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WHITEpaper



Transport Management in Cloud ERP

What the transport standard in SAP Cloud ERP delivers and where it ends

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This white paper shows what the transport standard in SAP Cloud ERP covers today, where it ends, and how the remaining gaps can be closed. It is aimed at logistics and IT leaders, CIOs, and program managers who are about to decide whether to move their transportation processes to the public cloud and want to know for sure whether the standard supports their processes before go-live provides the answer.



AUTHOR
MAURICE MERKENS



AUTHOR
SEBASTIAN RASCHE



AUTHOR
MARCEL TIMMERMANN

What is this decision about?

Your move to S/4HANA is decided. What remains open is something else: whether your transportation processes fit into the public cloud – or whether your processes end up adapting to the standard without that ever having been the plan.

You have more time than is often assumed

SAP Cloud ERP is a ready-to-run system that SAP operates and updates for you. You get a predefined process and a fast implementation. In return, you give up two things: control over the timing of updates and the freedom to intervene deeply in the process flow. This is not a question of technology. It is a question of control.

Whether this trade-off works for you depends on your transportation processes. Not on the general direction of the market. That is exactly what this white paper clarifies: what the standard delivers, where it ends, and how you can tell whether your requirements go beyond the standard.

Mainstream maintenance for SAP Business Suite 7 ends on December 31, 2027. After that, extended maintenance is available until the end of 2030, at a premium of two percentage points on the maintenance base. For SAP S/4HANA, an innovation commitment applies until the end of 2040.

So 2027 is not a wall but the point from which postponement costs money. The real time pressure comes from elsewhere. SAP ships two releases per year for Cloud ERP and expands the standard with every release. Those who realize too late that Cloud ERP is not enough first bridge the gap with time-consuming workarounds. If they build a side-by-side extension on the SAP Business Technology Platform (BTP) instead, they take on their own maintenance and testing effort with every release. That is exactly the cost item Cloud ERP is supposed to avoid for standard processes. A correction after go-live is therefore significantly more expensive than setting the right course beforehand.

Documented current state

No quarterly forecasts: the SAP Roadmap Explorer requires a login and remains the reference for verification. 2027 is not a hard wall: extended maintenance prolongs support until the end of 2030, but comes at a premium of two percentage points.

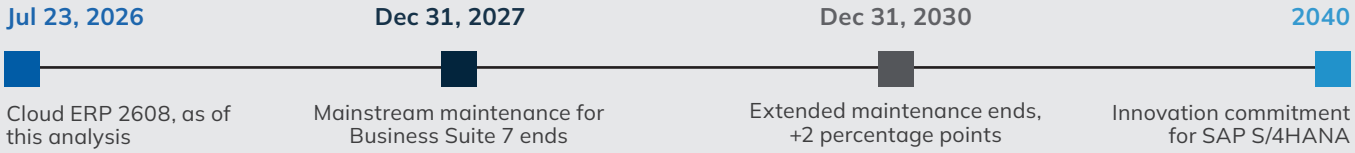


Fig. 1: Documented current state instead of roadmap forecasts. Sources: SAP Support Portal (maintenance strategy, innovation commitment), SAP release blog 2608.

A quick note on names

SAP renamed its products in 2025. “S/4HANA Cloud, Public Edition” became SAP Cloud ERP. That is the product this paper is about. It sits under the SAP Business Suite umbrella. GROW with SAP is the related implementation program, not the product. In SAP’s documentation, the old names still appear in parallel. “S/4HANA Cloud, Private Edition” became SAP Cloud ERP Private, referred to below as Private Cloud. The marketing names changed, not the terms in your contracts.

What does Cloud ERP deliver out of the box?

Before we get to the limits, it is worth looking at what is available without any effort on your part.

In Cloud ERP, you do not switch on a complete solution. You activate individual process building blocks that SAP delivers preconfigured. In SAP terminology, they are called scope items. The full SAP Transportation Management, SAP TM for short – SAP's standalone product for route planning, carrier assignment, and freight settlement, available in Private Cloud and on-premises – is not included in Cloud ERP. For transportation, there are four core scope items and one supplementary one, and together they cover the chain from order to invoice.

Scope item 6W1 comes up again further below: it is one of the four core scope items and is activated in Cloud ERP, but only once you outsource planning. It hands over the transport quantity to be planned (the freight unit) to a second, planning system. That is precisely the key when the standard alone is not enough.

Item	What it is for	What is behind it
6W1	Outsource planning	Cloud ERP hands the transport quantity over to a second system and receives the finished freight order back. Available as of release 2308.
6W2	Plan yourself	You bundle freight units into freight orders in the transportation cockpit, manually or based on rules that the system applies. For road, rail, sea, and air.
6W3	Track execution	The system records when a transport has arrived, been checked in and out, and departed. In each case for the source and destination location.
6W4	Settle	Calculate freight costs, post accruals, verify the carrier invoice, and distribute the costs to your cost objects.
46P	Determine distances	Addresses are geocoded; routes and travel times are calculated via a map service (provider: HERE).

How does transportation work in Cloud ERP?

The delivered process works differently from what most people expect. Two aspects are particularly noteworthy.

Does the chain start with the order or with the delivery?

In the delivered standard, saving the sales order automatically creates the smallest plannable transport quantity. In the system, it is called a freight unit. Whether an order or a delivery (or a purchase order, a stock transfer, or a return) triggers this is something you define beforehand: per document type, via a control key and an assigned set of rules. That is a matter of configuration, not a law of the system.

After that, you plan in the transportation cockpit. You bundle freight units into a freight document. The system automatically groups them by source, destination, shipper, ship-to party, and Incoterm (e.g., FCA or DAP). You add the carrier and the purchasing organization. When you save, the system calculates the freight costs itself.

When is the delivery created?

First, the freight document goes to the carrier as an EDI message (electronic data interchange). Only then does the system create the outbound deliveries, and only then are the goods picked, packed, loaded, and posted as goods issue.

The standard process: order-based, not delivery-based

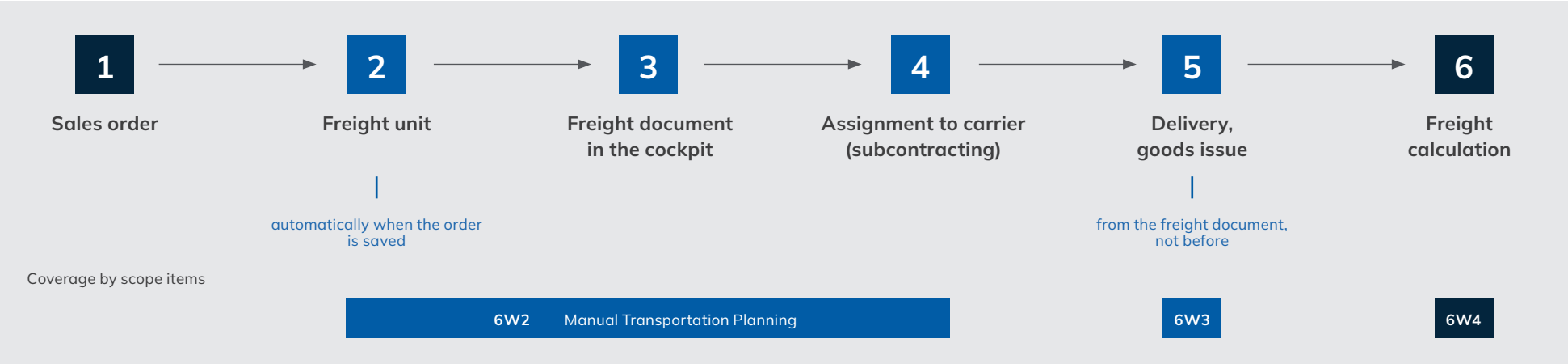


Fig. 2: The order-based standard process in Cloud ERP. It is based on profile S002 with freight unit building rule SFUBR2.
Source: SAP Help Portal, Transportation Planning – Sample Outbound Process, Cloud ERP 2608.

How do status tracking and settlement work?

After loading, the system sets execution statuses: arrived, checked in, checked out, departed. This applies to both the source and the destination location. If an intermediate step is missing, the system adds it automatically so that the status chain remains complete. This is status tracking within your own system. It is not true shipment tracking across the carriers' networks. For that, SAP Business Network Global Track and Trace is available as a separate product that consolidates shipment data from these networks.

Settlement comes at the end. The system posts an accrual and creates a purchase order with simplified service items. Depending on the agreement with the carrier, either the carrier's invoice is matched against this purchase order, or the system settles on its own via evaluated receipt settlement (self-billing), without waiting for the invoice. Only one of the two procedures is possible per agreement. The system then distributes the costs to your cost objects, broken down to the individual delivery item. For controlling, this last point is usually the most important one.

One widespread reservation is outdated: the standard has long covered more than outbound shipping. Freight units are also created from purchase orders, stock transfers, and customer returns. With release 2608, scheduling agreements and intercompany processes are additionally connected to warehouse and transportation. Even so, check in the fit-to-standard workshop (the comparison of your processes with the SAP standard) for each release whether your specific goods receipt process is included.

Where does the standard end?

Now to the limits. Five are relevant to your decision, and only the first one is truly hard.

Is automatic route planning missing?

Who finds the most cost-efficient route? In Cloud ERP, your dispatchers do, supported by rules that automatically group transportation requirements. What is missing is the algorithm that independently builds and schedules the cost-optimal sequence of routes from a large number of orders. At SAP, it is called the VSR optimizer (Vehicle Scheduling and Routing Optimizer), the centerpiece of the full SAP TM. It is not included in the Cloud ERP standard, and that is its hardest limit.

Cloud ERP does, however, calculate distances and travel times by road. Geocoding and route determination are connected via a map service. Cloud ERP is often wrongly said to lack this function.

Is freight tendering provided for?

Assigning a transport to a predefined carrier works: the freight document is sent to the service provider as an EDI message. Tendering a transport among several carriers and comparing quotes, however, is not possible in Cloud ERP.

Is Cloud ERP underestimated when it comes to freight costs?

The common claim that “Cloud ERP can only handle weight and volume” does not stand up to scrutiny. You can calculate charges by distance, weight, volume, pallet spaces, loading meters, and goods value. The real limit lies deeper: you cannot create your own calculation bases and scales. And settlement toward ordering parties or between your own companies is not covered.

This underestimation costs money. It leads to Cloud ERP being ruled out even though it would meet the requirements.

What changes for the transportation interfaces?

This is usually put too crudely. The statement “IDoc, RFC, and BAPI no longer exist” is not correct as such. SAP maintains a list of 20 BAPIs and 23 IDoc message types. These remain usable. For transportation documents, however, the exception does not apply: not a single transportation object is on this list. Here, IDoc, RFC, and BAPI are therefore dropped completely.

Your connections to carriers and upstream systems will run via modern web interfaces in the future, which SAP specifies as fixed arrangements. EDI itself does not disappear as a result:

Carrier communication continues to run via EDI, just no longer via IDoc but via web interfaces. For your planning, this means: existing EDI connections have to be technically converted, not replaced.

In which countries do you want to use Cloud ERP?

The last limit does not concern the transportation functions themselves but the framework in which they run. Cloud ERP is currently preconfigured for 60 countries. If further countries are part of your scope, extensive adjustments would have to be made there. These undermine precisely the advantages for which you choose Cloud ERP: fast implementation, predefined processes, and updates without any effort on your part. And even in the preconfigured countries, it is worth taking a second look at whether the transportation scope items are fully available there. So clarify early on in which countries you want to use Cloud ERP.

Topic	In the Cloud ERP standard	Additionally in Private Cloud / on-premises
Planning	Your dispatchers bundle freight units into freight orders, supported by rules that the system applies automatically. Distances and travel times come from a map service.	An algorithm that builds and schedules routes on its own (at SAP: VSR optimizer, Vehicle Scheduling and Routing Optimizer).
Subcontracting	Assignment to a predefined carrier. The freight document is sent to the service provider as an EDI message.	Tendering among several carriers and the management of long-term freight agreements.
Freight costs	Charge calculation by distance, weight, volume, pallet spaces, loading meters, and goods value. Costs are broken down to delivery item level.	Your own calculation bases and scales. Settlement toward ordering parties and between your own companies, plus collective settlement.
Configuration	Guided configuration within predefined guardrails, without programming (self-service configuration).	Unrestricted access to all system settings and the ability to intervene in deeper-lying logic.
Extensions	Three released levels: configuration without programming, development on released objects, your own applications alongside the core.	Changes directly in the system core.
Interfaces	Modern web interfaces that SAP specifies as fixed arrangements. For transportation documents, web interfaces only.	The classic routes IDoc, RFC, and BAPI: not provided for transportation objects in Cloud ERP.

Expert tip

Cloud ERP deliberately keeps the system core free of modifications (clean core principle). That is the price for updates working without any effort on your part. Anyone who needs their own logic for carrier selection or their own planning algorithms reaches the limit of the standard here. The alternative is then usually SAP Cloud ERP Private or on-premises, where SAP TM is available with full Customizing access. You should know about this need before you set the course, not after.

What can you adapt in Cloud ERP?

“No Customizing” does not capture it. In line with SAP’s clean core guidelines, the core of the system remains untouched so that the system can be updated reliably. You may extend it nonetheless: on three levels, and what can be extended is exactly what SAP has released for that purpose.

The three extensibility levels: released is what SAP releases

1 Key User Extensibility

Configuration without custom development.

Released object types

BAdIs, CDS Views

2 Developer Extensibility

Development based on released objects in the system.

Released object types

Additionally classes, interfaces, behavior definitions, authorization objects

3 Side-by-Side auf der BTP

Your own application alongside the core.

Released object types

BAPIs, IDocs, OData, SOAP, Events

What the level additionally requires

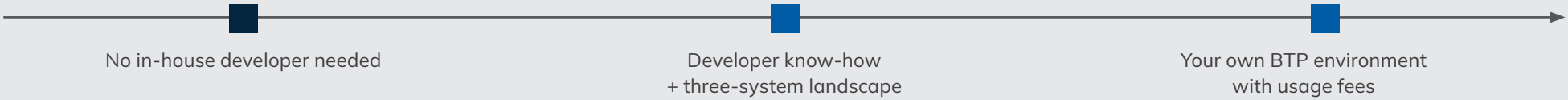


Fig. 3: The three extensibility levels in Cloud ERP with the object types released by SAP. Source: SAP Help Portal, Extensibility, Cloud ERP 2608.

For your budget, this means: the first level works without developers and covers many adjustments from day-to-day business. How far this goes for your processes becomes clear in the fit-to-standard workshop. The second requires developer know-how for SAP’s cloud programming and a landscape of three systems (development, test, production), but no additional licenses. The third offers the greatest flexibility and requires your own environment on SAP BTP with ongoing usage fees. You should include this item in your budget planning early on.

Specifically for transportation: the print forms can be extended, for example the waybill, the bill of lading (sea freight), and the CIM consignment note (rail). Your own analytics on the released data models of the freight documents are possible. What is not possible: your own planning algorithms and your own calculation bases for freight costs. These freedoms remain reserved for SAP TM in Private Cloud or on-premises.

When the standard is not enough: how do you outsource planning?

The hardest limit (the missing automatic route planning) can be closed without giving up Cloud ERP.

Why not switch completely to SAP Cloud ERP Private or on-premises with SAP TM right away? Because all other modules would then also be subject to the more extensive Customizing effort of this deployment option. For areas with no need for route planning, that would be an unnecessary conversion effort. Instead, you split the work. Cloud ERP remains your leading system and handles execution, while a second system takes over planning. This way, the rest of the company stays in the Cloud ERP standard, and only route planning moves to a specialized system. Cloud ERP passes the freight unit to the outside, and the planning system returns the finished freight order. On the Cloud ERP side, you activate scope item 6W1 for this. The two are connected via an interface arrangement specified by SAP.

What Cloud ERP provides and what is outsourced

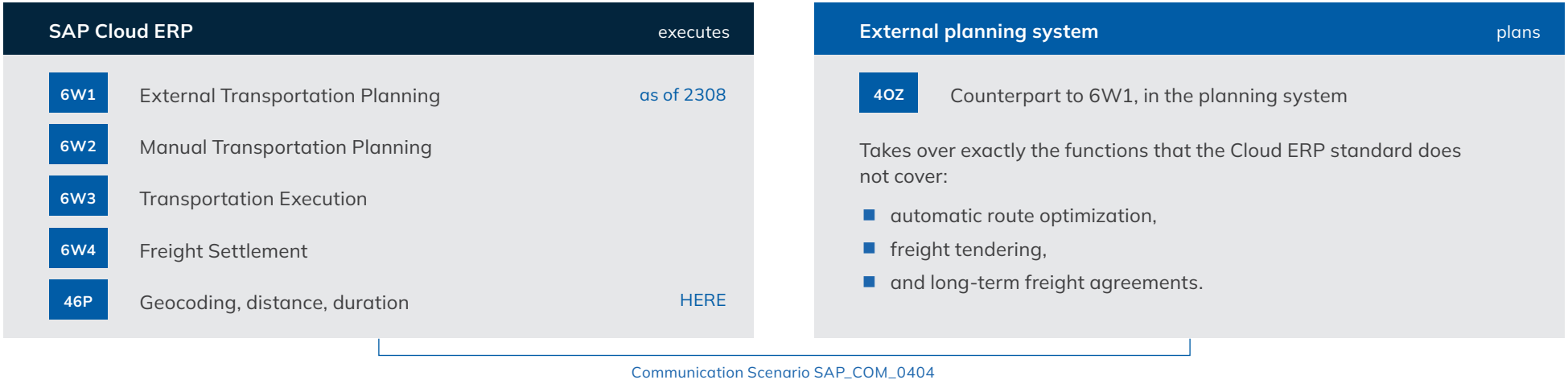


Fig. 4: Freight unit out, freight order back – setup reference: Solution Scenario EABL_SolS-013.

Which details only show up in live operation?

In practice, this model is more common than you might think. Simpler sales companies run on Cloud ERP, while the complex route planning remains bundled in one place. The result is a global standard with local flexibility.

The transferred freight unit is off-limits. The planning system – usually SAP TM – may adjust dates and assign freight orders. It may not change, split, merge, or cancel quantities. Anyone who builds their bundling strategy on such changes in the planning system is planning past the system boundary.

And the sequence of the interface calls is a matter of business design, not a technical detail. SAP warns in writing against changing the freight order directly in Cloud ERP during planning and subcontracting. The next transfer overwrites the change. (Source: SAP Help Portal, External Transportation Management Integration).

How do you check whether Cloud ERP is up to the task?

That leaves the question of how you answer this for your company.

In projects, blanket percentages for standard coverage are often quoted. As a decision criterion, a fixed percentage threshold is not reliable. A single percentage suggests a measurability that does not exist in practice: what counts as “one process” differs from company to company, and that is exactly what makes any blanket threshold open to challenge.

Five questions work better because you can actually answer them in a workshop. A “yes” does not rule out Cloud ERP. It only shows that at this point you have to accept a compromise or close the gap deliberately.

Five questions that decide for or against the Cloud ERP standard

1	**Planning**	Do you need a procedure that builds and schedules routes on its own?	Yes	not in the standard
2	**Subcontracting**	Do you want to tender transports among several carriers?	Yes	not in the standard
3	**Rates**	Does your rate structure go beyond the available calculation bases?	Yes	not in the standard
4	**Settlement***	Do you settle toward ordering parties or between your own companies?	Yes	not in the standard
5	**Countries**	Are the transportation scope items missing in one of your rollout countries?	Yes	not in the standard
All five answered no		**The Cloud ERP standard supports your processes**		

*Refers to more complex forms of settlement from SAP TM; Cloud ERP also issues invoices to ordering parties.
Fig. 5: Five questions replace the percentage threshold. Sources: SAP Help Portal (Transportation Management, Distance and Duration Determination), SAP Learning (Configuring Transportation Management).

The fifth question is overlooked most often

SAP itself states that for most country versions only the four transportation scope items 6W1 to 6W4 are available. In a rollout across several countries, that is no minor detail.

We cannot confirm a percentage threshold for standard coverage in this form in SAP Help, Learning, or Activate.

Where does the effort really lie?

Not where most proposals place it. Converting the interfaces is routine work and can be planned. Three other items are more expensive. The first only comes due when you need the second or third extensibility level: the three-system landscape for developer extensibility or your own environment on SAP BTP for side-by-side extensions. Added to this are the testing effort per release and possible parallel operation as long as planning still resides in the legacy system.

What the release commitment means in practice

Automatic updates relieve you of the upgrade project, but not of testing. For your transportation processes, custom fields, and extensions, a short regression test per release is worthwhile. Cloud ERP provides the Test Automation Tool for this, which retests standard processes automatically. You add your own adaptations to the test automation yourself. Those who plan for this rhythm from the start experience the semiannual releases as routine rather than as extra effort.



An example from our projects

For one of our midsize customers, the starting point looked like this: a legacy system with more than 1,000 custom developments, grown over years, without clearly defined processes. Transportation planning ran in Excel lists, maintained by hand. In the end, often only one person knew which outbound delivery was to be loaded when – for everyone else, planning and execution were hardly traceable.

After the move to SAP Cloud ERP, planning took place in the transportation cockpit instead of the spreadsheet. Freight documents, statuses, and costs were in the system and visible to everyone involved, no longer only to the one person who maintained the Excel file. The effect showed in two places: planning became faster because rules applied automatically, instead of every outbound delivery having to be entered into a table by hand. And it became more transparent because it was possible at any time to see where an outbound delivery stood and what it cost, without having to ask around. Planning that depended on a single person became a process that is documented in the system, regardless of who is on duty today.

Conclusion

SAP Cloud ERP has become a real alternative for transportation management. Fast to implement, easy to budget, with no upgrade project of your own – but with higher demands on organizational change management. For the processes the standard covers, you adapt to SAP's approach instead of tailoring the system to your existing procedures. Those who take this path consciously opt for SAP's standard process and hand over update planning. Whether this trade-off works for you overall is shown by the five questions in this white paper.

Companies with transportation processes that lend themselves to standardization gain noticeably in speed and planning reliability. Those who need automatic route optimization can map it in a separate system via scope item 6W1. Freight tendering is not included in the Cloud ERP standard. Both can be planned for if you know it beforehand.

The time to take this look is before you set the course. After that, every correction becomes expensive.

Our offer for you

Are you assessing whether your transportation processes fit into the public cloud? In a no-obligation strategy session, we go through the five questions from this white paper with you and tell you honestly where you have a “yes” – and what that means for your decision.

CONTACT

Olga Winterhoff
Senior Consultant

tm@abat.de

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abat | Johann-Reiners-Platz 1 | 28217 Bremen | Germany | +49 421 43 04 60 | www.abat.de