center at Gigaset. In the SAP public cloud, the solution is called MRP view XLNce. It will also become available to other interested parties in the SAP Store in the near future.



Worldwide Public Cloud Services End-User Spending Forecast, 2021-2023, By Segment (\$M). Source: Gartner 2022.





*We plan to jointly develop simple, modern process optimization solutions based on the design of SAP Fiori.*

*Christof Weyand,  
Product Manager Procurement,  
Inventory and IIoT,  
ifm*

## Encourage change

Gigaset is currently in the middle of the implementation phase for the switch to S/4 Hana, with a core team working in a test system. The change process involves more than just the technical implementation. Employees must also be convinced that the new system is future-proof and will improve their work. For Lörwink, the move to the cloud is a paradigm shift: „Until now, we were used to ‘driving’ the system to where we wanted it to go. Now, the roles have reversed. Following the motto ‘Fit-to-Standard’, we have to adhere to the system specifications and adapt our processes to them.“

This approach as the more passive part initially presented a challenge, but the new way of thinking has taken hold and all employees are encouraged to tackle the chan-

geover, thanks in part to numerous information events and key users who act as change motivators.

During the change process, unexpected issues keep popping up, but they are never truly disruptive, thanks to a dedicated project team and external support from ifm. „We are glad that our long-standing partner supports us not only in terms of software, but also in terms of content. The ex-

perts think in terms of supply chain processes and understand our process-related requirements very well. Through their expertise, they help us transform our processes for the cloud,” said Tourneur.

## Strategic advantages

The goal is to completely move the system to the public cloud by 2023. „We are aware that a go-live in this new environment is risky, but we have prepared very well through agile projects and testing. Before we go live, we will take six months to check if everything is indeed enterprise ready. Of course, there is always going to be residual risk, but we are highly motivated and are determined to standardize our processes,” explains Schlingemann.

For Gigaset, the move to the cloud has above all strategic advantages.

The company accepts the relatively long preparation phase to then be able to take full advantage of the benefits. These include faster and more transparent processes, mobile access to a real-time database, scalability, and the option of connecting partners via interfaces.

„SAP’s public cloud offering for S/4 Hana is a fantastic tool for mid-sized companies to map their processes. Even if some functions are missing, the cloud gives us the opportunity to integrate providers such as ifm via web interfaces, which is important to us,” says Schlingemann.

Now that some features essential for the go-live have been transferred from GIB Operations to the cloud as MRP view XLNce, Gigaset hopes that more functionalities will follow soon. „We are very pleased to remain in close cooperation with Gigaset in the future and to continue to see eye-to-eye in this partnership. We plan to jointly develop simple, modern process optimization solutions based on the design of SAP Fiori. Our goal is to provide users with the best possible support in their operational and strategic work,” says Christof Weyand, Product Manager Procurement, Inventory and IIoT at ifm.

## Conclusion: Fit-to-Standard

Today, companies are faced with the challenge of demonstrating greater agility and flexibility than ever before. Especially in times of crisis, processes and entire business models are often put to the test to make them leaner. The public cloud is the future when it comes to preparing established ERP systems for new digital operating and business models. To standardize processes, Gigaset, a German manufactu-

rer of communications products and solutions, decided to move to the public cloud when it switched to S/4. In the current implementation and test phase, the technical and consulting support of the long-standing solution partner ifm (previously GIB) is particularly valuable in order to make the change process run smoothly and to transfer essential functionalities to the new environment.



*Claudia Ballhause,  
IT author for ifm*

# Supply Chain: The New Complexity

There are snags and creaks in supply chains - so much so that the gross national product is suffering as a result. What can and should manufacturing SAP customers do to minimize disruptions in supply chains?

*By Gerald Scheffels, IT author for ifm*

**A**gility and intensive market observation are helpful. IT tools for refining the ERP system can also curb negative effects. The field of activity and the framework conditions of supply chain management have fundamentally changed in the past two years. Figuratively speaking: A road race has become an obstacle course in rough terrain. Turbulent times have dawned. As a result, the demands on SAP-supported supply chain management are also changing fundamentally. To stay with the metaphor, it is not primarily a matter of driving around the bend a little cleaner and faster in good weather conditions. Instead, it's about making sure that you can get to the finish line in unfamiliar terrain and in bad weather.

## Scarcity as the new normal

The challenges are well known; every company is affected in one way or another. It started with strict pandemic regulations in China's ports and manufacturing plants, continued with container ship congestion and drastically rising freight costs. In parallel, the shortage of semiconductors emerged, affecting the entire mechanical engineering industry in addition to the automotive industry. Paper and plastic packaging materials are in short supply everywhere, partly due to another escalating factor - skyrocketing energy prices. Supposedly trivial events such as a stuck container ship in the Suez Canal

further fueled the crisis. The war on European soil resulted in further shortages of products, ranging from automotive wiring harnesses to nails for wooden pallets. In an ifo survey conducted in March 2022, around 80 percent of the companies surveyed were affected by shortages. The Kiel Institute for the World Economy (IfW) estimates that German industrial production in 2021 was twelve percent below the level it would have been without supply bottlenecks and material shortages. This corresponds to a value of 70 billion euros and two percent of German gross domestic product lost. Unfortunately, it cannot be assumed that we will return to the (from today's perspective almost paradisiacal) conditions of a pre-pandemic era. Energy prices will in all likelihood remain high and the semiconductor crisis will keep us busy until at least 2024.

## Procurement goes C-level

Many manufacturing companies have switched to crisis mode in this situation. In design and development, machines are being redesigned so that available microchips can be used. Procurement, for example of semiconductors, has been declared a matter for the C-level - the boss or the board of directors -, and in the case of many supplier parts and raw materials, buyers are looking for secondary suppliers who should ideally be located in vicinity instead of on other continents.

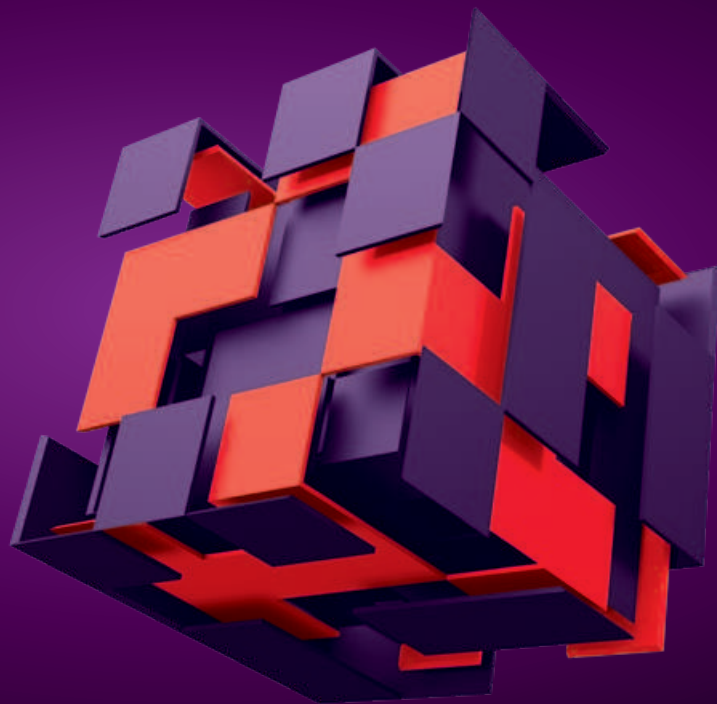
Under these circumstances, supply chain management software has a new role to play - or rather several new roles. One thing remains the same: management's demand on supply chain experts to ensure a smooth and cost-optimized supply chain. However, fulfilling this task has become much more difficult. This is because it virtually means squaring the circle: You have to forecast the unpredictable and reliably plan the impossible.

What seems manageable in such an abstract way quickly becomes almost impossible when you get specific and describe the unforeseeable. For example, if it only becomes apparent at the start of a shift that the required materials were not delivered just in time, the previous day's planning does not work. This is also the case when it only becomes clear in the morning how many employees are in quarantine or customer call-offs are adjusted numerous times throughout the day.

## Flexibility does not come cheap

Flexibility is required, but flexibility does not come cheap. It costs time in the form of setup and planning, it means higher logistics costs for smaller production quantities, and more machine downtime due to short-term full load instead of smooth production. So, is it better to increase the safety stock, to stock more intermediate and finished products? No, because this also costs, and not only because of capital





commitment and warehousing. Price changes - a big issue at the moment, anyway - or the loss due to the perishability of materials also have to be factored in.

First, companies need to look more closely at their entire supply chain. End-to-end ERP systems based on SAP are a good prerequisite. However, they should be supplemented and refined by SCM-specific tools such as the GIB Suite on ERP/ECC 6.0 or GIB SCX on S/4 Hana. These tools increase transparency across the entire

supply chain and create the prerequisite for quickly identifying irregularities. The users then have a kind of „bottleneck radar“ at their disposal, based on which they can react at an early stage and take targeted countermeasures.

### More agility

The GIB software ensures transparency and speed. In other words, it promotes agility. It immediately warns of changes in

customer requirements and simulates intralogistics processes to determine the best production sequence given capacities and material availability. It also allows you to jump directly from the order to the independent and dependent requirements to directly identify and resolve bottlenecks. Furthermore, it provides transparency right at the machine in order to remain capable of action even in the last stages of production.

Transparency has become a necessity, as it acts as a data foundation for all decision-makers. In addition to transparency, GIB tools also provide meaningful metrics that indicate the quality status of the supply chain and define exactly where action is needed in supply chain management. This ensures that all parties involved are looking at the same database in the SAP system and are talking about the same topic. Suppliers - even those without their own SAP system - can also be included in this information chain.

### Goodbye globalization?

Apart from these currently important optimizations, fundamental questions also arise: Is it now time to adjust the supply chain strategy? For years, the trend has been moving toward internationalization, and this definitely brought advantages. However, now the disadvantages are becoming apparent, many a purchasing manager or supply chain manager will

wish for the supposedly good old days before globalization (which they only know from hearsay, though). In those days, you simply sent a truck to the supplier when parts were missing and were not affected by what was happening in Chinese ports or shipping accidents in the Suez Canal.

## Insourcing und nearshoring

The desire to reintegrate previously outsourced processes is understandable.

Probably never before has the supply chain been so unstable and critical in so many companies. However, are strategies like insourcing or nearshoring realistic? Can they be a real alternative from an economic perspective? The answer is complex. Short chains are more stable, it's true. But it's important to note that if you want to sell globally, you shouldn't limit your sourcing to your neighborhood. What if the example of customers in China and the USA sets a precedent? Then entire markets break away.

In addition, wage differences, for example, cannot be explained away. And it might be difficult to buy microchips or special sensors through nearshoring. Some supply chains are global - if you take raw materials into consideration, that applies to almost all supply chains. Economies of scale and core competencies also play a role. If a service provider produces, paints, or finishes components for 50 or 200 customers, they can most

likely do it both better and cheaper than each customer can on their own. Consequently, we will have to live with complexity. There is no return to a pre-globalized economy. However, every company should proceed with caution when it comes to globalized supply chains and find points in the chain where risks can be reduced.

One measure could and should be to check where you could buy locally instead of globally. Price should not be the only consideration here, because it is often likely to be higher with local suppliers. It is also worthwhile to put cooperation and communication to the test. With a local supplier, cooperation can be structured differently than with suppliers on the other side of the globe. Per-

haps the local supplier has an idea for optimizing the design? Or maybe they deliver a complete module instead of various components? Companies should definitely keep in mind that physical proximity opens up other opportunities for working together.

## Stabilizing the supply chain

Consequently, supply chain optimization, which is often driven by necessity, should not only be about the physical proximity to the supplier, but also about the type of relationship you maintain. And regardless of where the supplier is located - whether in Stuttgart or Shenzhen - you should create transparency in the supply chain. Ideally, you will then be able to plan according to demand, monitor directly, and, as far as supplier management is concerned, sit at the steering wheel instead of in the passenger seat. This stabilizes the supply chain.

Another thing that can help is to make use of qualified services in the form of consulting. At ifm (previously GIB), consulting with the goal of Continuous Improvement is already part of ongoing customer support. Both parties can learn from this - the customers through comprehensive market knowledge of the consultants who have completed many different types of projects and have thus accumulated expertise, and the consultants by getting to know new and practical use cases for which solutions have to be found.

Good reasons for supply chain optimization: Apart from the disruptions of increasingly complex supply chains, there are other reasons for targeted and IT-supported supply chain optimization. Both new regulations and the increasing consideration of sustainability factors demand a higher degree of transparency across the entire logistics and procurement process.

## Stable supply chain ensures success

The ifm group, which also includes GIB, is a good example of how a close look at the supply chain makes a lasting contribution to corporate success, especially in turbulent times. In the past fiscal year, the specialist for innovative automation technology was able to increase the previous year's sales by 21 percent and achieve a new sales record of around 1.16 billion euros. „The fact that we have come through the crisis with this much strength shows that our growth strategy with a diversified market and industry structure has been successful,“ comments Christoph von Rosenberg, CFO of ifm,

on the publication of the business figures. „Furthermore, a stable supply chain despite globally disrupted logistics processes has played a significant role in our success. In 96.4 percent of cases, we were able to make the delivery on the date specified by customers in 2021.“ Earnings (EBIT) of 10.6 percent (previous year 7.6 percent) also increased significantly compared to the previous year and reached a record level. These pleasing data and figures are certainly not exclusively due to the use of GIB software tools developed in-house, but they have certainly contributed.



*Gerald Scheffels,  
IT author for ifm*





# COMMENT

By **Peter M. Färbing**, E-3 Magazine

## Even More Successful Future

**Peter M. Färbing**,  
Editor-in-Chief and Publisher,  
E-3 Magazine

You don't need a crystal ball to predict a successful future for the SAP partner GIB, which will soon be called ifm.

**S**AP is celebrating its 50th anniversary, which serves as reflection time for the SAP community to ask: What is success and where does it come from? Alongside all the technical achievements, impactful innovations and business inventions, SAP's guarantee of success has always been the relationship management between SAP and its customers, as well as holistic problem solving. GIB was founded on these values and will continue to develop as part of the ifm group. I was able to observe some steps of its successful path.

GIB was founded in 1992 and currently has about 120 employees at the Siegen site and 900 customers worldwide. The company supports roughly 1000 SAP systems. GIB has had a partnership with SAP for 21 years and has developed sustainably - the term sustainability is chosen very consciously here.

### Thriving sustainably

Sustainability as a principle of action means avoidance of the depletion of natural resources in order to maintain an ecological balance - or, in other words: that something successful in turn continues to create something new. The term comes from forestry, where obviously prudent management of the forest not only yields but also allows growth. The principle of careful resource management can be applied to many areas. Sustainability is also about giving future generations a chance and is therefore the opposite of overexploitation.

GIB primarily deals with the topic of procurement, which is not only a complex challenge, but also involves the imperative to achieve maximum yield in a resource-saving manner. A careful handling of the means of production brings about sustainability in the orga-

nizational and operational structure. GIB became an important player in the SAP community and has helped many SAP customers to gain a new perspective on the topic of procurement. To a certain extent, the company from Siegen thus pursues an educational mission. Annual events at the company headquarters are not only an SAP community hangout spot, but also a learning opportunity.

Those in charge at GIB have always shared their experience and knowledge with customers, because shared knowledge has the sustainability effect described above.

Officially, this successful development is described as follows in a company presentation: „GIB's software solutions extend the SAP standard by important planning functions and methods. Two central effects of the solutions are the reduction of unnecessary inventories and the increased readiness for delivery. Consequently, GIB customers gain a decisive advantage in their competitiveness and efficiency.“ Because procurement within the framework of an ERP system is only part of successful logistics, GIB has evolved into a holistic SCM provider. Currently, GIB has a world-leading Supply Chain Excellence program and offers SAP users sustainable end-to-end processes.

### Supply Chain Excellence

Supply Chain Excellence is no small task, as it ultimately involves creating a successful process in a cybernetic system. GIB took on that challenge of supply chain cybernetics. This step from a procurement solution provider to a holistic supply chain solution provider was important because existing SAP customers need more and more of this kind of

control. The term cybernetics comes from ancient Greek and refers to the helmsman who steers his ship safely and successfully through the Aegean Sea. Hence also the generally accepted translation for cybernetics as the art of steering, which GIB now offers with its software tools to the SAP community.

What comes after Supply Chain Excellence? Even the supply chain is only one part of a larger whole that can be described as IoT, Industry 4.0, and ERP. The challenges of the coming years will not only be resilient supply chains and production sites, but rather a holistic and effective mastery of one's own organizational structure and processes - from the CNC machine to financial accounting. Or, as GIB's parent company, ifm, puts it more precisely: „ifm is strategically focusing on digitization and will thus develop from a sensor manufacturer to a solution provider.“

The company ifm was founded in 1969 in Essen, Germany, and currently employs 8,100 employees worldwide, who serve more than 160,000 customers. Since its founding, the company has been developing, producing, and selling sensors, controllers, software, and systems for industrial automation. In the past few years, this tireless work has resulted in over a hundred patents. As one of the pioneers in the field of Industry 4.0, ifm develops and implements holistic solutions for the digitization of the entire value chain „from the sensor to the ERP“.

It is a logical step for GIB and ifm to merge. ifm will carry the knowledge and experience of GIB into the world, and both companies will complement each other's expertise.

[ifm-business-solutions.com](http://ifm-business-solutions.com)  
[e3zine.com](http://e3zine.com)