



# LOGISTICS OUTSOURCING

Success factors of 4PL, LLP and 3PL in  
chemical logistics

*Study & Guidelines*

In cooperation with:

**FH·W-S**

Hochschule  
für angewandte Wissenschaften  
Würzburg-Schweinfurt



# OUTSOURCING IN CHEMICAL LOGISTICS

“Make or buy?” is a question managers in the chemical industry have to answer time and again. Which processes should the company carry out itself and which will be assigned to external service providers? The aim is always to reduce the total cost of ownership (TCO) of a product and further develop international competitiveness by optimizing processes.

Of course, this question also applies to logistics. For some time CAMELOT Management Consultants has been observing an increasing demand for the identification of the scope of service and the selection of fourth party logistics (4PL) and lead logistics providers (LLP). As well as the traditional subjects of storage and transport (third party logistics), companies are increasingly on the lookout for process expertise and innovative IT solutions.

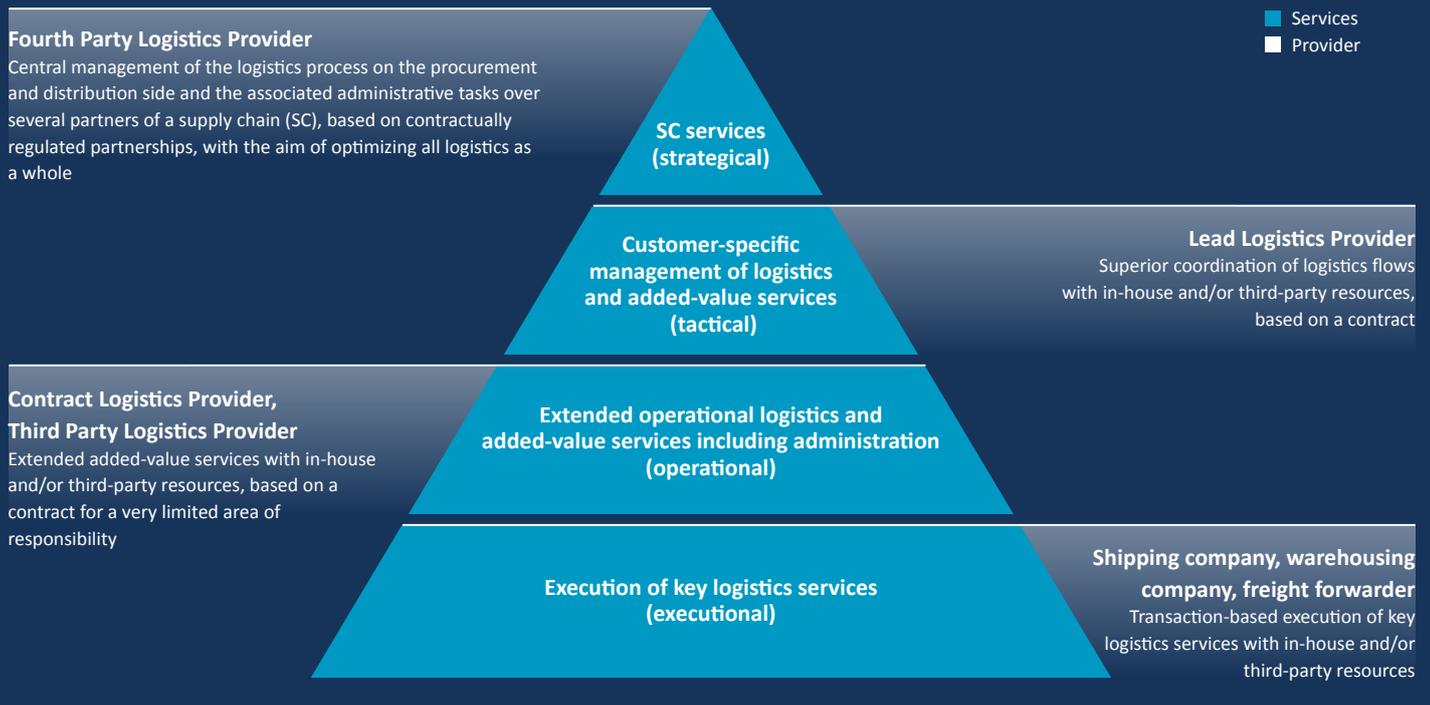
In order to tackle these current trends and offer companies guidance, CAMELOT has initiated a study together with the University of Würzburg. The study combines basic academic information on the subject, which has been compiled and expanded by Prof. Dr. Christian Kille and his team, with an empirical survey of logistics experts carried out by CAMELOT, focusing on the chemical industry.

As well as an overview of the current status quo of the outsourcing of logistical processes in the chemical industry, the study also provides a guideline to assist significantly with the selection of an appropriate logistics partner.

Below you will find a summary of the key findings of the study, supplemented by latest insights from the consulting practice of CAMELOT Management Consultants. The entire study (74 pages) is available to download in German, free of charge, at [www.camelot-mc.com/study-chemicallogistics](http://www.camelot-mc.com/study-chemicallogistics).

# WHAT ARE 4PL, LLP AND 3PL?

When using the terms fourth party logistics (4PL), lead logistics provider (LLP) and third party logistics (3PL), it is essential to differentiate between “services” and “providers”.



4PL services can be delivered by 4PL providers and in large part also by lead logistics providers. 3PL services on the other hand are offered by 3PL providers such as network providers and contract logistics providers. The 3PL providers commission or have access to the skills of shipping companies, freight forwarders and warehousing companies, which are also known as 2PL providers in some publications.

3PL services include the management and associated implementation of several primary operational logistics services on the acquisition or distribution side of a shipping company.

A 4PL service primarily involves the central management of ideally all tactical and strategic logistics processes on the acquisition and distribution side and the associated administrative tasks of a shipping company in a supply chain.

In this study, service providers that offer 4PL services and are not associated with a 3PL provider, based on their company structure or ownership structure, are known as 4PL providers. An LLP is a provider of 4PL services, which has firm business links with a 3PL provider.

# STATUS QUO: LOGISTICS OUTSOURCING IN THE CHEMICAL INDUSTRY



## Uncertainty in the outsourcing of logistics management tasks

A random sample survey among logistics managers in the chemical industry in Germany shows that around 80 percent of those surveyed have a vague idea of the subject of 4PL services. Only around 15 percent state that they have good or very good knowledge of the subject of 4PL services.

### HOW WOULD YOU RATE YOUR KNOWLEDGE OF 4PL?

I see myself as an expert in the area of 4PL services and have detailed knowledge of the services offered and the existing providers



7.7 %

I have good general knowledge of the area of 4PL services and I am familiar with the services offered and the active players



7.7 %

I am aware of the subject and have a vague idea of the area of 4PL services



61.6 %

I have heard of the subject of 4PL services, but do not have in-depth knowledge



19.2 %

I am not aware of the subject.



3.8 %



## Outsourcing not strategically motivated

In the chemical industry in Germany, when outsourcing logistics services, the focus is primarily on financial motives and the maintenance of a sustained service. Human resources and strategic aspects only rarely play a role.



## Operational logistics: clear case for in-house

82% of services in operational logistics are carried out in-house – sometimes with the support of a 3PL or 4PL. The proportion of in-house solutions for areas with a high risk for the company is particularly high.

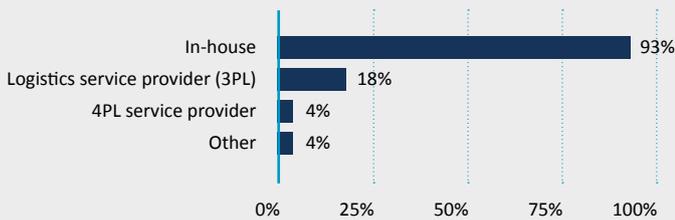


## Strategic and tactical services: very low subcontracting to 4PL

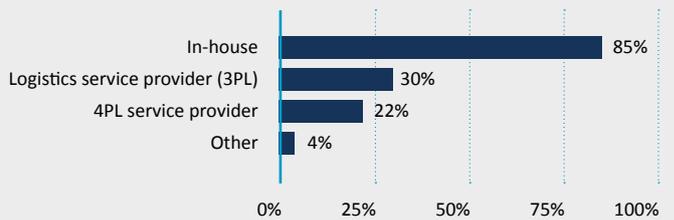
Both strategic and tactical logistics services are predominantly carried out in-house, sometimes however with support from external logistics service providers. Depending on the type of service, 19% - 39% of the companies surveyed subcontract strategic and tactical tasks to 3PL service providers. Subcontracting to a 4PL is currently the exception.

### HOW DO YOU DELIVER/PRODUCE YOUR TACTICAL LOGISTICS SERVICES?

#### PURCHASE OF WAREHOUSE SERVICES



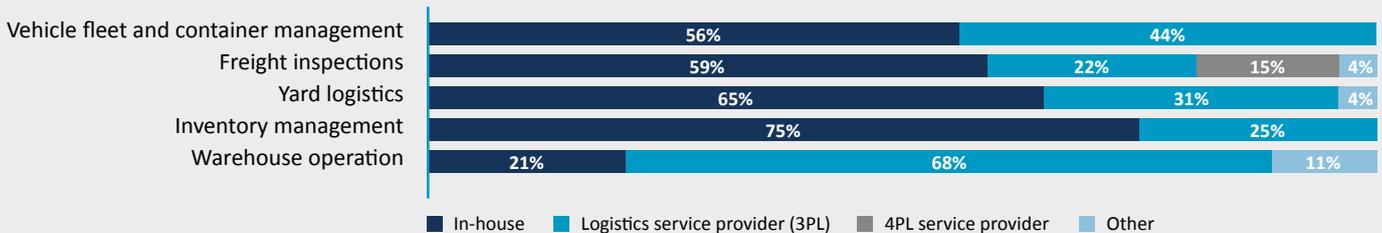
#### PURCHASE OF TRANSPORT SERVICES



## Day-to-day business: if outsourcing, then 3PL

85% of the companies surveyed operate at least one warehouse. Subcontracting to 4PL service providers is very rare. At 25%, inventory management has low significance for outsourcing, while warehouse operation has a particularly high significance with 68% subcontracting to a 3PL.

### HOW DO YOU DELIVER/PRODUCE YOUR LOGISTICS SERVICES IN DAY-TO-DAY BUSINESS?



## Great skepticism in medium-sized enterprises

Medium-sized, family-run chemical companies generally see logistics as a cost center. These companies are quite critical of the outsourcing of operational and particularly tactical and strategic logistics tasks to a logistics service provider.

Group companies often have many years of experience in outsourcing operational logistics. Almost a third of companies can imagine themselves subcontracting tactical and strategic management tasks to logistics service providers in future.

Large, very specialist chemical companies see logistics as the first steps in differentiation from the competition. These companies also have experience in outsourcing operational logistics processes and can in some cases foresee themselves subcontracting logistics management tasks.

# FUTURE OUTSOURCING IN CHEMICAL LOGISTICS

70% of those surveyed believe the optimum degree of outsourcing of strategic and tactical logistics services has already been reached. Whether the outsourcing potential is always recognized remains questionable.

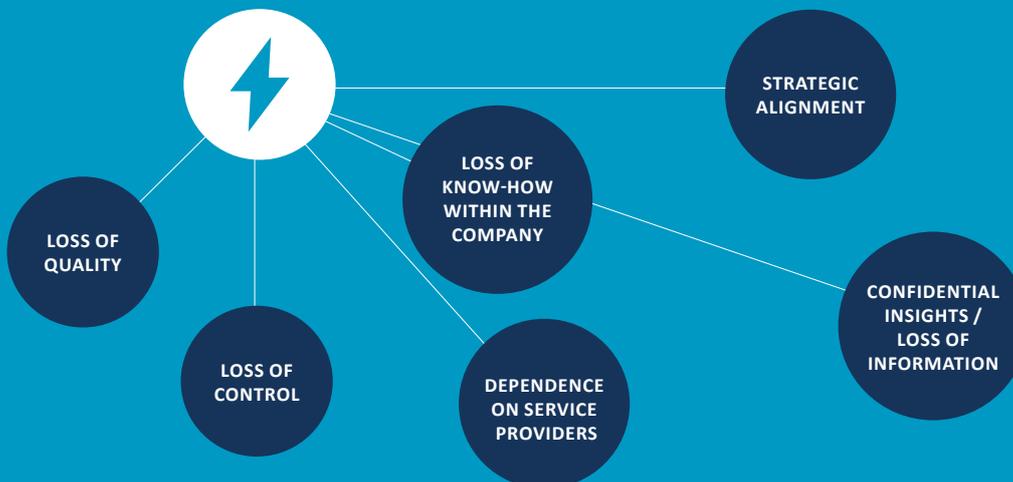
If outsourcing has been identified as an area of activity, in **88%** of cases the invitation of bids for the services is to be implemented in the **next 3 years**.

## WOULD YOU OUTSOURCE THE SERVICES YOU CURRENTLY PROVIDE?



From a present-day perspective, the majority of those surveyed would make the same outsourcing decision again, while a total of 40% of those surveyed are not completely convinced by the decision.

## THE MOST IMPORTANT RISKS OF LOGISTICS OUTSOURCING



While the risk of loss of quality is seen as all the more critical, the more operational the task is, the relationship is exactly the opposite when it comes to strategic alignment, loss of control, confidential insights and loss of information.

## Expectations placed on 4PL service providers

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KEY EXPECTATIONS PLACED ON A 4PL SERVICE PROVIDER INCLUDE PRIMARILY



Interestingly, at 12%, high purchasing volume plays only a minor role.

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### Most important selection criteria

For those surveyed, the ability to achieve transparency regarding processes and costs and to adapt individually to customers are the most important criteria in selecting a 4PL partner.

Further important aspects include ensuring seamless integration, IT system competence, expertise in the logistics market and the geographical coverage of the services. The neutrality towards logistics service providers is, on the other hand, rated as less important by as many as 30% of those surveyed. The shared service center of the 4PL appears to play a secondary role in the choice of 4PL.

# SPOTLIGHT: OPPORTUNITY FOR DIGITAL INNOVATION

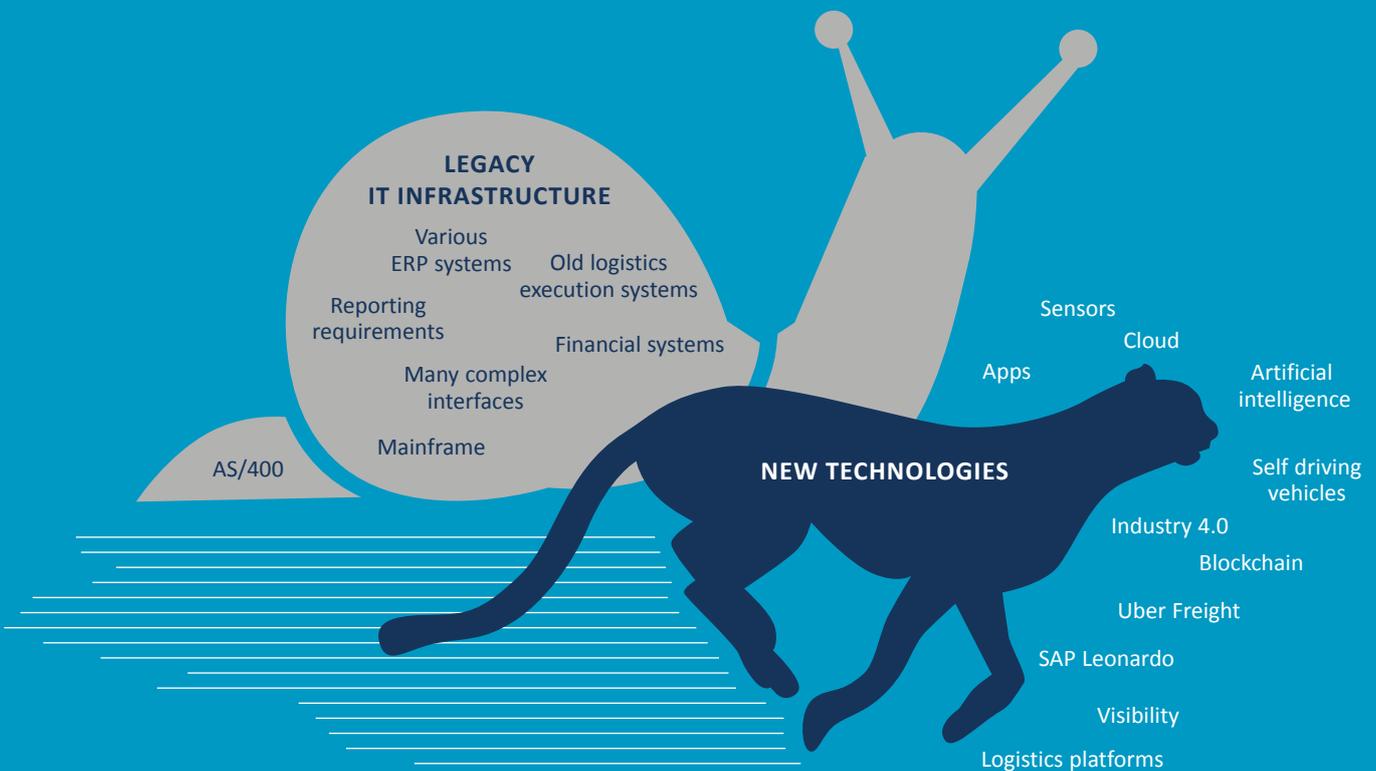


In recent years numerous innovative technologies have been developed, which offer new possibilities in terms of transparency, automation and optimization. At the same time, the selection of an adequate technology becomes a competitive factor and therefore requires a feasibility analysis, the development of a strategic vision and an implementation plan – it thus also becomes a complex and costly undertaking.

**70%** of the study participants do not have a **transport management system**

Many chemical companies still work with the outdated SAP LE-TRA module and recognize that the existing and future IT requirements can no longer be met with this. This major technological deficiency for one thing leads to non-harmonized transport management processes and at the same time involves the risk that in future LE-TRA will no longer be supported. Two trends can currently be observed: Many companies are now investing in their own transport management system based on SAP S/4HANA. Other companies are taking specialists on board in the form of a 4PL service provider which already has a well-developed transport management system and is very well connected with freight forwarding companies.

In logistics a 4PL generally presents a good opportunity for companies to use the latest technologies for distribution, without having to invest in market analysis and implementation themselves.



# GUIDELINE FOR OUTSOURCING DECISIONS

The following guidelines provide chemical companies with guidance when making “make or buy” decisions in logistics.

## ! Providing clarity

In order to make the correct decision when outsourcing logistics management tasks, chemical companies must be clear about their own motives. Is it about saving costs, transparency, increasing flexibility or a new transport management system? In addition, they should be aware of the role of logistics in the company and their own corporate culture. It is also necessary to examine the complexity and the internal framework conditions, before the specific contractual arrangement of the cooperation with a logistics service provider can be considered.

*When drawing up the specific contractual agreement for the cooperation, there is a difference between a 4PL provider and an LLP, for example in characteristics such as the type of contract, interface management or performance monitoring. However, the differences between the use of 3PL providers and freight forwarders are considerably bigger.*

## ! When 4PL, LLP and 3PL make sense

The outsourcing of strategic or tactical logistics management tasks to a 4PL provider or LLP is only useful if logistics are particularly seen as a possible opportunity to stand out from the competition. 4PL providers require a cooperative and process-oriented corporate culture. Generally, LLPs are able to cope with advanced hierarchical-functional structures.

Chemical companies should favor carrying out strategic and tactical logistics management tasks themselves if there is a very hierarchical and functional corporate culture.

If chemical companies see logistics purely as a cost center or function that generates downstream added-value services, the outsourcing of operational logistics tasks to a 3PL provider is to be recommended, especially if there is a collaborative, process-oriented corporate culture.

If there is a focus on the costs of the logistics, in combination with a very hierarchical and functional corporate culture, then a chemical company should also take responsibility for operational logistics with its own employees and use freight forwarders, shipping companies and warehousing companies selectively.



## Reduce complexity with LLP

The high number of players and interfaces, as well as the heterogeneous nature of these, leads to a high level of complexity, particularly in the management of distribution in chemical logistics. A company in the chemical industry can reduce this complexity by using 4PL services. The use of an LLP often proves to be more advantageous than using a 4PL provider, because the LLP can link the bundling effects in its own transport network with that of other partners to optimum effect.



## In-house IT platform or 4PL/LLP?

One important component of 4PL services is the informational integration of all relevant processes in a customer's supply chain, in order to achieve cost optimizations and service improvements through transparency. Open, flexible IT platforms are required for this. A company in the chemical industry can develop and operate these itself. Providers of 4PL services generally already have tried-and-tested IT platforms, so the use of a 4PL provider or LLP can be useful. Whether an in-house IT platform or a 4PL provider or LLP should be favored depends on the degree of coverage of the supply chain and the performance of the platform.



### CAMELOT INSIGHTS

#### LOGISTICS CONTROL TOWER

#### IT REQUIREMENTS



## ! Dynamic management in the supply chain

Companies in the chemical industry have to manage different dynamic incidents in their supply chain. These include on the one hand changes to production volumes, for example as a result of price fluctuations, changing demand, legal changes or new product launches. On the other hand, supply chain management is required due to fluctuating availability in the area of warehouse and transport capacities. A provider of 4PL services is sometimes better able to balance out these fluctuations than a company in the chemical industry itself. This is possible both with a 4PL provider as well as an LLP. What is crucial here is the actual option to access transport and warehouse capacities, either through a company's own assets, pooling systems or market power in certain logistics segments.

## ! Readjustment of the supply chain

If a tactical readjustment of the supply chain is necessary for individual resources and logistics partners, this can be undertaken effectively by providers of 4PL services. Both an LLP and a 4PL provider is suitable for this. Experience and knowledge of the logistics markets and network plans are essential.

## ! Innovation skills

The future viability of a supply chain is determined not least by its ability to innovate. This can be significantly increased through the use of 4PL service providers. Both 4PL providers and LLPs can be the correct choice here. Chemical companies should assess the innovation skills of their partner, both based on innovative future concepts, as well as actual solutions developed in the past.

## ! Neutrality?

If strategic aspects such as regular changes to the resources used and long-term logistics partners are needed for 4PL services, then the use of a 4PL provider is to be favored, as it can make decisions more independently of interests in in-house asset utilization. However, a neutral consultancy company acts even more independently of any self-interest in this case.

The subject of neutrality should be considered in a differentiated way when selecting service partners, i.e.: what type of neutrality is necessary at what point in the cooperation and how can decision-making in the interests of the client be ensured through contractual agreements and organizational measures? A blanket statement that a certain 4PL provider is generally more neutral than another is not useful.

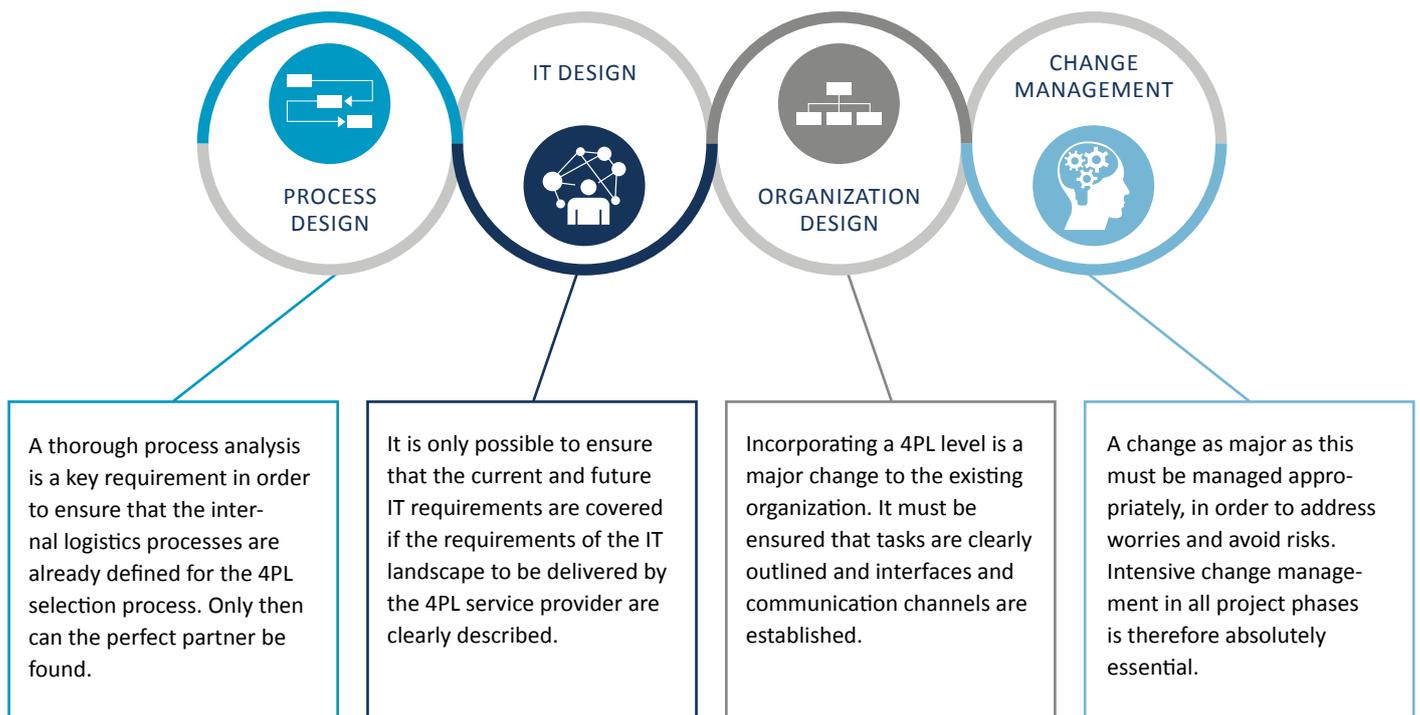


*“The guideline provides good assistance in approaching logistics outsourcing projects and allows addressing the right providers with the right requirements.”*

Dr. Henrik Follmann · Managing Director · Follmann Chemie GmbH

## PRACTICAL TIP

Chemical companies that have made the decision to subcontract their logistics management activities to a 4PL service provider are embarking on an exciting journey. At the end a professional logistics environment with specialist service know-how and the latest IT systems awaits them. At the start of the journey, however, the conditions for this must be created.



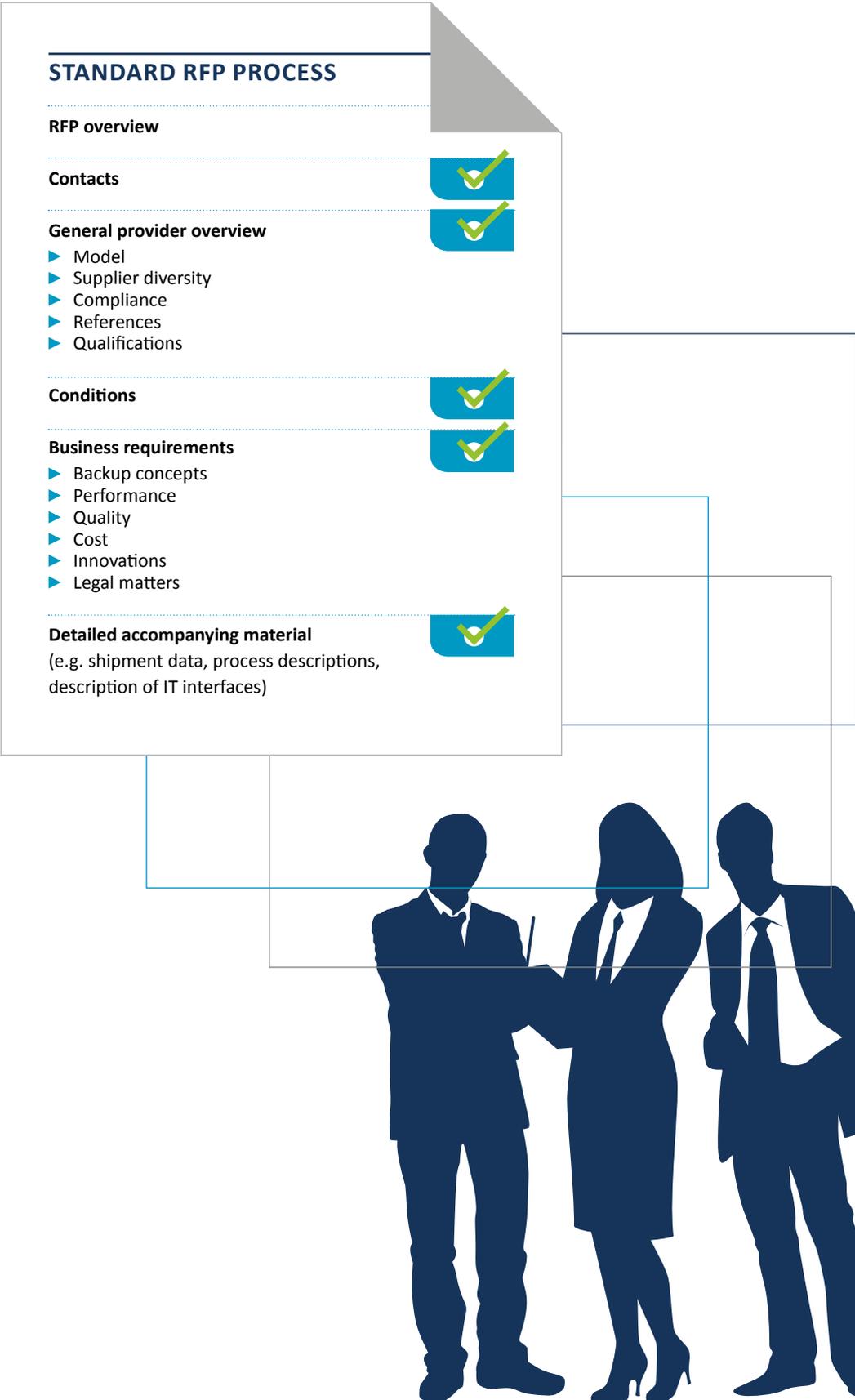
*“Two factors have a significant impact on the success of outsourcing: The expertise of the provider’s employees as well as the presence of an adaptable connectivity platform. Only if you have good data can you use event or optimization algorithms.”*

Michael Kriegel · Department Head DACHSER Chem-Logistics · DACHSER SE



Experience from various tendering projects shows that there are also large differences within the spectrum of 4PL providers. As soon as the conditions have been created within the company, a professional selection process should be used to ensure that the most suitable individual service provider is selected.

TENDERING PROCESS



## CAMELOT Management Consultants

CAMELOT Management Consultants is the globally leading consulting specialist for value chain management in the process, consumer packaged goods and industrial manufacturing industries. The company is part of the CAMELOT Group with 1,700 employees and headquarters in Mannheim, Germany. The integrated consulting approach and close collaboration with renowned technology specialists, guarantee project success along all consulting phases: from decision-making to the organizational and technical implementation.

In the area of logistics, CAMELOT supports organizations holistically from jointly designing a logistics strategy through to the implementation in organization and technology. CAMELOT's logistics consulting team combines industry and logistics consulting expertise, which guarantees the feasibility of the concepts, efficient project management as well as applying industry best-practice approaches.

## Institute for Applied Logistics (IAL) at the University of Applied Sciences Würzburg-Schweinfurt (FHWS)

For more than 10 years, the Institute for Applied Logistics (IAL) of the FHWS has been developing implementation-oriented, practical solutions for current issues of corporate practice and research in the broad field of logistics. As a project partner and research institution, the institute works closely with a network of partners from industry, trade and logistics services.

The University of Applied Sciences Würzburg-Schweinfurt, or FHWS, is one of the biggest universities of applied sciences in Bavaria. The Faculty of Economics and Business Administration provides practically oriented education to currently 1,900 students in 5 consecutive degree programs. Since 1990, the faculty uses research and practical teaching projects as a didactic element to introduce students in a solution-oriented way to real-life issues of enterprises and non-profit organizations.

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