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Ministry of Economic Affairs,
Industry, Climate Action and Energy
of the State of North Rhine-Westphalia

Guarantee payments and Trade Tax in hyperscale data centres settlement projects

www.wirtschaft.nrw

Imprint

Publisher

Ministry of Economic Affairs, Industry, Climate Action and Energy of the State of North Rhine-Westphalia

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Europe, Law and Foreign Trade

Unit 222
Policy Issues of Foreign Trade, Emerging Markets, FDI

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Media design
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Analysis

"Guarantee payments and Trade Tax in hyperscale data centres settlement projects"

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1. Management summary

- The surrender of a substantially **large piece of land** and the **sufferance of high energy consumption** on the one hand, and at the same time the **relatively low number of new jobs** (at least with regard to the data centre operator itself) in the respective municipality on the other hand, provides the basis for the **necessity and appropriateness of agreeing guarantee payments.**
- First of all, it should be noted that the **guarantee payments** must occur **alongside Trade Tax Revenues** in order to avoid (constitutional) legal risks. Thus, the claimed guarantee payments in favour of the municipalities should not be levied in the form of Trade Tax.
- Consequently, the **Trade Tax of** the operating company (i.e. the company running the hyperscale data centre) should also be considered **as a deductible item** when determining the guarantee payment. The deduction of the Trade Tax should therefore not reduce the District Allocation (proportionate Trade Tax Revenue to be paid by the towns belonging to the respective district to such district), if it is applied.
- In order to ensure that the guarantee payment actually occurs in addition to the Trade Tax, the **treatment of the guarantee payment tax-wise at the level of the operating company** for determining the Trade Income pursuant to Sec. 7 of the German Trade Tax Act should be discussed with the collaboration of the operating company.
- **The tendency** is to agree on an **annual fixed guarantee payment** with the company instead of dynamic guarantee payments for the purpose of risk hedging for the municipalities, even though this excludes participation in possible future (significant) profit increases.
- The annual net profit or – to simplify matters – the **expected profit,** which must be made available by the company to carry out the calculations on the basis of the calculation model developed in the course of this analysis, should be critically examined against the background of possible **transfer pricing structures** in the respective group concerned and**, if necessary, corrected by increasing it.**
- The **term** for the **guarantee payments** should correspond to the actual **operating time** of the data centre, but should not be shorter than a defined **minimum term** against the background of the structural and long-term importance of corresponding settlement projects for the respective municipalities. In addition, the **beginning of the term** of the guarantee payments should be determined in case that the initial operation does not take place until a certain time after the acquisition of the plot of land.
- When calculating the guarantee payments, we recommend that **all individual models** carried out in the context of this analysis are **calculated in the context of the (overall) calculation model,** where possible and available, to ensure that the appropriate guarantee payment can be determined or reasoned.
- The calculation model is based on the defined operator models of the data centre operators within this analysis. In detail, the operator models are linked to the following **three business models:**

- **Colocation**, i.e. – greatly simplified – leasing of data centre space and provision of framework services;
- **Server Hosting**, i.e. – greatly simplified – Colocation plus server rental;
- **Cloud Service Providers** (such as aws, Google, Microsoft, etc.), i.e. own use or rent of data centre space plus own use or rent of servers.

- Based on this, there are – depending on the respective **asset strategy** (from "asset light" to "asset heavy" strategy) – different operator models defined for the analysis: If the real property, the other IT infrastructure and the servers are owned by the data centre operator, then for the purposes of this analysis, the Cloud Service Providers are in the **Ownership Model** (without real property, in the **Ownership Model "Light"**). For **Colocation** and **Server Hosting,** the company may also own the real property. In these cases, the terms "**Modified Colocation Model**" and "**Modified Server Hosting**" are used for the respective operator models. There are therefore a total of six operator models for the purposes of this analysis.
- The parameters for the guarantee payments on which the calculation model is based on are, for the sake of simplicity, (i) the **Cost Key (**= depreciation of fixed assets in relation to total company expenses), (ii) the **External Revenues** and (iii) the **Industry Comparison.** Furthermore, a **90/10-Key** would theoretically also be conceivable (i.e. 90% of the Trade Tax falls on the Operator Municipality, 10% on the Headquarter Municipality), but this is ruled out for (constitutional) legal reasons for a practical implementation in the short term.
- Depending on the business model, External Revenues can be based on **Revenues from Server Hosting**, **Colocation Revenues** or **Revenues from Cloud Services**. In the latter case, however, a **Regional Component** would have to be integrated in order to allocate the External Revenues towards the Operator Municipality.
- Within the framework of the **Industry Comparison** (as a further parameter), a range of **€ 176,000 to € 1 million in Trade Tax Revenue per SME** (as an alternative local company to be settled) can be assumed – if no **individual values** are available for the municipality concerned. The average would be **€ 254,000 per SME**. Depending on the specific plot of land and thus the possible number of SME capable of locating, an Industry Comparison can be conducted for the purpose of calculating a guarantee payment.
- The **settlement agreement, which in our opinion is more likely to be a contract under civil law,** should be a **condition precedent** for the conclusion of the land purchase agreement. In addition, a further **detailed legal review of the admissibility of the settlement agreement** should be carried out in any case, not least because of its proximity to public law.
- The land purchase agreement should include a **repurchase option** in favour of the municipalities as well as an **deconstruction obligation** for the company concerned. For the purpose of securing the guarantee payments, **guarantees of the group** should be considered. Since many data centre operators have complex company structures, **guarantees of the parent company** should be considered for the purpose of securing the guarantee payments.

- Consideration should be given to **joint negotiation by several municipalities** on the basis of a so-called **"Contractual Joint Venture"**. Such a cooperation agreement only contains agreements solely based on obligatory rights between the individual municipalities, but has no external effect.
- The **Foundation Model** (i.e. donation to a municipal foundation) should be evaluated as a (partial) alternative to guarantee payments with the advantages and disadvantages presented in the context of the analysis.

2. Facts, initial situation and general objective

2.1. Facts and initial situation

The importance of the rapid availability of data at any time has increased significantly in recent years, both in the professional and private spheres of many citizens, but also for companies in a number of industries. This development was further accelerated in particular due to the COVID-19 pandemic, which made mobile working and home-schooling part of everyday life, at least in some phases, and video conferencing via various platforms an inherent part of daily work. However, many developments in industry, such as autonomous driving, predictive maintenance, etc., will also lead to a constantly increasing usage of the internet in the future. This will prospectively also lead to constantly increasing volumes of data, which must be processed reliably and at the required speed. Digital platforms have thus developed into an economically extremely successful business model and so-called cloud computing has become the most important infrastructure of the data economy.[1]

The large amounts of data must be processed and transmitted at a reasonable speed, which is why a short latency period is essential, especially for technologies such as autonomous driving, the Internet of Things, artificial intelligence and many others.[2] In order to be able to guarantee this, the distance of the data volumes to be transmitted to the recipient should be as short as possible, as the internet is forwarded via data lines and is therefore localized. In this context, a data centre serves as a local storage location for data, from which it can be transmitted to users using a data hub, which is also located within the data centre. Technology companies and other companies with a data-based business model can therefore benefit from the local proximity to a data centre and the associated short latency period.

In order to be able to keep up with this sometimes rapid development, it is important to also provide the necessary infrastructure in Germany – and thus "locally" – in order to enable the nationwide supply of the population and companies with data-based applications and services. The fact that the regional factor in particular – and thus independence from the resources of other countries – is of great importance is once again made clear by the current political crises.

The *Rheinisches Revier* in the state of North Rhine-Westphalia offers optimal conditions for locating hyperscale data centres.[3] In addition to the geographical advantages offered by the *Rheinisches Revier*, the location of data centres in combination with the associated infrastructure of a region formerly characterised by lignite opencast mining enables a contribution to structural change.

However, the settlement project is accompanied with possible disadvantages for the respective local authorities. If they release the limited resource of "plot of land" for the settlement of one or more hyperscale data centres, there is a risk that they may benefit little from this in fiscal terms compared to the settlement of other companies. As a tax whose revenue is due to the municipalities

[1] Cf. Annual Report of the German Council of Economic Experts 2021/22, p. 321.

[2] Cf. on this and the following Machbarkeitsstudie Dateninfrastrukturen im Rheinischen Revier, p. 12.

[3] Cf. on this and the following Machbarkeitsstudie Dateninfrastrukturen im Rheinischen Revier, p. 107.

according to Article 106 para. 6 of the German Basic Law (**GG**), the focus is on Trade Tax. However, the legally envisaged allocation key appears to be only partially suitable for allowing the municipalities to participate in the value added generated in the data centres.

In principle, a data centre only needs relatively few employees on site to operate.

In any case, the municipalities are likely to benefit only to a very limited extent from the settlement of companies that operate data centres from a Trade Tax perspective. If a classic industrial business, possibly with hundreds of employees, were to be established, the Trade Tax Revenue – at least according to the currently applicable Trade Tax Allocation Standards – would probably be higher for the municipalities on a regular basis, taking into account the considerable size of the plot of land required by the data centre operators for their business activities.

The classical connecting factors of the Trade Tax, which can impede the realisation of this objective, prove to be problematic. This is because the standard for the allocation of Trade Tax in cases where the company has permanent establishments ("**PEs**" or "**PE**") in several municipalities is primarily the Wage Totals, which is linked to the number of employees at the PE (cf. Sec. 29 of the German Trade Tax Act (**GewStG**)).

If data centres are operated by a company that is not located in the municipality where the data centre is situated, as has been the case in practice up to now, and if only a few employees work in the data centre itself, there is a risk that the municipality where the data centre is located will only participate to a very small extent in the value creation and thus in the Trade Tax Revenue, although it provides the operator of the data centres with large plots of land and accepts the energy-intensive business activity of the data centres.

2.2. General objective of this analysis

The aim of this analysis is therefore, among other things, to work out and compare various parameters other than wages or, consequently, the number of employees working in the data centre. This is intended to provide practical assistance for the concrete assessment of contractually agreed guarantee payments, which, however, do not affect the Trade Tax claims of the respective municipalities and stand alongside them as additional "real" compensation payments. In this way, the local municipalities can be supported in deriving an appropriate benefit and economic compensation from the settlement of the data centres.

In addition, further (legal) aspects are to be considered, in particular regarding the contractual arrangement of the settlement agreement within the scope of the analysis. A precise legal review of the effectiveness of a settlement agreement from a non-tax point of view was not the subject of this analysis.

The plot of land concerned is generally commercial land or land that is to be designated as commercial land. This can be a plot of land that is owned by the municipality as well as a plot of land that is not owned by a municipality.

The classic example of an operating company is likely to be an international technology group that plans to build and/or operate very large high-performance data centres (so-called "hyperscale data centres") in the *Rheinisches Revier*. The data centres will generally offer cloud services to customers in the "B2C" and/or "B2B" sector, who are generally located not only in the *Rheinisches Revier*, but throughout Germany, possibly Europe or even outside Europe. Consequently, the geographical location of the value creation is a central element in terms of the business model of the Cloud Service Providers.

Furthermore, it is conceivable that such operating companies will conduct data centres in order to offer so-called Colocation or Server Hosting services, i.e. to rent the data centre space together with other IT infrastructure (and possibly also the servers) to external customers who then provide services to their own customers via the data centre in question. The clients of such operating companies currently also include various international technology groups, which rent into corresponding service data centres due to the lack of their own capacities.

Taking into account this special industry "hyperscale data centres / cloud services", parameters/measurement figures must therefore be determined that can be used as a basis for determining the fiscal compensation in favour of the municipalities. These can be e.g. based on turnover, or expressed on the basis of the depreciation of the fixed assets used in the data centre, or based on the workplaces in the data centre, etc.

In order to ultimately be able to present suitable parameters for the guarantee payments to be agreed between the operating company and the Operator Municipalities and, in connection with this, to work out concrete recommendations for action for the municipalities, it is necessary to systematically prepare this complex of topics from a tax and business point of view.

2.3. Course of the analysis

The following Sec. 3 represents the scope of work of this analysis. Sec. 4 of the analysis summarises the main part, Sec. 5 of this analysis.

The recommendations for action derived from Sec. 5 are then presented under Sec. 6. The analysis then concludes under Sec. 7 with an overview of other benefits that the municipalities can make the subject of negotiations on corresponding settlement agreements.

The main part begins under Sec. 5.1 with the general Trade Tax implications. First, the possibilities offered by the currently applicable Trade Tax Law for dealing with constellations are shown. Following on from this, the advantage – and at the same time the necessity – of contractually agreed compensation or guarantee payments are worked out, which do not take the place of the existing

Trade Tax claims of affected municipalities, but rather constitute an addition to them. At the same time, the implications of Real Estate Transfer Tax (**RETT**) and any other taxes are briefly considered in this context.

The following Sec. 5.2 first provides an overview of the various business/operator models of companies in the data centre industry, including their asset strategies, from which the operator models defined for the analysis are then derived.

The next step is to examine the implications of these operator models for Trade Tax Revenue (Sec. 5.3).

Subsequently, under Sec. 5.4. further (tax) legal aspects of structuring the settlement are outlined.

Under Sec. 5.5 then follow explanations on the term of the guarantee payments, any further options and alternatives (e.g. Foundation Model, etc.).

Finally, other parameters instead of Wage Totals are elicited for the purpose of calculating possible guarantee payments (Sec. 5.6).

Furthermore, an Industry Comparison is shown (Sec. 5.7), which also serves to work out a concrete standard of comparison that can be used in the course of evaluating the settlement of small and medium-sized enterprises (so-called "**SME**") instead of the settlement of data centres on the available plots of land.

Under Sec. 5.8 of the analysis, the calculation model derived from the parameters worked out above is described in more detail.

3. Scope of work

We were engaged by the Ministry of Economic Affairs, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia (hereinafter "**MWIDE**") to prepare an analysis on the topic of "Corporate tax, in particular Trade Tax: guarantee promise for settlement projects hyperscale data centres".

The objective of the analysis is to examine the topic "Trade Tax / possible annual guarantee payments / other economic, financial and other advantages for a local municipality when hyperscale data centre operators/Cloud Service Providers settle in the area" as a basis for negotiations between local municipalities and potential companies in this industry that want to settle in the area (*Rheinisches Revier*), as well as to work out indications for an appropriate amount of realistically achievable Trade Tax Revenue or guarantee payments. The points of reference identified should then serve as a benchmark for guaranteed compensation or guarantee payments agreed in individual contracts between the operating companies and the municipalities.

Specifically, the following aspects are to be elaborated within the framework of the analysis, taking into account various questions of a fiscal, economic and structural nature, which we have incorporated into the presently chosen structure:

- **Amount of possible compensation payments:** This analysis is to be used to determine the amount of revenue a municipality can expect from Trade Taxes or possible guarantee payments. Based on this, a basis is to be created that is to serve the calculation of individually agreed, guaranteed compensation payments that compensate the affected municipalities for selling or making available large municipal plots of land to the respective operating company and in return for which only a relatively small number of jobs are created in the data centres.
- **Calculation Model**: Furthermore, a calculation model is to be developed in the course of the analysis, which is to provide a basis for illustrating possible different appropriate parameters. Based on this, the Calculation Model can serve as an orientation and negotiation basis for the contractual design of the concrete guarantee payment to be made by the operating company to the respective municipalities. It should be noted that this payment is to be understood as a guarantee promise that is made independently of actual tax revenues, so that the reasonable expectations of the municipalities concerned can be secured in the long term.

The analysis is intended to provide a comprehensive overview of the fundamental tax and economic implications in connection with the settlement of hyperscale data centres in the *Rheinisches Revier*. The explanations do not focus on a specific settlement project, but serve to illuminate this topic in general for current and future settlement projects in this context. The Calculation Model developed in the course of preparing the analysis and the recommendations for action elaborated are therefore intended to be usable for all (similar) potential settlements.

The analysis is therefore intended to provide municipalities with practical assistance on the topics of guarantee payments and other contractual arrangements in view of the settlement of hyperscale data centres and further relationships with the operating companies.

4. Summary

4.1. Need for guarantee payments

The initial issue is that the municipalities provide a relatively large plot of land for the data centre operators in the course of the planned settlement of a hyperscale data centre. On the other hand, however, in comparison to the settlement of companies in other industries, which – depending on the individual case and plot size – employ many more people on site, only relatively few jobs are usually created in the respective municipality (hereinafter referred to as "**Operator Municipality**"). In consequence the operation of a hyperscale data centre in all operator models, in principle only results in a relatively small amount of Trade Tax Revenue, taking into account the plot size made available, since the Wage Totals are used as the basis for calculating the Trade Tax.

In order to resolve this situation, it seems reasonable to make a "trade-off": If the location of a very large data centre (hyperscale data centre) is actually accompanied by the need of a large plot size and energy consumption with a comparatively low number of employees, such a "trade-off" can consist of determining a guarantee payment as compensation in favour of the Operator Municipality.

Against the background of such a "trade-off", an analysis based on publicly available annual financial statements of four selected data centre operating companies is presented. In detail, this exemplary analysis concerns the following companies:

- Equinix (Equinix (Germany) GmbH)
- InterXion (InterXion Deutschland GmbH)
- Kyndryl (Kyndryl Germany Aviation Industry Services GmbH)
- MCIO (Microsoft Germany MCIO GmbH)

The most accessible annual financial statement of a Cloud Service Provider available was that of MCIO, as it is an independent company that operates data centres as distinct from other services. In addition, the annual financial statement analysed was prepared in accordance with the provisions of the German Commercial Code (HGB).

As a result of this analysis, it should be noted that in individual cases the profitability of the on-site employees could be above average in a hyperscale data centre. In theory, such above average profitability per employee would therefore be conceivable regardless of the specific operator or business model (i.e. Colocation, Server Hosting or Cloud Service Provider).

In practice, however – based on the exemplary analysis – such above average profitability seems to be more common for Cloud Service Providers than for original service data centre operators whose business activities relate to the actual operation of data centres and precisely not to cloud services (i.e. Colocation and Server Hosting).

With above average profitability per employee, it is therefore possible that the Trade Tax is (significantly) higher for the settlement of a data centre compared to the settlement of a top SME, but that more space is required, so that the settlement of several top SME should in turn generate a significantly higher (deemed) Trade Tax Revenue compared to a single operating company in the municipality concerned.

4.2. Guarantee payments in addition to Trade Tax payments and other taxes

The application of the Allocation Standard of the Wage Totals primarily provided for by law in Sec. 29 para. 1 no. 1 GewStG can be disadvantageous for the Operator Municipality from a fiscal point of view with regard to the Trade Tax Revenue to be generated if the operating company in question operates one or more data centres in the *Rheinisches Revier* but has its headquarter in another municipality, which is currently more likely to be the general case. This disadvantage is considerably increased by the need for a large plot size in relation to a rather small number of employees as well as the aspect of high energy consumption for such a data centre.

In principle, the Trade Tax Act itself provides the legal basis for an agreement on the allocation deviating from the Allocation Standard of the Wage Totals in Sec. 33 para. 2 GewStG, which is concluded between the municipality and the respective person liable to pay the taxes. However, such an agreement requires that the allocation on the basis of the Wage Totals leads to an obvious and serious inequity. The barriers for the assumption of such inequity have been set quite high by the Federal Fiscal Court (**BFH**) in its previous case law, so that in our opinion there would be a considerable legal uncertainty as to whether an agreement concluded between the data centre operator and the respective municipality on the basis of Sec. 33 para. 2 GewStG would withstand proper judicial review.

Against this background, other economically reasonable standards must be defined for a kind of guarantee payment to the municipalities. In our opinion, the guarantee payments should in any case be made in addition to the Trade Tax payments of the operating company. In other words, the guarantee payments must not replace the Trade Tax payments in order to ensure the effectiveness of corresponding agreements both with regard to Sec. 134 of the German Civil Code (**BGB**) and from a constitutional point of view.

When determining the guarantee payment, the entire Trade Tax (i.e. not only the Trade Tax attributable to the Operator Municipality) of the operating company should, therefore, be taken into account as a deductible item. As a rule, this also does not reduce the District Allocation, if it is applied.

In this context, however, it is essential to consider the treatment of the specific guarantee payment at the level of the operating company (e.g. capitalization of acquisition costs or deduction of operating expenses). This consideration will also have to include whether or not there is an operating company on site and whether or not the company operating the data center is identical to the company acquiring the plot of land.

Moreover, it may be advisable to define a fixed annual guarantee payment amount instead of a dynamic or variable guarantee payment. This may reduce participation in the potential of increasing profits of such companies. On the other hand, however, the risk for the Operator Municipality is reduced that in the event of bad economic developments, which could also result e.g. from technological advances, which in turn cannot be reliably assessed at all at the time of the settlement project, guarantee payments are partially or completely cancelled.

We basically assume a civil law nature of the settlement agreement, in which the guarantee payments would be contractually agreed.

In any case, we recommend a detailed legal review of the admissibility of the specific settlement agreement. In this context, the essential legal principles of public law should also be examined due to the proximity to public law.

In the event that this further detailed legal review regarding the settlement agreement comes to the conclusion that the agreement of guarantee payments on a "civil law basis" is not permissible, the following alternative could be conceivable and should be examined further: The plot of land not already owned by the municipality could be acquired by the municipality concerned in the first step. Subsequently, the (acquired) plots of land would be sold to the potential operating company. Consequently, the purchase price for the plot of land could increase by the guarantee payments when it is sold to the company. It should be noted that the guarantee payments would be subject to RETT as an additional purchase price for the acquisition. This higher RETT expense would have to be considered accordingly when calculating the purchase price.

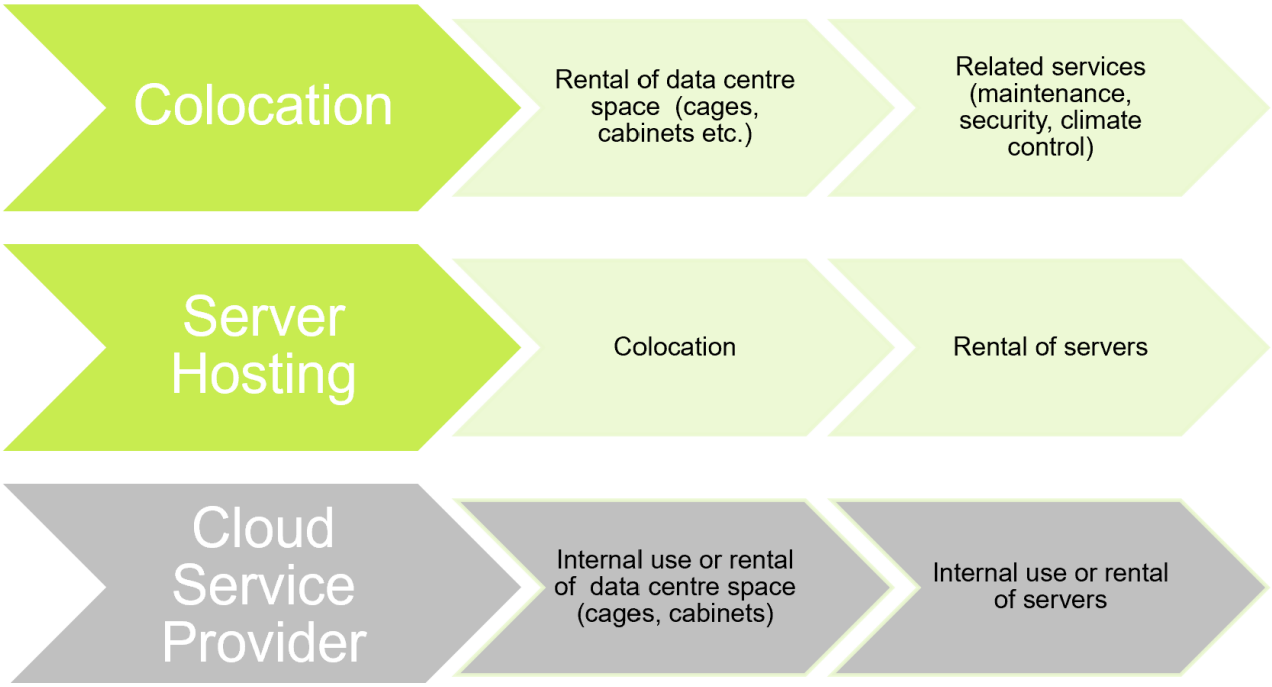
As far as other taxes are concerned, it can generally be stated that there are no specific fiscal issues in this regard compared to other industries. However, the so-called "digital tax" in the context of the "Pillar One" concept as part of the BEPS project ("Base Erosion and Profit Shifting")[4] should be mentioned. In simplified terms, the digital tax is intended to help the states in which the customers of multinational corporations in the digital economy are based to participate more in the profits of such companies. This is based on the issue that such companies do not (sufficiently) subject their sales and, thus, profits to taxation in the "customer states" due to a lack of taxation links ("genuine link"). The need for a digital tax – which is comparable to an additional tax on turnover and/or profits – considered by the OECD ("Organization for Economic Co-operation and Development") should therefore be taken into account to strengthen the argument for the necessity of guarantee payments.

4.3. Defined operator models

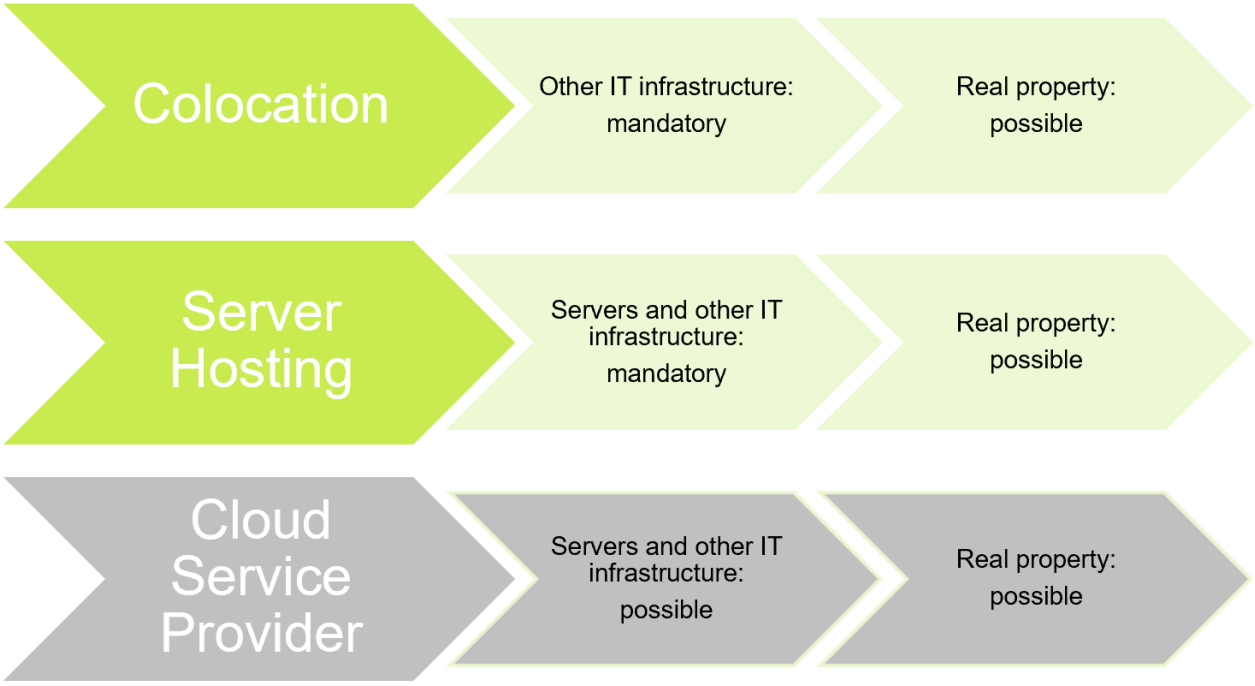
The operating models examined in this analysis were defined as a combination of the original business models on the one hand (i.e. Colocation, Server Hosting and Cloud Service Provider) and the asset strategies on the other.

[4] Cf. on this and the following OECD 2022, Pillar One – Amount A: Draft Model Rules for Domestic Legislation on Scope, p. 2.

The individual business models can be graphically illustrated as follows:



The business models can be summarised from an "asset" point of view for illustrative purposes as follows:



The defined operator models can accordingly be summarised graphically as follows:

Operating models	Fixed assets	Movable assets		Rental of servers
	Real property	Other infrastructure	Servers	
Colocation Model	×	✓	×	No
Modified Colocation Model	✓	✓	×	No
Server Hosting Model	×	✓	✓	Yes
Modified Server Hosting Model	✓	✓	✓	Yes
Ownership Model "Light"	×	✓	✓	No
Ownership Model	✓	✓	✓	No

Owned by the operating company	✓
Not owned by the operating company	×

It should be noted that the above-mentioned disadvantages of space requirements and a low number of employees on site are basically relevant for all the operator models defined above.

4.4. Special issue of transfer pricing/profit shifting arrangements in the group

Regardless of the specific standard for the derivation of any guarantee payments, any commission models or other comparable profit shifting or transfer pricing structures of the companies concerned would have to be taken into account. This is because such structures, which aim to shift profits abroad for tax reasons, have a detrimental and distorting effect on the determination of the measurable value added of the individual operating company. They also disadvantage the location-based nature of value creation in Germany.

Consequently, the annual net profit or – to simplify matters – the expected profit, which must be made available by the company to carry out the calculations on the basis of the Calculation Model developed in the course of this analysis, should be examined regarding any transfer pricing arrangements in the group and possibly corrected by adding a surcharge in order to depict the actual local value creation appropriately. This would have to be determined in more detail in each individual case.

4.5. Other (tax) legal aspects from a structural perspective

For the purpose of realising a joint negotiation by several municipalities, a joint approach on the basis of a so-called "Contractual Joint Venture" would in our opinion – subject to a further legal review (which is not the subject of this analysis) – be particularly suitable. Such a cooperation agreement only contains contractual agreements between the individual municipalities, but has no external effect.

The (implied) merger into an external Civil Law Partnership (**GbR**), on the other hand, should be avoided against the background of the unlimited and joint and several liability of the individual municipalities for corporate liabilities analogous to Sec. 128 HGB.

The formation of a Special Purpose Association would only be considered if the land is owned by the municipalities and is also to remain in their ownership, i.e. the operation of the data centre takes place in the Ownership Model “Light” or the data centre is to be operated in the Colocation Model

or Server Hosting Model. However, there is a risk that the formation of such a Special Purpose Association would not be income tax neutral and would not be free of RETT.

In our opinion, a Commercial Business (hereinafter referred to as "**BgA**"), which is subject to income tax (cf. Sec. 4 para. 1 and 2 of the German Corporate Income Tax Act (**KStG**)), is not likely to be established for the respective municipality solely by the agreement and receipt of the guarantee payments as such, since in our opinion this is not likely to be a sustainable commercial or professional activity of the municipality.

If a Special Purpose Association were to take over the management of the properties, i.e. if it were to rent them out exclusively to the data centre operators without providing any further additional services, the fulfilment of this constituent element of a BgA would probably be questionable in the absence of a commercial activity, as the renting and leasing is an exclusively asset-managing – and thus non-commercial – activity.

Furthermore, for reasons of visibility and "local" tangibility, it may in principle be worth considering that the operating company establishes a new company at least locally in the *Rheinisches Revier* for the construction and operation of the data centre. If several data centres are set up in different municipalities, the establishment of such "local" corporations per affected municipality could also be considered in principle.

With the visibility of one or more such "local" corporations as operating companies, further start-ups or settlements of other companies in the digital economy could possibly be encouraged locally. In addition, this structural design could make it easier to isolate distorting effects in the case of dynamic guarantee payments or, viewed *ex post,* in the case of fixed guarantee payments, through access to the annual financial statement of the specific operating company.

A contractual obligation that the real property must be acquired by the local company and may not be acquired by an international group company should also be included in the structural considerations. In this way, it can be avoided that the property is held by a pure real estate company based in a municipality with a low trade tax rate, which would lead to shifts in the model calculations. However, the most important argument for this might be that the local company, which is primarily responsible for the guarantee payments, is "more valuable" if it holds the land itself.

4.6. Term of the guarantee payments, repurchase option and deconstruction obligation

The guarantee payments should be fixed to at least a guaranteed term (minimum term) in the settlement agreement. If this minimum term is shorter than the term during which the data centre is operated, the longer actual term of the data centre operation should be used as a basis. In addition, the beginning of the term of the guarantee payments should be determined in case that the initial operation does not take place until a certain time after the acquisition of the plot of land. Thus, the term of the guarantee payments would temporally commence significantly later than the disposal

of the plots of land. This is relevant since any marketing and usage of the plot of land for other purposes is excluded during this interim period.

Furthermore, the guarantee payments should be secured over such a long period of time in the form of guarantees by the parent company in Germany and/or abroad or by other group companies – depending on the individual case.

Furthermore, it should be considered that a repurchase option in favour of the municipalities be included in the settlement agreement in order to obtain a contractual safeguard to the effect that, under certain circumstances, the land can be used again for other new purposes. Against the background of construction possibilities, such a repurchase option would have to be combined with a deconstruction obligation. Consequently, the company would have to commit to making the plot of land usable again for other commercial/office properties.

Both the option to (re)purchase the real property by the municipalities and the obligation to deconstruct should not be included in the settlement agreement directly, but in the land purchase agreement, so that the company that actually acquires the plot of land is also the obligated party under these two options. In case of doubt, the operating company would not be identical to the company holding the real property.

4.7. Alternatives to guarantee payments: Foundation Model, leasehold

Instead of or as a partial substitute for the guarantee payments, a Foundation Model could also be considered. In this case, the company would undertake to make a donation to a municipal foundation for specific purposes (e.g. construction of kindergartens or playgrounds, etc.) instead of the guarantee payments. In principle, it would also be possible to structure only part of the actual guarantee payments in the form of such a contribution.

The liquidity and possibly security advantage of such a Foundation Model instead of future guarantee payments, the collection of which would possibly be dependent on many events that cannot be influenced or foreseen, is, however, offset by the earmarking for a specific purpose.

Moreover, it would not be excluded that the company concerned would reduce the amount of such grants as an equivalent to the guarantee payments in the sense of a present value logic. Consequently, there would be a deduction from the actual guarantee payments.

Instead of land purchase agreements, the option of a leasehold could also be considered – depending on the individual case – at least as a point of discussion in the negotiations with the data centre operator. From the point of view of the Operator Municipality concerned, such a consideration could make sense if it is also the owner of the plot of land. A ground rent would possibly be easier to structure and contractually fix than any guarantee payments. In our opinion, however, the acquisition of the plot of land by a municipality for the purpose of creating a leasehold instead of guarantee payments appears to be less economically viable.

4.8. Other parameters instead of Wage Totals for the derivation or manifestation of the guarantee payments

For the purpose of manifestation, a corresponding guarantee payment amount should be derived by applying several parameters in orientation to the operator model advised by the respective data centre operator and the concrete case constellation.

Other parameters (i.e. instead of Wage Totals, which correspond to the status quo as the Allocation Standard for Trade Tax purposes) could be considered in principle: Cost Key, Revenues from Server Rental, Colocation Revenues, Revenues from Cloud Services and the "90/10-Key". In any case, an Industry Comparison should also be carried out as an additional parameter.

The respective parameters, the connecting points and their applicability depending on the operator model can be summarised as follows:

Parameter	Connection point	Operator model/ Notes
Wage Totals	Wage totals of the employees on site in the Operator Municipality	• Represents the status quo in Trade Tax Allocation
Cost Key	Link to depreciation of fixed assets, in particular servers and other IT infrastructure as well as buildings, if applicable	• Basically applicable for any operator model • Whereby the most suitable operator models are such with an "asset heavy" strategy
Revenues from Server Rental	Rental income through Server Hosting	• Applicable for Server Hosting • However, in practice probably only in combination with the following parameter "Colocation Revenues"
Colocation Revenues	Fees for Colocation services (leasing of data centre space, framework services)	• Applicable for Colocation • However, probably also in combination with the parameter "Revenues from Server Rental".

Parameter	Connection point	Operator model/ Notes
Revenues from Cloud Services	External Revenues with customers of Cloud Service Providers in the B2C and B2B area	• Applicable for Ownership Model • With the issue of a very complex determination of External Revenues in connection with a Regional Component, so that this parameter must be examined in detail in the respective concrete individual case
90/10-Key	90% of the profit goes to the Operator Municipality, 10% of the profit goes to the Headquarter Municipality (i.e. orientation towards "renewable energy" model)	• Basically applicable for any operator model • However, there are (constitutional) legal reservations about short-term implementation, so that it is more likely to be a long-term consideration in the context of a possible amendment to Sec. 29 GewStG that may be open to discussion
Industry Comparison	Trade Tax Revenues from SME that could settle in place of data centre operators	• According to an exemplary review in the context of this analysis, one would assume a Trade Tax of € 176,000 on average per SME; for a top SME of € 500,000 up to a maximum of € 1 million; on average € 254,000

Industry Comparison		• For an exemplary settlement of 10 SME, this would result in an expected average annual Trade Tax of € 1.76 million to (max.) € 10 million; the average would be € 2.54 million • This benchmark or another corresponding empirical value of the respective municipality should be used as a basis for the calculation of the guarantee payment, as it were, in the individual case

4.9. Calculation model (calculation tool)

The calculation model in the form of an calculation tool, which was developed in the course of this analysis on the basis of the audit results, is attached to this analysis as **Annex 1**.

The calculation model can be summarised as follows:

Model	Notes
Model 1: Wage Totals	• Model 1 reflects the current Trade Tax status quo • The starting point is the ratio of the Wage Totals of all employees employed in the operating company who work in the Operator Municipality to the Wage Totals of all employees employed in the operating company
Model 2: Cost Key	• In Model 2, an allocation key is derived in the form of a Cost Key • The starting point is the depreciation of the servers, other IT infrastructure and, if applicable, buildings in relation to the assets located in the

Model	Notes
	Operator Municipality to the total expenses of the operating company
Model 3a: Revenues from Server Rental	• Model 3a represents a revenue key for Server Hosting • The starting point is the determination of an allocation key according to the ratio of the revenues from server rental in the Operator Municipality to the total revenues of the operating company
Model 3b: Colocation Revenues	• Model 3b represents a revenue key for the Colocation sector • The starting point is the determination of an allocation key according to the ratio of revenues from Colocation services in the Operator Municipality to the total revenues of the operating company
Model 3c: Revenues from Cloud Services	• Model 3c represents a revenue key for the cloud services sector • The starting point is the ratio of revenues from cloud services, which are to be allocated to the Operator Municipality according to a Regional Component, to the total revenues of the operating company
Model 4: 90/10-Key	• Distribution of 90% of a notional Trade Income of the operating company to the Operator Municipality and 10% to the Headquarter Municipality • Model 4 is based on the Allocation Standard according to Sec. 29 para. 1 no. 2 GewStG for renewable energies (e.g. wind turbines)

Model 5: Industry Comparison	• Model 5 refers to the plot of land affected in each case and the resulting number of possible SME and Trade Tax Revenue as an alternative to data centre operators in the context of a settlement project • The starting point should either be the experience of the respective municipality or, alternatively, the review presented in Sec. 5.7.2 of this analysis can be used as a guide to determine the comparative figure in the form of possible Trade Tax Revenue

The guarantee payment values or result values resulting from the calculations according to the above models are defined in the analysis according to the logic of the model designations with M1, M2, M3a, M3b, M3c, M4 and M5. As a result, the maximum outcome value should be pursued. Accordingly, all five models mentioned above are to be calculated in principle.

However, since M4 can only be implemented in the long term in the context of an amendment to Sec. 29 GewStG, this value should not be directly included in the concrete further guarantee payment assessment.

The highest resulting result value (G_{fix}) would then have to be reduced by the total Trade Tax of the operating company (Z). This then results in the final guarantee payment (G).

In our opinion, the highest resulting value must be used as a basis against the background of the structural and long-term significance of corresponding settlement projects. The highest result value should also most appropriately reflect the value creation of the respective operator model. In particular, the surrender of the limited property "plot of land", the acceptance of energy-intensive business activities and the relatively small number of employees on site are, in our opinion, sufficient reasons to support the selection of the maximum resulting value according to the above formula as a guarantee payment.

5. Main part

5.1. Trade Tax, guarantee payments and other taxes

5.1.1. Trade Tax

5.1.1.1. Allocation of the Base Rate for Trade Tax on the basis of the Wage Totals as base case

If a company has several PE(s**)** in several municipalities, the German Trade Tax Act provides for the allocation of the Base Rate for Trade Tax into the shares attributable to the individual municipalities, cf. Sec. 28 para. 1 GewStG. In principle, this allocation must be made on the basis of the ratio of the Wage Total paid to the employees employed at all PEs to the wages paid to the employees employed at the PEs of the individual municipalities, cf. Sec. 29 para. 1 no. 1 GewStG.

If, however, one applies this statutory Allocation Standard to the case under review, in which an operating company runs one or more data centres in the *Rheinisches Revier*, but its headquarter is located in another municipality, this Allocation Standard leads to the municipalities, in which the data centres are located, being likely to generate only relatively little Trade Tax Revenue. This is because the majority of the employees of the operating company – and at the same time possibly in individual cases the more highly qualified employees who receive correspondingly higher salaries – are usually not employed on site in the data centre, but in the headquarter of the operating company. The Operator Municipality will, thus, often only be able to participate in a small amount of Trade Tax Revenue in relation to the plot size required by the data centre operator and the energy-intensive business, as the allocation is made on the basis of Wage Totals.

5.1.1.2. Allocation of the Base Rate for Trade Tax in special cases

In deviation from Sec. 29 GewStG, Sec. 33 GewStG allows for further possibilities for an allocation of the Base Rate for Trade Tax in special cases. If the allocation on the basis of the Wage Totals leads to an obviously unreasonable result, Sec. 33 para. 1 GewStG provides the legal basis for an allocation according to a standard that takes the actual circumstances into account in a more appropriate way.

The necessity for the application of a different Allocation Standard or substitute standard is generally discussed in the literature in the context of “inequity” within the meaning of Sec. 33 para. 1 GewStG and is affirmed, e.g., in cases where there is a complete lack of wages at the PEs of the taxable companies.[5] The ratio of turnover or operating income from the PE, the expenses related to the PE, time shares and similar circumstances (e.g. electricity income, quantities of electricity sold, asset values, land areas, working hours, rent for equipment) are to be considered as possible substitute standards for the allocation.

[5] Cf. on this and the following *Meier*, FR 2014, 1020, p. 1022; cf. on possible substitute standards also Glanegger/Güroff/*Güroff*, GewStG, 10th ed. 2021, Sec. 33 recital 5.

Irrespective of this, Sec. 33 para. 2 GewStG provides the legal basis for an agreement on the allocation between the municipality and the respective liable to pay the taxes, which then sets the standard for the allocation of the Base Rate for Trade Tax. This is an independent allocation provision.[6] The provision of Sec. 33 para. 2 GewStG has a pacification function and is, therefore, to be implemented solely in accordance with a corresponding agreement between the respective person liable to pay the taxes and the tax creditor.

Such agreements concluded between the taxpayer and the municipality pursuant to Sec. 33 para. 2 GewStG on the application of a different Allocation Standard in individual cases are accepted in the respective case law. Thus, as early as 1968, the BFH expressly considered a corresponding agreement with a public transport company serving several municipalities to be permissible, since the provision is based on the idea that if the parties involved reach an agreement, the objective of the allocation rules to allocate the Base Rate for Trade Tax as fairly as possible is met in the simplest and best way.[7]

5.1.1.3. Risk of legal uncertainty concerning the application of Sec. 33 GewStG

In practice, however, the handling of Sec. 33 GewStG involves certain risks with regard to a legally secure design, as shown by the allocation of Base Rates for Trade Tax for operating companies of wind power plants before the introduction of a special Allocation Standard for these circumstances in Sec. 29 para. 1 no. 2 GewStG.

Originally, the allocation for operating companies of wind power plants was regulated by means of corresponding orders of the Regional Tax Offices (**OFD**), which provided for an allocation based 50% on the wages and 50% on the fixed assets according to tax balance sheet values.[8] However, this procedure was not approved by the BFH in its ruling of 4 April 2007[9], as it denied the necessity of a deviating allocation (in the specific case according to Sec. 33 para. 1 sentence 1 GewStG) due to a lack of inequitable results in the specific individual case.

In its ruling, the BFH denied the existence of an obvious inequity of considerable weight due to the damage claimed by the municipality that it had suffered as a result of the heavy transports required for the construction and repair of the wind turbines on its municipal roads and paths.[10] An inequity pursuant to Sec. 33 GewStG was only to be affirmed in the case of particularly weighty and atypical

[6] Cf. on this and the following circular of the OFD Magdeburg dated 10 November 2008, file no. G 1450-23-St 216; cf. also OFD Magdeburg dated 25 August 2014, DB 2014, p. 2258.

[7] Cf. decision of the Federal Fiscal Court dated 25 September 1968, reference number I B 118/65, published in Federal Fiscal Gazette 1968 Part 2, p. 827.

[8] Cf. circular of the OFD Düsseldorf dated 15 March 2004, file no. G 1450 A-St 142 as well as circular of the OFD Koblenz dated 25 March 2004, short information trade tax no. 028/2004 G 1450 A.

[9] Reference number I R 23/06, published in Federal Fiscal Gazette 2007 Part 2, p. 836.

[10] Cf. on this and the following decision of the Federal Fiscal Court dated 4 April 2007, reference number I R 23/06, published in Federal Fiscal Gazette 2007 Part 2, p. 836.

burdens.[11] Contrary to the opinion of the legislature expressed later[12] , the BFH expressly did not consider the negative effects of the wind turbines on the local and landscape image, on the value of residential properties and on tourism in the affected municipalities to be suitable arguments for its decision to justify an Allocation Standard deviating from Sec. 29 GewStG, since these were not burdens that would have a direct impact on the municipal budgets. In the court's opinion, taking into account such primarily aesthetic factors and factors affecting the general quality of life, which do not have a direct impact on the municipal budgets would go beyond the legal framework of the Trade Tax Allocation procedure.[13]

Since the BFH had set the barriers for the application of a different Allocation Standard according to Sec. 33 GewStG very high with this ruling, the allocation for wind power plants remained inevitably bases on the ratio of the Wage Totals until the legislator decided to explicitly define a different Allocation Standard for wind power plants – and later also for solar plants – in the law.

Even if, with regard to the issue of the allocation of the Base Rate for Trade Tax in the operation of a hyperscale data centre to be considered in the context of this analysis, the agreement of a specific Allocation Standard between the data centre operator and the Operator Municipality seems quite plausible against the background of the above explanations – and in particular the potential unsuitability of Wage Totals as an Allocation Standard – there is a considerable risk that the BFH would ultimately deny an obvious and serious inequity of the allocation according to Wage Totals in the specific individual case if legal action were taken – for whatever reasons. This would then lead to an unlawfullness of the agreement in question and would have the consequence that the Trade Tax would have to be allocated on the basis of the Wage Totals after all, which would ultimately achieve exactly the result that was to be avoided by the agreement pursuant to Sec. 33 para. 2 GewStG.

In the present case, it would have to be considered that precisely not – as in the case decided by the BFH – a different Allocation Standard according to Sec. 33 para. 1 sentence 1 GewStG would be chosen, but an agreement according to Sec. 33 para. 2 GewStG, which in itself represents a separate legal basis in the regulatory system of Sec. 33 GewStG and, at least in the opinion of the tax authorities, does not require that the criteria of Sec. 33 para. 1 GewStG are also fulfilled, i.e. the allocation according to Wage Totals leads to an obvious and serious inequity.[14]

Nevertheless, an agreement under Sec. 33 para. 2 GewStG also requires a certain degree of justification.[15] Sec. 33 GewStG regulates the "allocation in special cases"; in all other (standard) cases, the allocation is based on the Wage Totals. This is a standard that is deliberately kept simple

[11] Cf. decision of the Federal Fiscal Court dated 4 April 2007, reference number I R 23/06, published in Federal Fiscal Gazette 2007 Part 2, p. 836 (recital 16).

[12] Cf. e.g. BT- Drucks. 16/11108, p. 30 et seq.

[13] Cf. decision of the Federal Fiscal Court dated 4 April 2007, reference number I R 23/06, published in Federal Fiscal Gazette 2007 Part 2, p. 836 (recital 18).

[14] Cf. circular of the OFD Düsseldorf dated 15 March 2004, file no. G 1450 A-St 142 as well as circular of the OFD Koblenz dated 25 March 2004, Brief Information Gewerbesteuer No. 028/2004 G 1450 A; parts of the literature express an other opinion, inter alia BeckOK GewStG/*Jahndorf*, Sec. 33 recital 199 and Brandis/Heuermann/*Baldauf*, GewStG, Sec. 33 recital 10.

[15] Cf. on this and the following Brandis/Heuermann/*Baldauf*, GewStG, Sec. 33 recital 4 with further references.

in order to make the allocation procedure practicable and deliberately accepts relatively unprecise results – and, thus, also the injustices resulting in individual cases with regard to the allocation of Trade Tax Revenue. If the scope of Sec. 33 GewStG were opened in every case of injustice, an allocation pursuant to Sec. 33 GewStG would – contrary to the legislative intention – be made the rule and the allocation on the basis of the Allocation Standard primarily provided for by law would be made the exception.

In our opinion, there is therefore a not inconsiderable risk that, despite its character as an independent legal basis, an agreement on a specific and case-by-case Allocation Standard pursuant to Sec. 33 para. 2 GewStG also requires the existence of an inequity that obviously exceeds the general inequity resulting in principle from the application of Sec. 29 para. 1 no. 1 GewStG in the individual case.[16] This inequity must be so substantial that it makes the justification of the most practicable structuring of the allocation procedure appear unreasonable for the specific individual case.

The BFH's comments above on the "soft" negative factors associated with the operation of wind turbines, which are certainly comparable, at least in part, to the factors associated with the operation of a hyperscale data centre, suggests that the BFH could rule similarly with regard to the agreements conceivable for the present constellation and deny the required obvious and serious inequity in the individual case, so that an agreement between the operating company and the municipalities based on Sec. 33 para. 2 GewStG would be accompanied by not inconsiderable legal uncertainties.

5.1.2. Guarantee payments

5.1.2.1. Design of the guarantee payments as "real" guarantee payments

In order to exclude this risk and, in particular, the legal uncertainty with regard to Trade Tax, which is inherent in the interpretation and handling of Undefined Legal Concepts such as "inequity", it would, in our opinion, make sense for the constellation considered here to leave the scope of application of the Trade Tax Act altogether and to agree on the guarantee payments as "real" compensation payments or guarantee payments. In our opinion, the guarantee payments should therefore be made in addition to the data centre operator's Trade Tax payments and supplement them in economic terms, but not replace them.

However, the legal nature of such an agreement is questionable.

An agreement reached between the taxpayer and the municipality within the meaning of Sec. 33 para. 2 GewStG can according to case law generally qualify as a Public-law (Settlement) Agreement within the meaning of Sec. 54 et seqq. of the German Administrative Procedure Act (**VwVfG**), as a *sui generis* agreement between the municipalities entitled to levy Trade Tax and the taxpayer

[16] Cf. also Brandis/Heuermann/*Baldauf*, GewStG, Sec. 33 recital 4.

or as a Factual Agreement.[17] In the present case, however, the agreement on the compensation payment is precisely not to be made on the basis of Sec. 33 para. 2 GewStG, but is to be part of the settlement agreement concluded between the Operator Municipality and the data centre operator and has no direct reference to Trade Tax Law.

A Public-law Agreement within the meaning of Sec. 54 et seqq. VwVfG requires the existence of a an agreement under administrative law, i.e. a contract which aims at legal consequences in the field of administrative law, i.e. which establishes, changes or terminates a legal relationship under administrative law.[18] Purely with regard to the guarantee payment, at first glance the agreement to be made with regard to the guarantee payments would appear to be of a civil-law nature, since it concerns a compensation payment for lost jobs, the surrender of the limited good "plot of land" and other aspects (e.g. electricity-intensive industry on site, etc.).

Indirectly, however, the guarantee payment could possibly also be interpreted as compensation for lost Trade Tax Revenue, which would accrue to the municipality if it had located SME on the site instead of the data centre. If this were a contract in the area of tax law, this would go hand in hand with a qualification as Public-law Agreement[19], the legal admissibility of which would be questioned.

The fact that the contractual agreement of a waiver or partial waiver of Trade Tax should not be permissible in settlement agreements between municipalities and (industrial) enterprises, since agreements between the municipality and the taxpayer on the realization of facts relevant for taxation are not possible[20], should in our opinion not prevent the admissibility of the guarantee payments such as in the present constellation, since in the present case neither the Operator Municipality nor another PE Municipality nor the Headquarter Municipality waives the Trade Tax Revenue in whole or in part.

If a municipality makes its services – in this specific case the sale or release of the real property for purposes of the operation of a the data centre – dependent on the location of the facility in the municipality's area, this should not represent an (inadmissible) agreement on a tax liability, but a legitimate consideration of fiscal concerns in the area of municipal planning sovereignty.[21] Consequently, the settlement proposed in Sec. 6. of this analysis, which already contains a concrete obligation to pay a defined compensation payment and is to be a condition precedent for the land purchase agreement, should in our opinion be of a civil-law nature.[22]

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[17] Cf. decision of the Federal Fiscal Court dated 20 April 1999, reference number VIII R 13/97, published in Federal Fiscal Gazette 1999 Part 2, p. 542 with further references. The subject matter of the dispute was an agreement that had been concluded between two municipalities with the consent of the taxpayer.

[18] Cf. Stelkens/Bonk/Sachs/*Bonk/Neumann/Siegel*, VwVfG, 9th ed. 2018, Sec. 54 recital 11, 13.

[19] Cf. Stelkens/Bonk/Sachs/*Bonk/Neumann/Siegel*, VwVfG, 9th ed. 2018, Sec. 54 recital 64 regarding the qualification of a contract to secure Trade Tax Revenue between a municipality and a company.

[20] Cf. Glanegger/Güroff/*Selder*, GewStG, 10th ed. 2021, Sec. 4 recital 12 with further references.

[21] Cf. Glanegger/Güroff/*Selder*, GewStG, 10th ed. 2021, Sec. 4 recital 12 with further references.

[22] In our opinion, the decision of the Federal Court of Justice dated 14 April 1976, reference number VIII ZR 253/74, BGHZ 66, p. 199, also speaks in favour of a civil-law nature of the agreement.

Due to the proximity to public law, it appears necessary in the specific case to also examine the provisions and legal principles of public law, i.e. in particular the Principle Of Proportionality and the Principle of Equal Treatment, in the specific contractual arrangement.

Furthermore – apart from legal issues relating to public law – the principles according to the case law of the Federal Court of Justice (**BGH**) [23] on the question of the invalidity of such agreements pursuant to Sec. 134 BGB must also be considered. In principle – in contrast to the case law of the BGH[24] – the question of invalidity of the agreement pursuant to Sec. 134 BGB should not arise in the present case, since the municipalities do not intend to inadmissibly extend the Trade Tax liability by means of agreements of civil law nature, but rather it is a civil law agreement outside of tax law, which therefore leaves existing Trade Tax claims of the Headquarter and Operator Municipality unaffected.

The tax treatment of the guarantee payments at the level of the company should be agreed on a case-by-case basis with the operating company concerned. The tax treatment of the specific guarantee payment (e.g. as acquisition costs, operating expenses, etc.) also depends on the structuring of the operating and real property companies as well as the contractual arrangement and the settlement agreement.

The above statements, in particular on the legal nature of the contractually agreed compensation payments, are only to be understood as a rough assessment at this point and require a more detailed legal review in the course of the drafting of the contractual arrangement.

Should such a further legal review come to the conclusion that the agreement of guarantee payments on a "civil law basis" is not permitted, the following alternative, e.g., could be considered and should be examined further: The real property not already owned by the municipality would be acquired by the municipality in a first step. Subsequently, the (acquired) plot of land would be sold to the potential operating company. Accordingly, the purchase price for the plot of land would increase by the calculated guarantee payments when it is sold to the company. It should be noted, however, that the guarantee payments would be subject to RETT as an additional purchase price for the acquisition of the plot of land. Consequently, there would be a higher RETT expense, which should be taken into account accordingly in the purchase price assessment.

Apart from the above considerations, it would also have to be evaluated whether the guarantee payments should be agreed as an annual fixed payment or not. The advantage of such an approach would be the elimination of monitoring and constant adjustment of future profits and calculation parameters, which are the basis for determining the guarantee payments.

Consequently, this would create more planning security for the municipalities.

[23] Decision of the Federal Court of Justice dated 14 April 1976, reference number VIII ZR 253/74, BGHZ 66, p. 199.

[24] Decision of the Federal Court of Justice dated 14 April 1976, reference number VIII ZR 253/74, BGHZ 66, p. 199.

Instead of a fixed guarantee payment, a variable or dynamic guarantee payment could also be considered. Such a dynamic guarantee payment would, therefore, be linked to actual future profits. The advantage of such a dynamic guarantee payment for the municipality would, therefore, be that it secures the opportunity to participate in future commercial success if it possibly exceeds the planned target figures. Conversely, the respective municipality also assumes the risk in the event of a poor business performance of the company.

Against this background, it may be advisable to determine and agree on a fixed guarantee payment instead of a dynamic guarantee payment in order to hedge such risks, which is generally preferable to the possibly higher chance of profit participation.

5.1.2.2. Constitutionality of the guarantee payments

As far as can be seen, there are no (fiscal court) rulings to date that deal with the question of whether the agreement of a guarantee payment constitutes a circumvention of Trade Tax with regard to the apportionment that has to be paid by municipalities to the district, if they belong to a district (District Allocation).

However, in our opinion, the question of circumvention should not arise if the payments – as proposed in the course of this analysis – are contractually structured as guarantee payments which, as "real" compensation payments for the disadvantages incurred by the Operator Municipalities, are made in addition to the Trade Tax claim of the Headquarter Municipality (and also of the Operator Municipality). In this context, however, the tax treatment of the guarantee payments at the level of the company is also a relevant aspect. The tax treatment of the specific guarantee payment should therefore be agreed with the operating company concerned.

The agreement of such a guarantee payment does not restrict the right of the municipalities to levy Trade Tax (usually according to the Allocation Standard of Wage Totals). It also does not avoid the transfer of Trade Tax to the districts via the District Allocation, because the Trade Tax claim of all municipalities concerned according to Sec. 29 GewStG continues to exist without restrictions. The guarantee payment is merely to be considered as an additional payment alongside the Trade Tax claim of the Operator Municipality, but does not replace it. Both the Operator Municipality and the Headquarter Municipality thus make the payment owed by them in the course of the Intermunicipal Financial Compensation without restriction.

However, in order to avoid a double taxation of the operating company, both the Trade Tax, which by law has to be paid to the Operator Municipality (and any other PE Municipalities) as well as the Trade Tax levied by the Headquarter Municipality should be taken into account as a deduction item in the course of assessing the guarantee payment. Consequently, the District Allocation, insofar as it is applied, is not reduced in any of the municipalities concerned. At the same time, there is also no violation of the Prohibition On Excessiveness at the level of the operating company. However, the tax treatment of the guarantee payments should be examined more closely in each individual case and agreed with the company concerned.

Against this background, there should therefore be no constitutional concerns regarding the agreement of a guarantee payment in the sense that the guarantee payment could lead to an avoidance or evasion of the Trade Tax claim of one of the participating municipalities or that the operating company is excessively burdened. Nevertheless, in our opinion it is necessary to carry out a further detailed legal review in the context of the concrete settlement project.

5.1.3. Other taxes

When data centre operators locate in Germany, these companies will generate further tax revenue in the future – in addition to Trade Tax – such as in the area of Value Added Tax (**VAT**) and Corporate Income Tax (**CIT**) as well as, in principle, in the area of Withholding Tax, e.g. for licence payments or capital gains tax on dividends etc.

In the case of operating companies, there are basically two types of turnover: On the one hand, it can be a turnover with a company affiliated with the operating company (so-called "intercompany-relationships"). On the other hand, it can also be a turnover generated by a "real" customer. If and to the extent that the service recipient is resident in Germany for VAT purposes, German VAT (currently 19%) should in any case be levied on such turnover. If it is an intra-group turnover, i.e. an intercompany-service, the turnover may be VAT-exempt due to a possible fiscal unity for VAT purposes.

Furthermore, there could also be fiscal unity for income tax purposes between the operating companies and their parent companies, so that – to put it simple – the tax profits/losses of the operating company would be consolidated with those of the parent company and possibly other group companies for CIT purposes. Consequently, an offsetting of tax profits and losses would be possible. In addition, the explanations on the profit shifting aspects due to transfer pricing under Sec. 5.3.3 apply accordingly.

However, VAT and CIT are not taxes that are likely to be of material relevance from the perspective of the Operator Municipality, as they are basically federal taxes (i.e. irrespective of the Federal Financial Compensation, e.g. for VAT, etc.). Consequently, these types of taxes have not been further examined in the context of this analysis.

In this context, however, for the sake of completeness, reference should be made to the considerations on the so-called "digital tax" in the context of the "Pillar One" concept as part of the BEPS project.[25] In essence, this is about the redistribution of taxation rights in the light of the digital economy in favour of the states in which the users or customers of the digital products are located. By means of establishing new links for purposes of levying taxes, it should be achieved that the market/user states can tax a relevant share of the profits of such IT companies without existing links for purposes of taxation with regard to the multinational corporations. In the context of enforcement, such a digital tax would be levied like an additional tax on turnover and/or profits.

[25] Cf. OECD 2022, Pillar One – Amount A: Draft Model Rules for Domestic Legislation on Scope, p. 2.

In the light of these tax policy considerations, we believe that the necessity of the guarantee payments could also be supported indicatively.

Another type of tax, the RETT, which has to be considered in the sale of real property, is a state tax, which does not allow municipalities themselves to participate (to a relevant extent) in this respect, but the state of North Rhine-Westphalia.

The purchase price for the plot of land should be determined on the basis of market conditions and, if possible, set (significantly) above the Standard Land Values, since the usability of the plot of land is very limited and few possible future structural changes are opened up in the course of the settlement of the data centres, which would otherwise be considered as value-increasing on the real estate market. From the point of view of the municipalities, it is decisive in connection with the sale of the plots of land that the respective relevant land purchase agreement – especially in cases where the real property is not owned by the Operator Municipality – contains the effective conclusion of the respective settlement agreement as a condition precedent (cf. on this in detail further under Sec. 5.1.2.1).

For further remarks on VAT with regard to the structural aspects at the level of the municipalities, we may refer to Sec. 5.4.1.1 and 5.4.1.5 of this analysis.

5.2. Overview of business/operator models

5.2.1. Key factors for the business of the operating companies

The External Revenues generated by the respective operating companies through the operation of the data centres are essentially determined by three factors:

- The customers of the data centre who use its services are a decisive determinant for the type and amount of revenue generated by the data centre operator. The operating companies differ in whether their customer groups include primarily private individuals (B2C) or predominantly other companies (B2B). Other companies in this context also include, in particular, large international technology corporations that require data centre capacities for the supply of cloud services.
- Furthermore, the number and qualifications of the data centre's employees influence the company's revenues. It should be noted that few, if any, on-site employees are necessary for data centre operations, as the services offered are largely non-human or do not require human assistance. The majority of the workforce of data centre providers is usually made up of sales and administrative staff, who usually do not work at the data centre site itself, but perform their tasks from the company's headquarters or another branch office. As a rule, issues to be solved exclusively on site are installation and maintenance work to be solved by technicians, as well as security issues to be dealt with by appropriate security personnel.

- In addition, intangible factors such as brand and software rights as well as licences also play a very decisive role in the revenue generation of data centre operators. This is especially true for the large cloud technology corporations.[26] In some of the business models presented in detail below, these elements probably represent the largest component of the revenue generated.

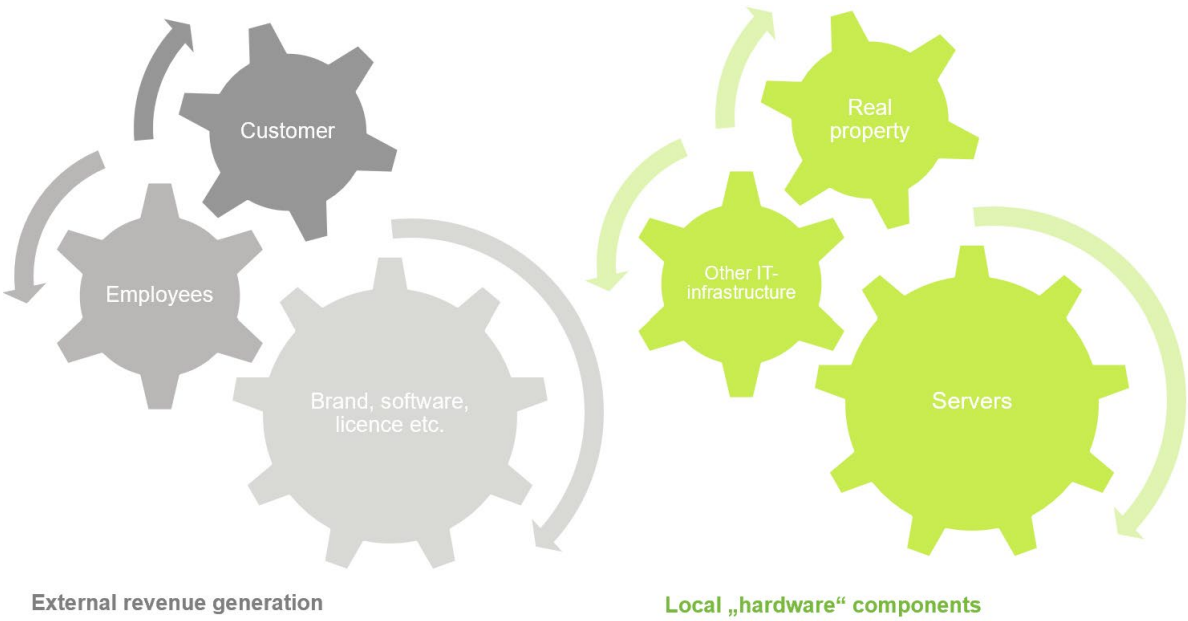
The assets attributable to the data centre are the basis of the data centre operation. The operating models can be differentiated according to which local "hardware" components are owned by the data centre and which are either leased to the operating company by external third parties or installed for their own purposes.

These components are essentially

- the real property, i.e. the property on which the building is build, and the building itself,
- the other IT infrastructure, i.e. air conditioning, cages[27] etc. and
- the servers.

The other IT infrastructure is considered necessary for the operation of the data centre in each case, which is why it is owned by the operating company in each individual operating model.

Graphically, the essential factors for the business of the operating companies can be illustrated as follows:



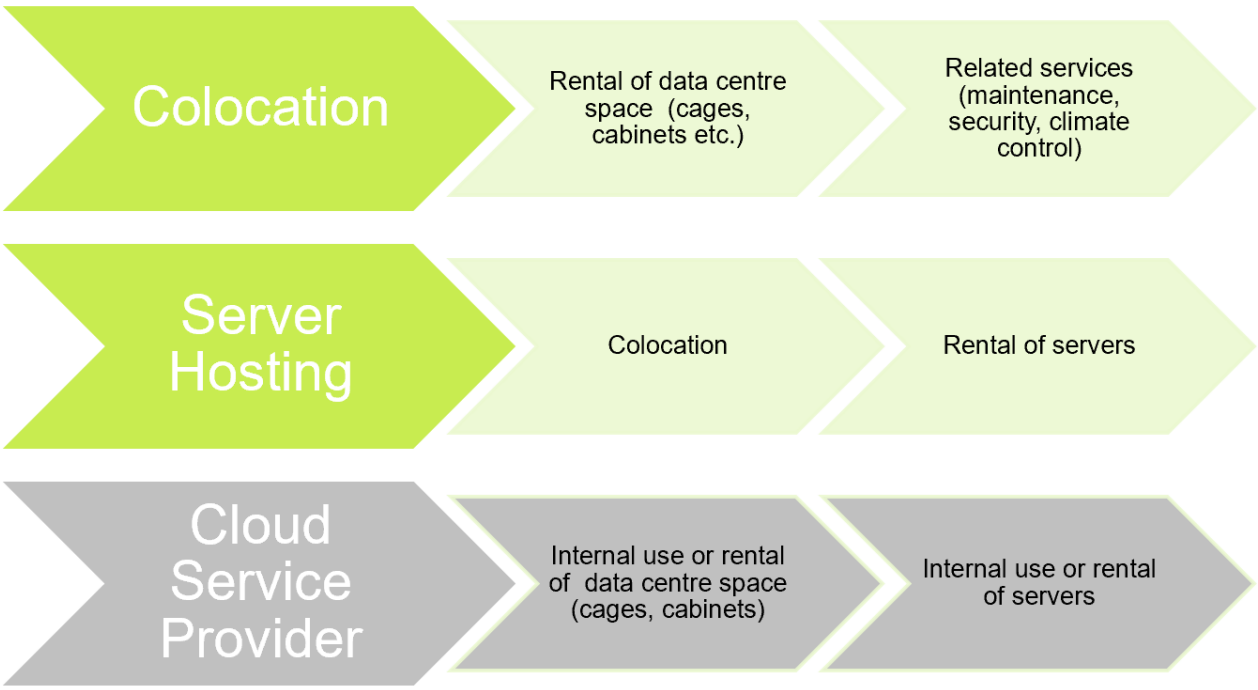
[26] Major technology companies in Europe include Amazon, Luxembourg; Microsoft, Dublin; Facebook/Meta, Dublin; Apple, Cork; Alibaba, London.

[27] Cages are separated and fenced areas within the data centre that offer space for servers and to which access is only possible with access authorisation (e.g. with a transponder card).

5.2.2. Definition of the individual business models

Operating companies pursue different strategies to create value through their operational activities. According to our research, there are three predominant business models exercised – often in mixed form – by data centre operators: Colocation, Server Hosting and Cloud Service Provider. These three models are discussed in detail below in Sec. 5.2.4. of this analysis.

For overview purposes, however, the business models can be subdivided as follows:

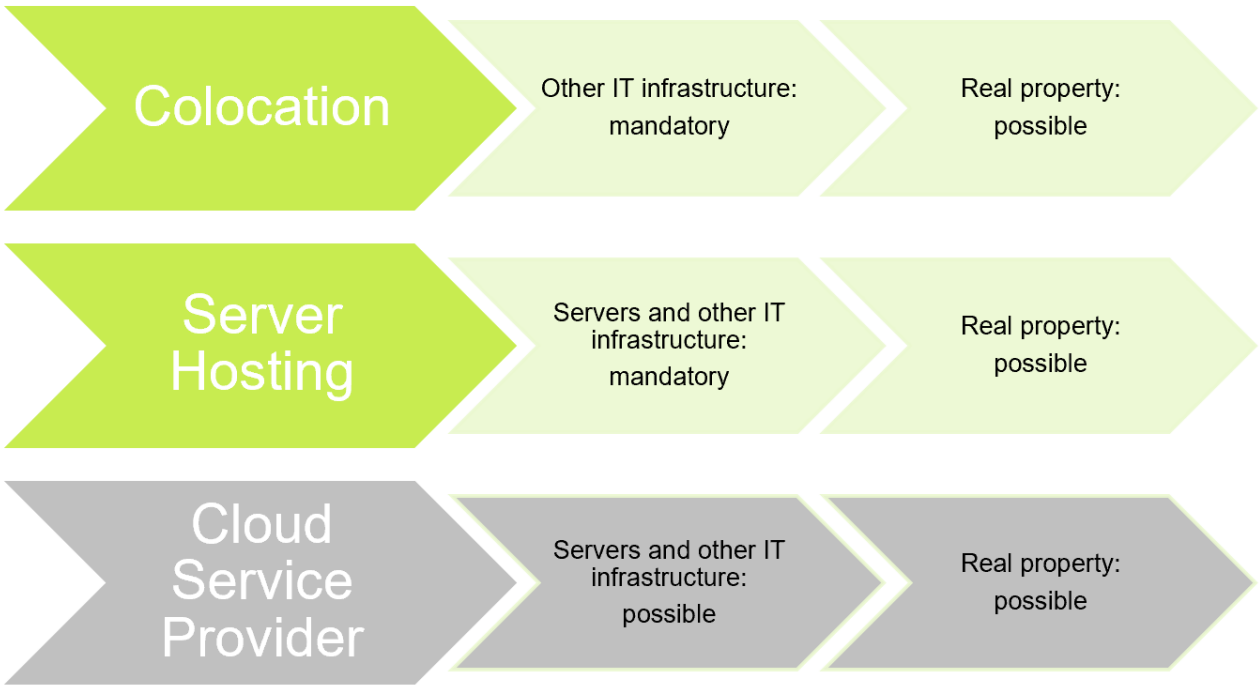


5.2.3. Asset strategy

The different business models can be further broken down in a next step regarding the asset strategy they pursue.

In the case of the Colocation and Server Hosting business models, the other IT infrastructure is mandatory in each case, while the ownership of the servers is only mandatory in the case of Server Hosting.

The business model of the Cloud Service Providers, on the other hand, differs from this, as the other IT infrastructure and the servers are both owned by the company and can be rented for the company's own purposes. For the purpose of overview, the business models can be illustrated with the respective "asset strategy" as follows (for further details of the "asset strategy" in combination with the respective business model, we may refer to the following Sec. of 5.2.4. of this analysis):



5.2.4. Defined operator models

According to our analyses, six operator models are common in the market – although several of these models are often operated at the same time – which result from the combination of the business models with the asset strategy:

- Colocation Model and Modified Colocation Model
- Server Hosting and Modified Server Hosting as well as
- Ownership Model and Ownership Model "Light"

Operating models	Fixed assets	Movable assets		Rental of servers
	Real property	Other infrastructure	Servers	
Colocation Model	×	✓	×	No
Modified Colocation Model	✓	✓	×	No
Server Hosting Model	×	✓	✓	Yes
Modified Server Hosting Model	✓	✓	✓	Yes
Ownership Model "Light"	×	✓	✓	No
Ownership Model	✓	✓	✓	No

Owned by the operating company	✓
Not owned by the operating company	×

With the exception of the Ownership Model, all other operator models are rental models from the perspective of the Cloud Service Provider, as the other IT infrastructure and/or servers are rented.

5.2.4.1. Colocation

The distinguishing feature of the "Colocation" business model from Server Hosting is the customer's ownership of the servers used in the data centre. Therefore, Server Hosting can also be seen as a

further development of "Colocation", since in this case the servers owned by the operator are added.

If only the other IT infrastructure is owned by the data centre operator, while the servers are owned and used by the customers for their own purposes and a third party owns the real property, the data centre is managed in the form of the **"Colocation Model"** defined for the purposes of this analysis. In this model, the Colocation provider is often backed by real estate investment trusts or other investors who take the investment risk of the real property off the Colocation providers.

In the "**Modified Colocation Model**", the operating company is the owner of the real property and the other IT infrastructure, but this is probably the exception rather than the rule in the market. In this model, the servers are also owned by the customer, who rents a certain area in the data centre in order to install his own servers in the cages or cabinets available and use them for his own purposes.

The rental offer in these models exclusively comprises the data centre space including power, security and cooling systems.[28] In addition, customers can also take advantage of so-called "managed services"; these include, in particular, care and maintenance work on the existing IT systems.[29]

By using hyperscale colocation data centres, Cloud Service Providers can also offer their services at locations where they do not operate their own data centre.[30] The high capital commitment associated with an Ownership Model is avoided here from the perspective of the Cloud Service Provider itself.

Since in the Colocation Model the Cloud Service Provider is not identical to the operator of the data centre, the Colocation provider relieves the Cloud Service Provider of the investment risk in the data centre and the capital commitment. The strategy of the Cloud Service Provider behind this model is referred to as an "asset light" strategy, as only the servers, i.e. the necessary movable assets, are owned by the Cloud Service Provider.

The Colocation operator also has no incentive to share the available resources and potential customers with other Colocation providers, which is why several providers with this business model will not settle on the same plot of land.[31] Colocation providers, on the other hand, can benefit from the spatial proximity and attraction of a Cloud Service Provider (e.g. Amazon, Google, Microsoft, etc.). It is therefore conceivable that a Colocation operator will locate on a site close to the Cloud Service Provider.

[28] Cf. https://www.rackspace.com/de-de/library/what-is-Colocation, as of 27.04.2022.

[29] Cf. https://www.telemaxx.de/it-services/weitere-services, as of 27.04.2022.

[30] Cf. on this and the following Machbarkeitsstudie Dateninfrastrukturen im Rheinischen Revier, p. 100 et seq.

[31] Cf. on this and the following Machbarkeitsstudie Dateninfrastrukturen im Rheinischen Revier, p. 100 et seq.

5.2.4.2. Server Hosting

Server Hosting differs from the Colocation Model in that, in addition to the other IT infrastructure, the servers are also owned by the data centre operator. This is also the case in the Ownership Model defined below (cf. Sec. 5.2.4.3), however, with Server Hosting the servers are not used for the company's own purposes, but are rented to external customers who in turn provide their own (cloud) services to their customers with the help of the servers provided, including data centre space.

If the real property is not owned by the operating company, but the data centre operator rents space on someone else's property in a building owned by someone else, this operating model is defined as **"Server Hosting**" for the purposes of this analysis.

In the second model defined in this analysis, "**Modified Server Hosting**", the operating company owns not only the other IT infrastructure and the servers, but also the real property. Consequently, Modified Server Hosting – like the Modified Colocation Model and the subsequent Ownership Model (cf. Sec. 5.2.4.3) – represents an "asset heavy" strategy.

Customers (e.g. hyperscalers) of the Server Hosting companies can rent servers, including main processor, RAM, hard disk and network equipment as required for a monthly fee and also take advantage of additional services for the operation and configuration of the IT hardware.[32] The data centre operator's revenues in the Server Hosting Models are accordingly generated – unlike in the Ownership Model – by renting the data centre space and IT hardware including the servers on site.

Colocation and Server Hosting – regardless of their specific characteristics – are not mutually exclusive as business models. Data centres can offer both partial Colocation and Server Hosting services to provide customers a customised solution.

5.2.4.3. Ownership Model

In distinction to the above operator models, we have defined a separate model for the Cloud Service Providers for the purposes of this analysis, namely the "Ownership Model". In other words, the business model of the Cloud Service Providers is always the basis for the Ownership Model defined here. Consequently, the Ownership Model ties in with the business model of the Cloud Service Providers if they run their own data centre. Unlike the Colocation Model and Server Hosting, the Cloud Service Provider is therefore not a customer of the data centre, but the independent operator.

If the real property of the data centre is not owned by the data centre operator – in the Ownership Model this corresponds to the Cloud Service Provider – and the Cloud Service Provider uses the data centre for the provision of its own cloud services, the data centre operation takes place in the form of the "**Ownership Model 'Light'**".

[32] Cf. https://www.equinix.de/services/managed-services/japan/rental-service, as of 26.4.2022.

This allows Cloud Service Providers to operate their own data centre without having to tie up a lot of capital by acquiring the real property. By renting the plot of land and the building, operators save resources they can invest in business activities. Consequently, business success lies in rapid implementation and scaling, as well as the innovation and expansion of the business model that is driven by this.[33]

In the original Ownership Model (hereinafter referred to as the "**Ownership Model**"), the Cloud Service Provider builds and operates the data centre itself, i.e. it acquires the plot of land and constructs the building it owns on it, including the other IT infrastructure required to operate a data centre (e.g. air conditioning systems, generators, etc.). The servers, however, are also owned by the operating company and are used for the provision of its own services. The revenues are generated analogous to Ownership Model “Light” through the provision of IT services (especially cloud services)[34] and are therefore more difficult to localise than with the Server Hosting or Colocation Model. The customer groups of data centre operators are – identical to the Ownership Model “Light” – business and private customers.[35]

In this case, the Cloud Service Provider pursues a so-called "asset heavy" strategy and thus enters into a long-term high capital commitment.[36] This restricts flexibility with regard to the location of the data centre, as not only the movable servers are acquired, but also the necessary immovable assets that are to be allocated to the operation of the data centre. Consequently, it is not possible for the Cloud Service Provider to move the data centre operation to another location at short notice if market conditions change.

In order not to make a bad investment regarding the real property, a detailed and lengthy examination of the region on the part of the Cloud Service Provider with regard to its suitability for a hyperscale data centre is therefore required.[37] However, the acquisition of the real property has the advantage for the company that it can be used to secure necessary loans and thus mitigate the risks and restrictions associated with the Ownership Model. In addition, the Cloud Service Provider retains complete control over the IT hardware and does not run the risk of specialised knowledge about the company's own servers leaking to third parties.

5.3. Implications of the business/operator models on Trade Tax Revenue

5.3.1. Wage Totals/ number of employees on site

If municipalities and data centre operators have not agreed otherwise, the Trade Tax Revenue accruing to the Operator Municipality is calculated exclusively on the basis of the Wage Totals of the employees deployed in the Operator Municipality (cf. Sec. 29 para. 1 no. 1 GewStG), which has

[33] Cf. Machbarkeitsstudie Dateninfrastrukturen im Rheinischen Revier, p. 100.
[34] Cf. annual financial statement Microsoft Deutschland MCIO GmbH 2019/20, p. 1.
[35] Cf. Machbarkeitsstudie Dateninfrastrukturen im Rheinischen Revier, p. 101.
[36] Cf. on this and the following Machbarkeitsstudie Dateninfrastrukturen im Rheinischen Revier, p. 99 et seq.
[37] Cf. on this and the following Machbarkeitsstudie Dateninfrastrukturen im Rheinischen Revier, p. 99 et seq.

already been described under Sec. 5.1.1 of the analysis. Consequently, the Trade Tax Revenue accruing to the Operator Municipality also depends on the operating model chosen by the data centre.

However, the core issue with all operator models is that – as already explained – the municipalities provide the data centre operators with a relatively large plot of land in the course of the planned settlement compared to the number of local employees. Consequently, a hyperscale data centre – in all operator models – only generates a small amount of Trade Tax Revenue in relation to the large plot size it obtains.

5.3.2. Exemplary findings from the evaluation of freely available annual financial statements of various data centre operators

As examples for our investigation, we analysed the annual financial statements of various companies from the data centre operator industry, insofar as these were freely available to the public, contained sufficiently filterable information on the data centre operators' business model and were prepared in accordance with HGB regulations.

Against this background, the 2019 annual financial statement of Equinix (Germany) GmbH ("**Equinix**"), as a representative of the Colocation sector, and the 2020 annual financial statement of InterXion Deutschland GmbH ("**InterXion**"), as a company which can subsequently also be located in the Server Hosting sector, were evaluated.

Furthermore, the 2019/2020 financial statement of Microsoft Deutschland MCIO GmbH ("**MCIO**") was evaluated as an example of a data centre operator from the Cloud Service Provider sector, as this financial statement was the most accessible financial statement of a Cloud Service Provider, which was partly due to the fact that it is a stand-alone company that operates data centres – as distinct from the actual cloud services.

In addition, the 2019 annual financial statement[38] of Kyndryl Deutschland Aviation Industry Services GmbH ("**Kyndryl**"), which also provides cloud services as part of the IBM Group, was investigated. Unlike MCIO, however, Kyndryl's range of services also includes communication services and electronic workplaces, i.e. not exclusively data centre operations. Furthermore, Kyndryl provides its services in particular to a special customer, the Lufthansa Group.

Consequently, the basic three operator models were covered in the exemplary evaluation.

[38] Taken from the 2020 annual financial statement as previous year's figures, as a net loss was reported in the 2020 annual financial statement.

Case study on Equinix (Germany) GmbH based on the annual financial statement 2019:

- As far as can be seen from the freely available information, Equinix offers local Colocation services.
- In the year under review, Equinix operated 10 digital infrastructure sites in Germany.
- There is an agreement on the operation of the data centres and a commission agreement with Equinix EMEA B.V., i.e. externally generated revenues (External Revenues) are not reported by Equinix, but only the agreed commission on mediated sales to which the company is entitled.
- The commission includes reimbursement for data centre operations and sales, marketing and administrative activities, as well as a mark-up.
- The following figures can be taken from Equinix's annual financial statement for 2019:

Turnover	261,945,952.60 €
EBT	33,046,012.55 €
Number of employees	308
Profit per employee	107,292.25 €

Case study on InterXion Deutschland GmbH based on the annual financial statement 2020:

- InterXion offers – as far as can be seen from the freely available information – Colocation and therefore also Server Hosting.
- In the reporting year, InterXion operated 15 operational data centres in Frankfurt am Main and 2 in Düsseldorf.
- The company has leased around 112,628 sqm in Frankfurt am Main and Düsseldorf for further use as data centres.
- The following figures can be taken from InterXion's annual financial statement for 2020:

Turnover	201,482,208.64 €
EBT	7,710,440.74 €
Number of employees	203
Profit per employee	37,982.47 €

Case study on Microsoft Germany MCIO GmbH based on the annual financial statement 2019/2020:

- MCIO operates and (partly) uses its own data centres for the provision of cloud services etc., whereby there was no ownership of the real property.
- MCIO operates data centres in the Frankfurt, Berlin and Magdeburg regions for this purpose.
- MCIO pursues a so-called "Cost Plus Commission Model" with Microsoft Ireland Operations Limited, i.e. the revenues result entirely from the commission payments (Internal Revenues) and no revenues are generated through services to third parties (External Revenues).
- The following figures can be taken from the MCIO's annual financial statement for 2019/2020:

Turnover	133,056,244.18 €
EBT	6,336,016.66 €
Number of employees	20
Profit per employee	316,800.83 €

Case study on Kyndryl Deutschland Aviation Industry Services GmbH based on the annual financial statement 2019:

- Kyndryl provides infrastructure services for the Lufthansa Group and a few services for other customers outside the Lufthansa Group within the framework of a long-term service contract.
- The range of services essentially includes data centre operations with the main location in Kelsterbach, communications services and electronic workplaces.
- Revenues mainly include external customer revenues, but also include intercompany revenues from other IBM Group companies.
- There is a profit transfer agreement with IBM Central Holding GmbH.
- The following figures can be taken from the Kyndryl annual financial statement for 2019:

Turnover	190,918,000.00 €
EBT	7,135,000.00 €
Number of employees	> 227
Profit per employee	0 € - 31.431,72 €

The exact number of employees in 2019 could not be taken from the annual financial statement for 2020. The 2020 annual financial statement only indicates that the number of employees in 2019 was higher than in 2019 and thus higher than 227 employees. Consequently, only the above range can be given for the profit per employee.

The evaluation of the above-mentioned freely available annual financial statements of various data centre operators has thus shown that in cases where the operator acts as a Cloud Service Provider (here: MCIO) – i.e. it purchases and operates the server infrastructure including the associated other equipment of a data centre – itself and on this basis provides IT services out of the data centre, which corresponds to the Ownership Model "Light" only (very) few employees work at the data centre locations. In principle, such a data centre is likely to have about 20 to 30 employees.[39]

Due to the high profitability per employee at MCIO, a Trade Tax of around € 1.1 million would result if – for reasons of simplification and illustration – the Trade Income were identical to the profit before taxes and an average Trade Tax Multiplier of 490% were applied. Taken on its own, this Trade Tax Revenue would be more in line with that of a top SME. However, if one takes into account the large plot size required to operate the data centres, the Trade Tax Revenue would be rather low in relation to the several SME that could potentially be established as alternatives.

The fact that large Cloud Service Providers do not necessarily have such high profitability as in the case of MCIO is made clear by the evaluation of Kyndryl's annual financial statement. This showed that the profit per employee is likely to range between €0 and €31,000, which in the highest case corresponds to about one tenth of MCIO's profit per employee. Due to the specific customer-related services of Kyndryl, significantly more employees are needed than in the case of MCIO. In terms of size, this number of employees is more in the range of Colocation and Server Hosting providers.

In the case of InterXion and Equinix, which – in contrast to MCIO – have employed the sales/administrative staff in the respective company on the basis of the freely available evaluated annual financial statements, the effect clearly comes to bear that if the ratio of Wage Totals is used for the Allocation of Trade Tax (cf. Sec. 29 GewStG), the majority of the Trade Tax Revenue is likely to fall to the municipality in which the headquarter of the operating company is located, but not to the municipality in which the data centre is located. It must also be taken into account that the employees deployed on site (i.e. in the Operator Municipality) are predominantly rather low-skilled personnel from the areas of security, maintenance and cleaning in comparison to the staff at the headquarter (including sales/administrative staff), who should generally receive higher salaries.

As a result, it can be seen from the exemplary analysis of the above-mentioned annual financial statements that neither the number of employees nor the amount of the individual salaries can achieve a sufficiently high Wage Total, so that, *ceteris paribus,* a sufficient Trade Tax Revenue in relation to the required plot size cannot be expected for the Operator Municipality.

Nevertheless, it should be noted from the exemplary examination of the annual financial statements that in individual cases there can be a relatively high profitability per employee (as in the example of MCIO), if the profit of the company is put in relation to the total number of employees in a highly simplified manner. In these constellations, the Trade Tax Revenue based on the annual financial

[39] Cf. also Machbarkeitsstudie Dateninfrastrukturen im Rheinischen Revier, p. 84, according to which only about 50 direct jobs are to be expected in a hyperscale data centre.

statements examined would tend to be comparable to that of a "top SME" despite a relatively small number of employees on site (cf. further under Sec. 5.7).

5.3.3. Profit shifting as a further disadvantage in determining value added

Moreover, it is not uncommon in the market that data centre operators – regardless of which operator model they have chosen – tend to generate purely Internal Revenues in Germany, as they often shift the profits generated by the operation of the data centres to low-taxed foreign countries through corresponding transfer pricing arrangements in the value chain, thereby creating a noticeable factor with regard to the determination and, above all, also the location of value creation.

In addition to cross-border profit shifting, profit shifting to another municipality with a lower Trade Tax Multiplier is also conceivable at the national level.

In cases where the data centre is operated e.g. under the Ownership Model “Light” of the Cloud Service Providers, this may be due to the fact that the operating company provides its IT services in connection with the operation of the data centres for customers of other Group companies and receives a commission for this, which is calculated according to the actual costs incurred at the level of the operating company plus a mark-up ("cost plus"). Own external revenues through services to customers who are not affiliated companies are not provided in this case.

The operation of a data centre, e.g. in the Colocation model, can (and will, depending on the individual case) also be carried out in the commission model. In these cases, e.g., the operation of the data centre can be carried out via a commission agreement with another group company. This has the consequence that the externally transacted sales are no longer reported by the operating company, but only the agreed commission on mediated sales to which the company is entitled and which compensates the company for its activities, as well as the cost reimbursements for the data centre operation and the sales, marketing and administrative activities plus a mark-up (i.e. profit mark-up on the costs). Since the German operating company acts as a sales agent of the foreign parent company in such distribution models, sales from commissions on sales with third parties and sales from services rendered (including in the operation of the data centres) are reported in the income statement of the operating company; the sales with third parties themselves, on the other hand, are reported by the parent company or the other relevant group company. Corresponding arrangements would also be conceivable in the Server Hosting Model.

In addition to the commission model just described, profit shifting within a multinational group can also take place, as already mentioned, up to a certain limit, in particular through other or further transfer pricing arrangements.

Accordingly, the annual net profit or – to simplify matters – the expected profit, which represents an essential basis for the calculation model developed in the course of this analysis, should be examined with reference to any transfer pricing arrangements (e.g. commission models, etc.) in the concretely affected group and – depending on the result – corrected by adding a surcharge. However,

this can only be analysed in more detail in the individual case concerned and requires cooperation with the company concerned for the purpose of obtaining information.

5.4. (Fiscal) aspects from a structural point of view with regard to the settlement

5.4.1. Structural aspects at the municipal level

If several municipalities are affected as data centre locations because an operator is looking for several locations, these municipalities should pursue the same negotiating interest. In this case, it seems to make sense to act together in the negotiations with the data centre operator or at least to coordinate on essential points in order to better represent the basically concurrent interests towards the data centre operator.

The legal observations under this Sec. 5.4.1. are only to be understood as an overview, which requires a detailed legal review before their respective concrete implementation.

5.4.1.1. Formation of a Civil Law Partnership (GbR)

The consequence of a joint conduct of negotiations by several municipalities as described above could be – depending on the individual case – the (implied) formation of a GbR, since all participating municipalities at least impliedly commit themselves through their cooperation to promote the achievement of a certain common purpose in a certain way (cf. Sec. 705 BGB). The formation of a GbR would in principle be possible informally.

The establishment of a GbR should not have a negative tax impact on the municipalities when viewed independently. The consequence of the GbR would be that the municipalities would be considered shareholders of a purely asset-managing GbR and the guarantee payments would be recorded for tax purposes in the so-called Separate and Uniform Determination of the Bases of Taxation ("**GuE**") of the GbR and on this basis would then be attributed to the municipalities for income tax purposes. Insofar as the GbR shares are held at least in the public-authority sphere, this does not result in any further CIT and Trade Tax obligations (cf. on this aspect further under Sec. 5.4.1.5).

Furthermore, the GbR itself would not fall within the scope of Sec. 2b of the German Value Added Tax Act (**UStG**), as it is not a Public-law Entity (hereinafter "**JPdöR**"). The question of the applicability of Sec. 2b UStG would therefore – as before – shift to the level of the municipalities as JPdöR.

However, with regard to the formation of a GbR, the unlimited joint and several liability for all corporate liabilities analogous to Sec. 128 HGB, which would subsequently result at the level of the municipalities as shareholders, would be problematic.

From the point of view of liability, it would therefore be inadvisable to act as an external partnership. At best, a purely internal GbR could be considered. In this respect, however, the practical imple-

mentation proves to be quite difficult, since it would have to be ensured that the internal GbR actually only acts as such. However, a joint approach on the basis of a so-called "Contractual Joint Venture" could be a possible solution (cf. in detail under Sec. 5.4.1.3).

5.4.1.2. Formation of a Special Purpose Association

As an alternative to the GbR, the formation of a Special Purpose Association could be considered. A Special Purpose Association is formed when at least two municipalities partner with each other to carry out certain tasks. The Special Purpose Association is a JPdöR with its own legal personality, which administers its affairs under its own responsibility within the framework of the law. The legal framework for the formation of a Special Purpose Association can be found in Sec. 4 et seqq. NRW Law on Communal Cooperation (**GkG NRW**).

The formation of such a Special Purpose Association would, however, be associated with greater expense than the GbR and would at the same time be accompanied by a more rigid corset for the actions to be taken by the Special Purpose Association. The Special Purpose Association requires an Association Assembly (as the main decision making body) and an Association Management as the representative body (cf. Sec. 15 et seqq. GkG NRW); other possible bodies include an Association Committee and an Administrative Board. The participating municipalities then have influence on the policy and orientation of the Special Purpose Association exclusively through the association assembly.

From a formal point of view, the formation of a Special Purpose Association requires the agreement of association statutes, the purpose of which is to regulate the legal relationships of the Special Purpose Association (cf. Sec. 7, Sec. 9 et seqq. GkG NRW).

As an underlying question, however, it would first have to be clarified what purpose the (potential) Special Purpose Association is to serve in order to be able to assess whether its formation and the associated expense appear to be proportionate at all. The starting point for this question in the present context is the ownership of the real property and the planned handling of the property rights concerned.

If and insofar as the real property concerned is therefore not owned by the municipalities or the real property is to be sold to the data centre operators by the municipalities – i.e. the data centre is to be operated by the operating company in the Ownership Model, Modified Colocation Model or Modified Server Hosting Model – the formation of a Special Purpose Association seems rather remote, since either from the outset or in any case after the sale of the real property to the operating companies it would not be left with any common municipal task that the participating municipalities could (continue to) fulfil via this association. Its only purpose would be to bundle the land rights to the various plots and then transfer them in this bundled form to the operating company, i.e. it would be exhausted in the joint coordination of the processes. However, this purpose can also be achieved in a simpler way without the formation of a Special Purpose Association (see in more detail under Sec. 5.4.1.3 of the analysis).

The formation of a Special Purpose Association would, therefore, only be conceivable in the case that the real property remains in the ownership of the municipalities concerned, i.e. the operation of the data centre takes place in the Ownership Model "Light" or the data centre is to be operated in the Colocation Model or Server Hosting Model. In this constellation, the properties could be transferred to the Special Purpose Association, which would then take over the task of managing them. However, it would also be conceivable for the real property to remain in the ownership of the municipalities or external third parties and only be leased to the Special Purpose Association, which would then sublet the real property to the respective operating companies.

In this constellation, however, it would have to be examined on a case-by-case basis whether the establishment of the Special Purpose Association can be carried out in an income tax-neutral manner or not. Only if exclusively public authority tasks and associated enterprises are transferred the establishment would be income tax neutral and the transfer of real property on the occasion of the transfer of public-authority tasks under Sec. 4 no. 1 of the German Real Estate Transfer Tax Act (**GrEStG**) also be free of RETT.[40] Otherwise, the transfer of assets to the Special Purpose Association would probably not be possible in a tax-neutral manner. In particular, an analogous application of Sec. 20 para. 2 of the German Reorganization Tax Act (**UmwStG**) is ruled out, since there are no shares or membership rights in a Special Purpose Association within the meaning of the UmwStG. Consequently, in the present context, i.e. the settlement of data centre operators, the transfer of the assets is likely to lead to the disclosure and taxation of existing hidden reserves; moreover, the transfer of real property is not likely to be exempt from RETT due to the lack of applicability of Sec. 4 no. 1 GrEStG. A later retransfer of businesses or individual assets to the municipalities would also lead to the disclosure of hidden reserves outside of public authority enterprises.

5.4.1.3. Establishment of a Municipal Limited Liability Company

In the constellation in which the real property is not owned by the municipalities or is not to remain in the ownership of the municipalities – i.e. only the coordination of the sale process is to be carried out jointly by all municipalities – it would also be possible to establish a Municipal Limited Liability Company to which the real property is transferred in a first step and which then sells it to the operating company in a second step.

However, in this constellation the double transfer of the real property – from the municipalities to the GmbH and from the GmbH to the operating company – is likely to prove disadvantageous, at least from a RETT perspective. It also seems questionable whether the cost of setting up the GmbH is in proportion to its relatively short expected life.

[40] Cf. on this and the following Hidien/Jürgens/Westermann, Die Besteuerung der öffentlichen Hand, 2017, Sec. 12 recital 30 et seqq. with further references.

5.4.1.4. Joint coordination of the divestment process on a contractual basis

Against the background of the intended joint coordination of the sale process, a joint approach in the form of a so-called "Contractual Joint Venture" would be appropriate instead of founding a Municipal Limited Liability Company. Such a cooperation agreement only contains contractual agreements between the individual municipalities, but has no external effect. Instead, according to the agreement, individual municipalities – or specifically their representatives as so-called external shareholders – are to conclude legal transactions for the account of the internal GbR not in its name, but in their own name. [41]

As a result, no (implied) external GbR is established in such a procedure, so that each municipality continues to act in its own name externally. In the absence of a company that can participate in legal transactions externally, the merger of the municipalities cannot itself create corporate liabilities by virtue of a legal transaction, which would avoid joint and several liability analogous to Sec. 128 HGB at the level of the municipalities.[42]

It could be contractually agreed that, e.g., the mayor of one of the participating municipalities acts as the negotiator in the negotiations with the data centre operator; a corresponding power of representation can be contractually granted to him. However, any action by the negotiator requires the approval of the other Joint Venture partners. If it becomes sufficiently clear in the course of the negotiations that the individual Joint Venture partners act individually and externally in their own name, the liability consequences also only affect the respective Joint Venture partner acting. Only this partner becomes the respective contractual partner, whereby a personal joint and several liability of all joint venture partners analogous to Sec. 128 HGB can be avoided, since corporate liabilities – as already explained – cannot arise in the case of an internal GbR.[43]

The tax treatment of the Contractual Joint Venture is likely to correspond to the consequences described under Sec. 5.4.1.1. and should not be disadvantageous for the participating municipalities in terms of income tax.

5.4.1.5. Establishment of a business of a commercial nature

Against the background of the qualification of the municipalities as well as of a possibly founded Special Purpose Associations as JPdöR, it would have to be taken into account with regard to the current taxation that this could result in a BgA being liable to income tax, cf. Sec. 4 para. 1 and 2 KStG.[44]

If the activity of the Special Purpose Association or the respective municipality itself has a commercial significance and is not directly connected with a public authority task, it is a BgA if the other requirements are met (cf. Sec. 1 para. 1 no. 6 and Sec. 4 KStG). Pursuant to Sec. 4 sentence 1

[41] Cf. BeckOGK/*Geibel*, BGB, Sec. 705 recital 227.

[42] Cf. MüKoBGB/*Schäfer*, BGB, 8th ed. 2020, Sec. 714 recital 8.

[43] Cf. MüKoBGB/*Schäfer*, BGB, 8th ed. 2020, Sec. 714 recital 11; BeckOGK/*Geibel*, BGB, Sec. 705 recital 230.

[44] Cf. Hidien/Jürgens/Westermann, Die Besteuerung der öffentlichen Hand, 2017, Sec. 12 recital 35.

KStG, BgA are all establishments which serve a sustainable economic activity for the generation of income outside agriculture and forestry and which stand out economically within the overall activity of the entity. The intention to make profits and participate in general economic transactions are not required under Sec. 4 para. 1 sentence 2 KStG.

A commercial or professional activity is sustainable if it is designed to generate income in the long term. In our opinion, the mere agreement and receipt of the guarantee payments to the respective municipalities does not constitute a sustainable commercial or professional activity.

If a Special Purpose Association were to take over the management of the properties, i.e. rent them out to the data centre operators, the fulfilment of this criterion would probably already be questionable in the absence of a commercial activity. This is because the renting or leasing of immovable assets is generally considered to be a mere asset management activity, cf. Sec. 14 sentence 3 of the German Fiscal Code (**AO**). Mirroring private asset management, which as a rule does not constitute a business, asset management by a JPdöR should also not constitute a BgA.[45] However, this must be examined separately for each individual case, especially in those cases in which further services are provided by the Special Purpose Association in addition to the pure rental or leasing activities.

The services provided by the Special Purpose Association to its sponsoring body corporate (*Trägerkörperschaft*) may also be subject to VAT if and to the extent that the Special Purpose Association does not only act within the scope of public authority in accordance with the provisions of Sec. 2b UStG.[46]

The services that the Special Purpose Association provides to the data centre operators are likely to be subject to VAT in principle pursuant to Sec. 2b UStG against the background of operating on a civil-law basis. However, the pure rental activity would be exempt from VAT according to Sec. 4 no. 12 lit. a) UStG, unless there is an opt-out according to Sec. 9 UStG.

5.4.2. Legal form and structure of the operating company

In principle, it should be assumed in case of doubt that the operating company already has a headquarter at a certain location in Germany and that only additional PEs are established at the individual locations where the data centres are to be operated.

Even if the guarantee payments are excluded in a first step and only the Trade Tax status quo is considered, this does not have a disadvantageous effect for the municipalities. This is because the allocation of Trade Tax is carried out in any case by way of apportioning the Trade Tax Revenue

[45] Cf. BeckOK KStG/*Schiffers*, Sec. 4 recital 121; decision of the Federal Fiscal Court dated 15.4.2010, reference number V R 10/09, BFHE 229, p. 416; decision of the Federal Fiscal Court dated 13.03.1974, reference number I R 7/71, published in Federal Fiscal Gazette 1974 Part 2, p. 391; Streck/*Alvermann*, KStG, 10th ed. 2022, Sec. 4 recital 18; Brandis/Heuermann/Pfirrmann, KStG, Sec. 4 recital 31; Gosch/*Märtens*, KStG, 4th ed. 2020, Sec. 4 recital 50.

[46] Cf. Hidien/Jürgens/Westermann, Die Besteuerung der öffentlichen Hand, 2017, Sec. 12 recital 36.

between the municipalities in which a PE was established and the municipality where the headquarter is located.

If, irrespective of this, for actual reasons – i.e. in particular for reasons of visibility and "local" tangibility through the company's registered office – it is desired that the operating company establishes a new company for such an establishment at least locally in the *Rheinisches Revier*, a corresponding obligation could in principle be included in the settlement agreement. The visibility of a "local" corporation as an operating company could possibly be accompanied by the establishment of other local companies, i.e. from the digital economy sector. In addition, this structural design could make it easier to isolate distorting effects in the case of dynamic guarantee payments or, viewed *ex post,* in the case of fixed guarantee payments, through access to the annual financial statement of the specific operating company.

Nevertheless, it should be noted that in case of doubt, such a "local" corporation could be part of a fiscal unity for income tax purposes, so that consequently, in the end, the "local" corporation would again only be a PE of the relevant controlling company (parent company) for Trade Tax purposes from a tax perspective (cf. Sec. 2 para. 2 sentence 2 GewStG).

It would also be conceivable to oblige the operating company to establish a GmbH for each municipality in which a data centre is to be operated. It should be borne in mind that the founding of each local company, for which the legal form of a GmbH would in principle be suitable, would be associated with founding costs in the amount of the share capital of € 25,000 as well as one-off external founding costs (e.g. notary costs, consultancy costs, etc.) and higher annual administrative costs for the preparation of the annual financial statements and tax returns for these companies, etc. In the overall picture, however, these costs should be of minor importance.

A contractual obligation that the real property must be acquired by the local company and may not be acquired by another group company would also be conceivable in principle, but – depending on the structure of the main operating company – may be difficult to enforce in the contract negotiations if, e.g., in the group structure in question all the real property is held by one real property company in which external investors may also have a stake.

In principle, transfer pricing arrangements that allow the main operating companies to transfer profits earned from the operation of the data centres to low-taxed foreign countries could also be contractually excluded. Against the background of the complexity of determining such a synthetic profit determination mechanism and the associated intervention in established group structures, this can hardly be implemented in practice for the actual tax determination of profits of such companies.

5.5. Term of the guarantee payments, further options and Foundation Model

5.5.1. Duration of the guarantee payments

The guarantee payments should be fixed to a minimum term in the settlement agreement against the background of the structural and long-term importance of corresponding settlement projects for the municipalities concerned. However, this minimum term should only be decisive if the actual term of the data centre is shorter. Otherwise, the actual operating time of the data centre would be the decisive period. The minimum term should be contractually defined in advance as a fixed term and do justice to the long-term structural importance of corresponding settlement projects. Moreover, it should be contractually stipulated that after expiry of the minimum term, the longer actual operating term of the data centre will be considered.

In addition, the beginning of the term of the guarantee payments should be contractually fixed. Since it cannot be ruled out that the initial operation does not occur until a certain time after the acquisition of the plot of land, a specific starting date for the term should be contractually defined. Since there may be a few years between the acquisition of the plot of land, the start of the construction work and, above all, the initial operation, and since the plot of land can no longer be used for any other purposes in the interim period, the beginning of the term of the guarantee payments should be fixed at, for example, 12 to 24 months after the acquisition of the plot of land has been completed. If the data center is put into operation earlier, this earlier point in time should be considered as the starting date.

With regard to the contractually fixed guarantee payment, it would also be worth considering contractually obliging the top German parent company or – in the case of multinational groups – the corresponding parent company (e.g. US parent company) or other group companies to issue a guarantee with regard to the guarantee payment to be made. In this way it could be sufficiently ensured that the guarantee payment would not be cancelled without replacement if the specific operating company in the *Rheinisches Revier* were to become part of a group-internal restructuring or the operation of the data centre were to be discontinued prematurely due to, e.g., technical renewals, etc.

5.5.2. Repurchase option and deconstruction obligation

In addition, if the operation of the data centre is discontinued prematurely, a repurchase option should be agreed upon that enables the municipalities to (re)acquire the real property. Furthermore, a deconstruction obligation should also be contractually fixed, which makes it possible to use the data centre building for new purposes.

However, both the deconstruction obligation from the perspective of the data centre operator and the repurchase option should not be included in the settlement agreement directly, but in the land purchase agreement regarding the real property, so that the company acquiring the real property is also the obligated party under these two options. This is particularly important if the operating company is not identical to the real property company in the individual case.

5.5.3. Leasehold as a possible option

Alternatively, in addition to the guarantee payments, the data centre operator could be granted a leasehold to the real property in question instead of selling the real property to the company.

In this case, however, the guarantee payments would probably be lower, since the data centre operator would not become the owner of the real property. However, this would also be offset by the ground rent that the Operator Municipality would receive. In individual cases, the option of a ground lease could therefore at least be introduced as a point of discussion in the negotiations with the data centre operator. In principle, a ground rent should be easier to structure and contractually fix than any guarantee payments.

From an economic point of view, however, such an arrangement could only be considered reasonable from the perspective of the municipality if it is also the owner of the real property. A preceding purchase of the real property by the municipalities with the subsequent granting of a leasehold would only be economically viable if a considerable increase in the value of the acquired real property could be assumed in the individual case.

5.5.4. Foundation Model

A (partial) alternative to the agreement of guarantee payments against the background of the risk of a possible default of the guarantee payments in the future, would be the contractual obligation of the operating company to make the actual total (i.e. the sum of the guarantee payments over the defined term) guarantee payment as a contribution to a foundation established specifically to fulfil municipal purposes (e.g. the construction of kindergartens or playgrounds etc.) (so-called "**Foundation Model**").

Against the background of private autonomy, it would also be conceivable to oblige the operating company to make only a part of these actual total guarantee payments to the foundation as a one-off payment and to make the other part of the payments as regular payments at certain intervals – as in the actual guarantee payment case.

Although the Foundation Model has the disadvantage of being earmarked for a specific purpose, it also has the advantage that the payment from the data centre operator would be collected promptly. Accordingly, the risk from unanticipated future events that could negatively influence the actual collection of the guarantee payments is reduced.

As a result, a Foundation Model would in principle have a liquidity advantage over the distribution of guarantee payments over a longer term. However, the disadvantage of the Foundation Model could be that the company concerned makes corresponding discounts on the payment amount in the sense of a present value logic in contrast to the guarantee payments that have to be made over a corresponding term in the future.

5.6. Parameters other than Wage Totals for calculating possible guarantee payments

5.6.1. Cost Key

Since the operation of a data centre is very hardware-intensive – which has an even greater effect the more immovable and movable assets are actually owned by the respective operating company – it may be appropriate to base the calculation for the guarantee payment on the depreciation of the assets in the sense of a "**Cost Key**".

5.6.1.1. Assets to be included in the calculation

In the case of (Modified) Server Hosting or the Ownership Model ("Light"), the consumption of value should be based on the consumption of value of the servers as the decisive source of the value added generated by a data centre. The hardware platforms are usually replaced every four years at the latest[47]; the normal useful life of the operating and office equipment is usually two to five years.

Furthermore, the consumption of value of the other IT infrastructure should be included, since the further equipment of a data centre is also absolutely necessary to provide the data centre services and also contributes (significantly) to the value creation. If the group of tangible fixed assets relevant for the calculation of the allocation key is expanded, the Cost Key increases accordingly.

In the Ownership Model as well as in the Modified Colocation Model and Modified Server Hosting Model, it is ultimately also possible to include the depreciation on the building owned by the data centre operator in the calculation of this parameter, since ultimately the building is also required to provide the concrete value creation. This should also lead to a further increase in the Cost Key.

5.6.1.2. Exemplary findings from the examination of the various financial statements

In the following, we have summarised the results of our sample audit of the financial statements referred to in Sec. 5.3.2. of this analysis in the light of such a Cost Key.

In the case of a classic Cloud Service Provider who operates the data centre in the Ownership Model “Light”, the loss in value of the assets is essentially reflected in the depreciations to be made on the servers.

The tangible fixed assets of a Colocation operator, on the other hand, are essentially made up of technical equipment and machinery as well as, in part, the buildings required to operate the data centres, provided these are also owned by the operating company. The balance sheet item "Technical equipment and machinery" generally includes electrical equipment (generators, transformers, switchgear), fire protection equipment, so-called HVAC equipment (heating, ventilation, air conditioning) and corresponding security and monitoring equipment. Operating and Business Equipment (**BGA**) represents only a fairly small part of real property, plant and equipment. The values shown

[47] Cf. Machbarkeitsstudie Dateninfrastrukturen im Rheinischen Revier, p. 22.

for real property, plant and equipment in the balance sheets also include, in part, capitalised installation costs in connection with the construction and connection of the data centre space rented from customers.

This entirely different type of tangible asset also leads to a correspondingly higher useful life, ranging from 3 to 20 or even 40 years. While the useful life of the technical equipment is not necessarily at the upper end of this time frame, it is likely to exceed the useful life of the server infrastructure.

If the data centre is operated in the Server Hosting Model, the tangible assets consist of servers, technical equipment and machinery and may also include the real property.

If the share of depreciation on tangible fixed assets in total expenses is determined and this ratio is used as the basis for allocation, the Operator Municipality can be allocated the share of revenue that is attributable to local value creation, which is specifically reflected in the depreciation of the locally located fixed assets. In cases where a Cloud Service Provider operates a data centre by way of the Ownership Model “Light”, the evaluation of the annual financial statement of the operating company in question can be used as an example to determine a share of depreciation in total expenses that roughly amounts to about 40% of total expenses.

If a Colocation Model or Server Hosting Model is used as a basis, the share of depreciation on tangible fixed assets represents a much smaller percentage of the operator's total expenditure, since the total expenditure in this model includes not only energy costs and rent but also costs for other services (e.g. security services, technical consulting services) that are part of the range of services offered to the customer and which form the main focus of this model. In the Colocation Model, in which the servers in particular are not owned by the data centre operator in addition to the real property, the share of depreciation on real property, plant and equipment, at a good 20%, should therefore be only half as high as in the operation of a data centre by an exemplary Cloud Service Provider by way of the Ownership Model “Light”.

However, the above statements are merely an exemplary illustration based on evaluated individual annual financial statements of data centre operators, so that these statements can only be applied to the respective concrete individual case to a limited extent.

5.6.1.3. Conclusions

A link to the consumption of the value of the assets per Cost Key should therefore prove to be a possible suitable benchmark for recording the value creation, especially for operator models with an "asset heavy" strategy. Therefore, the decline in value of assets would in principle be suitable for hyperscale data centres operated in this way. Nevertheless, this parameter would have to be combined with the other parameters, in particular with External Revenues, e.g. Revenues from Cloud Services (see below).

As a starting point for this parameter, the depreciation for the first edition of the hardware should be chosen as the assessment basis for the compensation payments to the municipalities.

5.6.2. Revenues from Server Rental

Another point of reference is the External Revenue of the respective data centre. Here, too, the various models differ considerably from each other, especially since different External Revenues are generated depending on the model chosen.

In the (Modified) Server Hosting Model (i.e. the servers are owned by the operating company and are rented out to the customers for use including the other IT infrastructure), the operating company's External Revenues are fed, among other things, by rental income for the servers.

In this context, the fees from server leasing in particular are measurable revenues that are generated on site in the data centre and therefore prove to be a more suitable and easily manageable point of reference for the assessment of the guarantee payments if the company concerned is from the Server Hosting sector.

However, it must be taken into account that a pure Server Hosting concept is not pursued on the market – as far as can be seen – but Server Hosting is usually provided as an additional optional service in the Colocation Model. The objective benchmark can therefore hardly be applied alone in practice, but would have to be combined with other benchmarks or parameters, i.e. in particular in combination with the revenues from the Colocation area (see below under Sec. 5.6.3.).

5.6.3. Colocation Revenues

In constellations in which the data centre is operated in the (Modified) Colocation Model, the data centre operator also provides space in the data centre, including the necessary IT infrastructure, which can be rented by customers for the purpose of operating their own servers. Thus, in this model, the operating company also generates rental income, which is generated on site and represents a measurable and easy-to-handle computing parameter.

In addition to this rental income, fees from services provided by the customers of the data centre for the provision of the "data centre environment" for the purpose of operating their own servers (e.g. maintenance work, security services, etc.) represent the main source of income for data centres operated by way of the (Modified) Colocation Model. The fees for the framework services in question are also generated locally in the data centre, so that a link to this would be justified by the location principle.

With regard to the (Modified) Colocation Model, however, it can be stated that this is not necessarily pursued on the market in its pure form, but is often combined with Server Hosting concepts. Therefore, it is also questionable whether this benchmark alone can be used to accurately capture the value added in this constellation.

5.6.4. Revenues from Cloud Services

The constellation in which External Revenues are most difficult to grasp is the one in which the data centre is operated by a Cloud Service Provider in the Ownership Model or Ownership Model "Light".

In the constellation in which the sales generated in the data centre are not skimmed off by another group company through a commission model and thus no External Revenues are generated at all or these are (mentally) eliminated for the purpose of calculating the guarantee payments, the question arises as to how External Revenues with end consumers can be accessed from a calculation point of view.

Here, a link to a Regional Component would be conceivable. If the data centre is essentially used to provide corresponding data centre services to B2B customers (in particular to so-called key accounts), the place where the service is provided can probably be determined with relatively little effort via the registered office of the service recipient. Here too, however, an unfavourable result may arise for the municipalities if the customers have their headquarters e.g. in southern Germany, but are supplied via the data centre in the *Rheinisches Revier*.

Apart from this, the link to a Regional Component is more difficult if the data centre in the *Rheinisches Revier* is essentially to provide services in the B2C sector. In this case, it would probably be necessary to define a certain radius within which the sales made to consumers would be considered as value added by the data centre in the *Rheinisches Revier*. A Regional Component based on the state of North Rhine-Westphalia or Germany would also be conceivable.

The high data protection requirements in Germany, the "perceived proximity" to the data centre on the part of the customer and the advantage of lower latencies and higher speeds are all arguments in favour of placing a strong emphasis on such a Regional Component. All of these aspects are arguments in favour of setting up a data centre in Germany and especially in North Rhine-Westphalia, because they can thus be located regionally.

This approach would only be suitable in the B2C sector if the data centre is operated by way of the Ownership Model or the Ownership Model “Light”, since it is essentially only conceivable in these constellations that the data centre operator offers its own software etc. via its own data centre and its own servers on the market and the value added is used locally or within a certain radius of the data centre. However, the practical handling of this approach appears questionable, especially against the background of the effort required to determine the relevant consumers to be included or their place of residence. The effort required to determine the exact Regional Component, which can only be defined on a case-by-case basis, and the associated requirement for the very individual tailoring of the parameter to the concrete facts, i.e. the company concerned, makes the parameter, which is in principle very suitable for the Ownership Model of Cloud Service Providers, very complex in practical handling. On the other hand, such a complex determination would be a one-time invest-

ment that could be justified in principle against the background of the economic importance of corresponding settlement projects. In any case, such a tailoring of the parameter would only be possible with the cooperation of the respective company.

5.6.5. "90/10-Key"

In principle, the guarantee payments could also be calculated analogously to the Allocation Standard for renewable energies (PV plants and wind farms) subsequently inserted into the Trade Tax Act in Sec. 29 para. 1 no. 2 GewStG.

In cases where a municipality allows the operation of a photovoltaic plant or a wind farm on its municipal territory, it is allocated 90% of the Trade Tax Revenue, since it "tolerates" the impairments caused by the operation in the form of noise and an impairment of the landscape. The municipality in which the operating company is located, on the other hand, receives only 10% of the Trade Tax Revenue.

This idea and the associated "90/10-Key" could in principle also be applied to the operation of hyperscale data centres, since here too the Operator Municipality has to accept the negative effects of data centre operation (in particular the unfavourable ratio of plot size to jobs created and the high energy consumption), while these negative effects are not felt in the municipality in which the operating company is based.

At first glance, the 90/10-Key appears to be a simple model that can be applied to any operator model. However, in individual cases, a fictitious determination of Trade Income is required, ignoring profit shifting through transfer pricing systems, for the determination of these guarantee payments in the form of a fictitious Trade Tax.

Moreover, in this constellation there would possibly be constitutional concerns (cf. on this also underSec. 5.1.2.2) and the risk of the nullity of such an agreement under Sec. 134 BGB (cf. on this the general remarks under Sec. 5.1.2.1). As a result, we do not recommend this model in the event of a practical implementation required in the short term.

However, the 90/10-Key could possibly be discussed in the long term in the context of a tax law measure in the form of the inclusion of such a key in Sec. 29 GewStG as an Allocation Standard for data centres.

5.7. Industry Comparison as a further parameter for deriving the guarantee payments

The core issue regarding the location of data centres is the fact, already mentioned several times, that as a rule relatively large areas are (have to be) given up, but the operating companies – in return – create only a few local jobs and as a result the respective municipalities usually only achieve a very low Trade Tax Revenue when the classic allocation of Wage Totals is applied (cf. in detail already under Sec. 5.3.1 of the analysis).

Consequently, it is advisable to always make an Industry Comparison as a further parameter or – better said – as a further standard of review when deriving the guarantee payments. In other words, it is imperative to also check what Trade Tax Revenue would be generated if SME were to settle on the respective sites.

5.7.1. General considerations on the settlement of SME vs. data centres

The advantages of locating SME in comparison to data centres are obvious: an SME usually has its headquarters in the municipality in which it has established a PE; the possibility of shifting profits to another municipality with a lower Trade Tax Multiplier in order to reduce the Trade Tax expense simply does not exist at all in these cases. As a rule, this also applies to the issue of profit shifting to (low-taxed) foreign countries through appropriate transfer pricing. As a rule, this possibility does not exist for SME either due to the lack of foreign affiliated companies.

However, the location of hyperscale data centres also offers advantages for the municipalities: In particular, the negotiation effort for the municipalities is likely to be significantly reduced, as the municipalities only have to negotiate with one company here instead of with many smaller companies that may be to be located in a business park. In addition, the name of a "tech giant" that decides to build a data centre in a municipality can also act as a magnet for other similar settlements and thus lead to an increased attractiveness of the location and indirectly, e.g. in the course of the establishment of so-called digital parks, to an increase in Trade Tax Revenue in the respective municipality.

These considerations are already known in connection with the construction of larger shopping centres. However, these shopping centres also illustrate the disadvantage of focussing on an anchor tenant or – transferred to data centres – an anchor operator; if the anchor operator leaves, the attractiveness of the shopping centre in the perception of the customers often decreases, which is then sooner or later usually accompanied by the loss of other tenants. This can also be applied to data centres. If the data centre operator terminates operations after a few years, the continued operation of a connected digital park is likely to be rather difficult and would possibly result in the loss of a large number of jobs.

5.7.2. Average achievable Trade Tax Revenue by SME

To determine the average Trade Tax Revenue that can be generated by the establishment of SME, we have used eight companies based in North Rhine-Westphalia from the industry, IT and services sectors with a workforce of 11 to 104 employees and a taxable Trade Income of € 0 (trade loss) to just under € 3 million as a benchmark, which together generate Trade Tax Revenue of approximately € 1.38 million. This calculation is based on an assumed Trade Tax Multiplier of 490%.

Industry	Number of Employees	Taxable Trade Income	Trade Tax
Manufacture	93	2,967,900.00 €	508,994.85 €
IT	23	2,022,000.00 €	346,773.00 €
Manufacture	95	1,049,000.00 €	179,903.50 €
Manufacture	22	1,043,400.00 €	178,943.10 €
Manufacture	104	458,500.00 €	78,632.75 €
Manufacture	11	337,900.00 €	57,949.85 €
IT / Services	27	351,000.00 €	60,196.50 €
Services	25	- €	- €
Total			1,411,393.55 €
Trade Tax Multiplier	490.00%		

The following key statements can be derived from this Industry Comparison in conjunction with other empirical values:

- According to our empirical values, against the background of these calculations, one would assume a Trade Tax for a top SME in the amount of € 500,000 to a maximum of € 1 million.
- For an average SME, one would assume an average Trade Tax of about € 176,000 to a maximum of about € 352,000.
- The mean value based on the above review would be approximately € 254,000.

With an exemplary total area of approx. 40 ha and an assumed area requirement per SME of e.g. 3.5 ha, on average approx. 10 to 15 SME could be located on the areas.

From the above Industry Comparison, it can be concluded that if, e.g., 10 SME are assumed to locate here instead of data centres, the Trade Tax to be expected could range from approx. € 1.7 million (without top SME) to a maximum of € 10 million (top SME only).

This benchmark should be used as a rough indicator for the guarantee payments to be agreed between the Operator Municipality and the data centre operator, unless – as will be shown below in the calculation model under Sec. 5.8.5 an Industry Comparison is calculated as a parameter specifically for the individual case of the Operator Municipality.

5.8. Presentation of the calculation model (calculation tool)

Four different main calculation models can be derived from the parameters described in detail above as well as the Trade Tax Allocation Standard in the sense of Sec. 29 GewStG, which have been incorporated into the calculation tool (cf. **Appendix 1**) and which are explained in more detail below. The calculation model always shows the guaranteed payment or the estimated Trade Tax Revenue per year.

5.8.1. Model 1: Wage Totals

The "**Wage Totals**" model reflects the current Trade Tax status quo, which in principle also applies to data centres if nothing to the contrary is contractually agreed between the Operator Municipality and the data centre operator (see above under Sec. 5.1.1 and 5.3.1 of this analysis).

In accordance with the Allocation Standard of Sec. 29 para. 1 no. 1 GewStG, when applying this model, the Wage Total paid to all employees working in the operating company is to be put in relation to the Wage Total of the employees who are deployed on site in the data centre itself.

Graphically, Model 1 is displayed in the calculation tool **using fictitious figures** as follows, whereby the cells with an orange background are input boxes that would have to be filled in, and the cells with a green background are output boxes:

Model 1: Wage Totals	
Trade Tax Multiplier of the Operater Municipality	490%
Trade Income[1)]	20,000,000.00 €
Wage Totals of employees on site[1)]	1,100,000.00 €
Wage Totals employees overall[1)]	5,400,000.00 €
Proportionate Trade Income	4,074,074.07 €
Proportionate Base Rate for Trade Tax	142,592.59 €
Proportionate Trade Tax Revenue	**698,703.70 €**

Boxes to be filled in by the municipality

Note: Original Allocation Standard for Trade Tax purposes pursuant to Sec. 29 para. 1 no. 1 GewStG: Ratio of the Wage Totals paid by the operating company to the Wage Totals attributable to the employees deployed in the Operator Municipality.

[1)] To be requested from respective operating company.

The calculation requires, among other things, the Trade Income of the operating company and the Wage Totals of the employees who will work on site in the Operator Municipality, as well as the total number of employees deployed in the operating company.

On this basis, the proportionate estimated Trade Tax Revenue can be calculated.

5.8.2. Model 2: Cost Key

The "**Cost Key**" model first takes as a parameter the depreciation on the servers as the central source of value creation of a data centre, since the depreciation of these assets offers a realistic key for a corresponding profit distribution. In the course of determining the Cost Key, it makes sense

to also consider the depreciation on the other IT infrastructure as well as any depreciation on buildings, provided that they are owned by the operator. The share of depreciation is to be set in relation to the total expenses of the operating company.

Graphically, Model 2 is presented in the calculation tool **using fictitious figures** as follows, where the cells with an orange background are input boxes that would have to be filled in, and cells with a green background are output boxes:

Model 2: Cost Key	
Annual net profit[1)]	20,000,000.00 €
Total expenses of the operating company[1)]	50,000,000.00 €
Depreciation on servers[1)]	11,000,000.00 €
Depreciation on other IT infrastructure[1)]	7,000,000.00 €
Depreciation on buildings[1)]	2,500,000.00 €
Cost Key	41.00%
Proportionate profit attributable to the Operator Municipality	8,200,000.00 €
17 %[2)] from that = guarantee payment	**1,394,000.00 €**

Boxes to be filled in by the municipality

Note: The Cost Key is derived from the share of depreciation on the servers and other IT infrastructure as well as buildings (in each case, if relevant in the specific case) of the data center in the Operator Municipality in the total expenses of the operating company.

[1)] To be requested from respective operating company.
[2)] 17 % corresponds to (rounded) 17.15 % = 3.5 % (Federal Rate) x 490 % (presumed Trade Tax Multiplier).

For the calculation of the guarantee payments, the planned annual net profit of the company, the total expenditure generated by it and, derived from this, the amount attributable to the depreciation of the servers, the other IT infrastructure and, if applicable, the buildings, are required. These amounts are then put into relation and result in the Cost Key this model. With the help of the Cost Key, a possible guarantee payment can be calculated; although this parameter is not likely to be the only relevant yardstick in individual cases.

Derivation of the 17% multiplier

For the calculation of the guarantee payments, we would propose 17% of the proportional profit attributable to the Operator Municipality determined after application of the Cost Key for reasons of simplification.

The multiplier of 17% is based on a Trade Tax Multiplier of 490%. For this purpose, the Federal Rate of 3.5 is multiplied by the Trade Tax Multiplier of 490%. This results in a notional Trade Tax Rate of 17.15%, i.e. 17% rounded down, as a multiplier.

5.8.3. Model 3: External Revenues

5.8.3.1. Model 3a: Revenues from Server Rental

The model "**Revenues From Server Rental**" (Model 3a) is intended to record the External Revenues that accrues to the data centre operator as income from server rental. In practice, this parameter is likely to be used only in combination with the Revenues from Colocation Services. In model 3a, the Revenues from Server Rental is set in relation to the total turnover of the company and then this key is multiplied by the profit of the company.

Graphically, Model 3a is presented in the calculation tool **using fictitious figures** as follows, where the cells with an orange background are input boxes that would have to be filled in, and cells with a green background are output boxes:

Model 3a: Revenues from Server Rental	
Annual net profit[1)]	20,000,000.00 €
Total turnover operating company[1)]	100,000,000.00 €
Revenues from Server Rental in Operator Municipality[1)]	30,000,000.00 €
Allocation key	30.00%
Proportionate profit attributable to the Operator Municipality	6,000,000.00 €
17 %[2)] from that = guarantee payment	**1,020,000.00 €**

Boxes to be filled in by the municipality

Note: Allocation key represents the ratio of Revenues from Server Rental to the total turnover of the operating company.

[1)] To be requested from respective operating company.
[2)] 17 % corresponds to (rounded) 17.15 % = 3.5 % (Federal Rate) x 490 % (presumed Trade Tax Multiplier).

First of all, the total amount of revenue generated by the operating company is required. In addition, the share of revenues from server rentals attributable to the Operator Municipality must be known. Furthermore, an estimated annual net profit of the respective operating company must be stated.

Derivation of the 17% multiplier

For the calculation of the guarantee payments, we would propose 17% of the proportional profit attributable to the Operator Municipality determined after application of the allocation key for reasons of simplification.

The multiplier of 17% is based on a Trade Tax Multiplier of 490%. For this purpose, the Federal Rate of 3.5 is multiplied by the Trade Tax Multiplier of 490%. This results in a notional Trade Tax Rate of 17.15%, i.e. 17% rounded down, as a multiplier.

5.8.3.2. Model 3b: Colocation Revenues

The "**Colocation Revenues**" model (Model 3b) primarily captures the fees paid by an external customer to the data centre operator for various Colocation services if the data centre is operated through the (Modified) Colocation Model. These fees include both rental income generated from the leasing of data centre space and fees for framework services, which are likely to make up the major part of the income. This parameter, together with model 3a, also proves to be practicable in constellations in which the Colocation Model is combined with Server Hosting. As with Model 3a, it is a revenue key, as the on-site revenues are set in relation to the total revenues of the company; then the resulting allocation key is multiplied by the profit of the company.

Graphically, model 3b is represented in the calculation tool **using fictitious figures** as follows, whereby the cells with an orange background are input boxes that would have to be filled in, and cells with a green background are output boxes:

Model 3b: Revenues from Colocation Services	
Annual net profit[1)]	20,000,000.00 €
Total turnover operating company[1)]	100,000,000.00 €
Revenues from Colocation Services[3)] in Operator Municipality[1)]	70,000,000.00 €
Allocation key	70.00%
Proportionate profit attributable to the Operator Municipality	14,000,000.00 €
17 %[2)] from that = guarantee payment	**2,380,000.00 €**

Boxes to be filled in by the municipality

Note: Allocation key represents the ratio of Revenues from Colocation Services to the total turnover of the operating company.

[1)] To be requested from respective operating company.
[2)] 17 % corresponds to (rounded) 17.15 % = 3.5 % (Federal Rate) x 490 % (presumed Trade Tax Multiplier).
[3)] Revenues from Colocation Services comprise rental revenues and service fees.

For the purpose of calculating the guarantee payment, the amount of the total turnover of the operating company as well as its annual net profit is also required here. In addition, the share of service fees and rental income attributable to the Operator Municipality must be determined in advance.

Derivation of the 17% multiplier

For the calculation of the guarantee payments, we would propose 17% of the proportionate profit attributable to the Operator Municipality determined after application of the allocation key for reasons of simplification.

The multiplier of 17% is based on a Trade Tax Multiplier of 490%. For this purpose, the Federal Rate of 3.5 is multiplied by the Trade Tax Multiplier of 490%. This results in a notional Trade Tax Rate of 17.15%, i.e. 17% rounded down, as a multiplier.

5.8.3.3. Model 3c: Revenues From Cloud Services

The model "**Revenues From Cloud Services**" (model 3c) is used to record the External Revenues with end users of the data centres (B2B, B2C) as a relevant expression of the value added and to

make these revenues the basis of assessment for the guarantee payment, provided they are generated in a radius around the data centre to be defined in advance or have another Regional Component. This calculation model requires the most effort, as its application requires knowledge of a large number of additional (calculation) factors. However, this would be possible with the help of the company and, as a rule, this determination would only have to take place once (cf. already further explanations on this under Sec. 5.6.4).

Graphically, model 3c is represented in the calculation tool **using fictitious figures** as follows, whereby the cells with an orange background are input boxes that would have to be filled in, and cells with a green background are output boxes:

Model 3c: Revenues from Cloud Services	
Annual net profit[1)]	20,000,000.00 €
Total turnover operating company[1)]	100,000,000.00 €
Revenues attributable to the Operator Municipality[1)3)]	100,000,000.00 €
Allocation key	100.00%
Proportionate profit attributable to the Operator Municipality	20,000,000.00 €
17 %[2)] from that = guarantee payment	**3,400,000.00 €**

Boxes to be filled in by the municipality

Note: Allocation key represents the ratio of sales in the Operator Municipality with reference to the regional component to the total sales of the operating company.

[1)] To be requested from respective operating company.
[2)] 17 % corresponds to (rounded) 17.15 % = 3.5 % (Federal Rate) x 490 % (presumed Trade Tax Multiplier).
[3)] According to the regional component.

First of all, the total turnover generated by the operating company and the expected annual net profit are required. In addition, the share of the revenues attributable to the Operator Municipality must be determined in advance.

This first requires an agreement (if necessary in coordination with other municipalities) on the radius in which the data centre services used by the end customers can still be attributed to a specific data centre (so-called "Regional Component"). In addition, the end users to be included in the calculation must be "filtered out" using suitable connecting factors. With regard to the latter, in light of the BEPS initiative – specifically in the form of the so-called "Pillar One" concept – a link to the (residential) domicile of the end consumer in both B2B and B2C contexts is possible.

The practicability of this approach will essentially depend on the effort required to determine the share of revenues due to the Operator Municipality resulting from the linkage with the Regional Component.

Derivation of the 17% multiplier

For the calculation of the guarantee payments, we would propose 17% of the proportional profit attributable to the Operator Municipality determined after application of the allocation key for reasons of simplification.

The multiplier of 17% is based on a Trade Tax Multiplier of 490%. For this purpose, the Federal Rate of 3.5 is multiplied by the Trade Tax Multiplier of 490%. This results in a notional Trade Tax Rate of 17.15%, i.e. 17% rounded down, as a multiplier.

5.8.4. Model 4: 90/10-Key

When applying the so-called "**90/10-Key**", the fictitious Trade Tax Revenue is divided between the Operator Municipality and the Headquarter Municipality in accordance with the model chosen by the legislator for PV plants and wind farms (Sec. 29 para. 1 no. 2 GewStG).

Accordingly, the Operator Municipality would be entitled to 90% of the notional Trade Tax Revenue, since it accepts the negative consequences associated with the operation of the data centre, and the Headquarter Municipality would only be entitled to the remaining 10%.

Graphically, Model 4 is represented in the calculation tool **using fictitious figures** as follows, where the cells with an orange background are input boxes that would have to be filled in, and cells with a green background are output boxes:

Model 4: 90/10-Key	
Trade Tax Multiplier of the Operater Municipality	490%
Trade Income[1)]	20,000,000.00 €
Allocation key pursuant to Sec. 29 para. 1 no. 2 GewStG	90.00%
Proportionate Trade Income	18,000,000.00 €
Proportionate Base Rate for Trade Tax	630,000.00 €
Proportionate Trade Tax Revenue	**3,087,000.00 €**

Boxes to be filled in by the municipality

Note: Transfer of the renewable energy model (Sec. 29 para. 1 no. 2 GewStG) to the industry of data centers: municipality is allocated certain share of total revenues.

The estimated Trade Income of the operating company is required as a calculation factor. The proportionate fictitious Trade Tax can then be determined by applying the fixed allocation key of 90%.

However, for this calculation – as already explained above under Sec. 5.6.5 of this analysis – a fictitious determination of Trade Income is required, ignoring profit shifting through transfer pricing systems. In addition, this key could raise possible concerns against the background of Sec. 134 of the BGB (cf. also the explanations under Sec. 5.1.2.1) and, if applicable, questions regarding the constitutionality of the guarantee payments (cf. the remarks under Sec. 5.1.2.2) due to the use of a – fictitious – Trade Income.

As a result, we do not recommend this model for concrete short-term implementation.

5.8.5. Model 5: Industry Comparison

Within the framework of Model 5 "**Industry Comparison**", the plot size available to the municipality in each case should be taken as the basis. Subsequently, a number of possible SME must be determined on the basis of the available plot of land.

Based on this, either empirical values or the review presented in the above Sec. should be used to determine the comparative figure in the form of a possible Trade Tax Revenue. 5.7.2 above should be used to determine the comparative figure in the form of a possible Trade Tax Revenue.

This comparative figure should then also serve as a parameter for determining the specific guarantee payments.

Graphically, Model 5 is represented in the calculation tool **using fictitious figures** as follows, where the cells with an orange background are input boxes that would have to be filled in, and cells with a green background are output boxes:

Model 5: Industry Comparison	
Plot size in ha	40.00
Trade Tax Revenue per SME[1)]	100,000.00 €
Required plot size per SME in ha[1)]	3.00
Trade Tax Revenue in total	1,333,333.33 €
Guarantee payment	**1,333,333.33 €**

Boxes to be filled in by the municipality

[1)] On average, from empirical values of the Operator Municipality.

In the case of the alternative that uses the review in the context of the analysis, model 5 is graphically represented in the calculation tool **using fictitious figures** as follows, whereby the cells with an orange background are input boxes that would have to be filled in, and cells with a green background are output boxes:

Alternative: Figures from internal review (analysis)	
Plot size in ha	40.00
Trade Tax Revenue per SME (on average)	176,000 €
Required plot size per SME in ha	3.50
Trade Tax Revenue in total	2,011,428.57 €
Guarantee payment	**2,011,428.57 €**

Boxes to be filled in by the municipality

5.8.6. Summary procedure

For the purpose of determining the amount of the guarantee payment to be agreed upon, the following procedure should be followed in the calculation model:

1. Model 1 (Wage Totals) should always be calculated. The result value in the amount of the guarantee payment should be defined as "**M1**" in the following.
2. Model 2 should then be calculated if the company has an "asset heavy" strategy. The result value should be defined as "**M2**" in the following.
3. Model 3a should only be calculated if the company pursues a Server Hosting business model. The result value should be defined as "**M3a**" in the following.
4. Model 3b should only be calculated if the operator is a Colocation operator. The result value should be defined as "**M3b**" in the following.
5. Model 3c should only be calculated for Cloud Service Providers, i.e. in the Ownership Model or Ownership Model "Light", provided that corresponding data bases can practically be made available. The result value should be defined as "**M3c**" in the following.
6. Model 5 should always be calculated and could represent the upper limit for the guarantee payment to be agreed in individual cases. The result value from model 5 shall be defined as "**M5**" in the following.

From the set of the above resulting values (M1; M2; M3a; M3b; M3c; M5), the highest resulting value should always be chosen to determine the guarantee payment. This highest resulting value is defined in the following as "$\mathbf{G_{fix}}$ ".

Accordingly, the highest resulting value should also most appropriately reflect the value creation of the respective operator model. In our opinion, this resulting value must also be taken into account against the background of the structural and long-term significance of the corresponding settlement

projects. In particular, we believe that the surrender of the limited property "plot of land", the acceptance of energy-intensive management on site and the relatively small number of employees on site are sufficient reasons for selecting the highest resulting value from the above-mentioned resulting values.

G_{fix} would then have to be reduced by the total Trade Tax of the operating company in the further contractual determination. This reduction amount shall be defined here as "**Z**".

The final guarantee payment shall be defined as "**G**" (= G_{fix} - Z) in the following.

Based on the previous illustration, the following formula can also be derived:

$G = G_{fix} - Z$

G_{fix} = Max (M1; M2; M3a; M3b; M3c; M5)

6. Recommendations for action

In the following, the concrete recommendations for action for the Operator Municipalities are summarised once again.

6.1. Structure of the guarantee payments

- We recommend
  - (i) The structure of the guarantee payment as an individual contractually agreed, guaranteed compensation payment, which occurs in addition to the Trade Tax and other taxes, as well as
  - (ii) to consider the Trade Tax of the operating company as a deductible item when determining the guarantee payment.
- The deduction of Trade Tax should also not reduce the District Allocation, if it is applied.
- In order to ensure that the guarantee payment actually occurs in addition to the Trade Tax, the treatment of the guarantee payment tax-wise at the level of the operating company for determining the Trade Income pursuant to Sec. 7 of the German Trade Tax Act should be discussed with the collaboration of the operating company. In our opinion, there are good reasons why the guarantee payment should not be tax-deductible as an operating expense and, thus, not affect the Trade Tax Revenue.
- The treatment of the guarantee payment tax-wise at the level of the operating company for determining the Trade Income pursuant to Sec. 7 of the German Trade Tax Act should be discussed with the collaboration of the operating company.
- Moreover, fixed annual guarantee payment amounts should be agreed rather than dynamic guarantee payments for the purpose of risk hedging for the municipalities.
- The annual net profit or – to simplify matters – the expected profit, which must be made available by the company to carry out the calculations on the basis of the calculation model developed in the course of this analysis, should be critically examined against the

background of possible transfer pricing arrangements in the respective group and, if necessary, corrected by increasing it.

- A minimum term for the guarantee payments should be contractually agreed. If the actual operating time of the data centre is longer than the minimum term, then the actual operating time should be decisive. In addition, the latest beginning of the term of the guarantee payments should be contractually fixed, which can also be before the time of initial operation.
- When calculating the guarantee payments, we recommend that all models 1-5 are calculated if possible and information is available.

6.2. Further key points for the design of the settlement agreement and/or the land purchase agreement

- We recommend a detailed legal review of the admissibility of the settlement agreement.
- The conclusion of such a settlement agreement should be made a condition precedent to the conclusion of the land purchase agreement between the Operator Municipality or the land owner and the data centre operator.
- The land purchase contract should include a repurchase option in favour of the municipalities.
- In addition, a deconstruction obligation for the company concerned should be included in the land purchase contract.
- If possible, it should be considered that the real property must be acquired by the locally resident company and may not be acquired by another group company.
- Furthermore, the guarantee payments should be secured in the form of guarantees by the parent company in Germany and/or abroad or by other group companies – depending on the individual case – as part of the settlement agreement.

6.3. Key points from a structural perspective

- In principle, joint negotiation by several municipalities should be considered. In this context, a joint approach on the basis of a so-called "Contractual Joint Venture" could be particularly suitable.
- For various reasons, consideration could be given to obliging the data centre operator either to establish at least one operating company based in the *Rheinisches Revier* or, at best, one operating company per Operator Municipality.
- A contractual obligation that the real property must be acquired by the local company and may not be acquired by another group company would also make sense in principle.

6.4. Alternatives to guarantee payments to be evaluated

- The Foundation Model should be evaluated as a (partial) alternative to guarantee payments with the advantages and disadvantages presented in the context of the analysis.

- Another alternative might be the option of a leasehold, so that the real property itself would not have to be sold. However, this alternative only seems worth considering for those municipalities that also hold the ownership of the real property in question.

6.5. Questionnaire for the operating companies

In order to calculate the guarantee payments to be agreed as precisely as possible tailored to the respective data centre operator and to be able to determine the most suitable parameters in each individual case, the following list of questions can be submitted to the potential data centre operators for answering:

Question	Objectives/ Background
Should the data centre be used purely for cloud services provided by the acquirer or other group companies or should it (also) be opened up to other providers, i.e. is (partial) use in the sense of a Colocation or Server Hosting Model conceivable or planned? Or is use exclusively for Colocation or Server Hosting services conceivable?	Gaining an understanding of the specific business model
Will the company that acquires the real property also become the operating company of the data centre? If not, which company acquires the real property instead of the operating company?	Gaining an understanding of the group structure
What intra-group service relationships are established with regard to the operating and real property companies? Are profits generated by the operating companies through data centre operation transferred to other (domestic or foreign) group companies? Are corresponding commission models or transfer pricing models used within the group? If so, could you please explain these in more detail?	Gaining an understanding of the value creation within the group of companies

Please explain how many employees will (probably) be deployed on site and what the ratio of this number will be to the total number of employees in the operating/acquiring company? What profit do you expect per employee?	Gaining an understanding of the potential Trade Tax Revenue
Which customers are to be served in the future via the planned data centre (i.e. B2C, B2B)? Is a Regional Component also being considered in terms of potential customers?	General information on turnover
Only relevant for Cloud Service Providers: With regard to the External Revenues generated by the operation of the data centre, could it be determined with a reasonable amount of effort where the respective end users (B2B and B2C) are located? What would be the radius of the end users or customers supplied with services by a data centre in the Rheinisches Revier?	Revenues from Cloud Services
How long is the data centre expected to operate?	Gaining an understanding of the question of the design of the term of the guarantee payments

7. Other possible benefits to be achieved or agreed for the municipalities

In addition to the guarantee payments received and – albeit to a lesser extent – the creation of jobs, the location of a data centre can offer further benefits for those municipalities that provide the plot of land for its operation. In this context, economic as well as environmental and social aspects can be considered.

7.1. Coupling with energy uses in the form of waste heat

One starting point for corresponding benefits to be agreed is the energy demand of data centres, which has increased in Germany from 10.5 billion kWh to 16 billion kWh per year between 2010 and 2020.[48] Data centres in Germany emit approximately 6.09 tonnes of CO_2 per year, with electricity consumption from operations accounting for more than 80% of the greenhouse gas emissions caused. In the process, more than 13 billion kWh of the electricity demand is converted into heat, which is released into the atmosphere without any further benefit.[49] Consequently, there is untapped potential here to make the operation of data centres more efficient and sustainable through the use of waste heat.

[48] Cf. on this and the following Bitkom study: Data centres in Germany 2022, p. 45 et seq.

[49] Cf. Abwärmenutzung im Rechenzentrum, p. 4.

Spatially speaking, the most obvious use of waste heat is in the data centre itself. Thus, the waste heat can be used to heat common rooms within the data centre building, as well as to heat adjacent office buildings and other structures located on the same plot of land.[50] This can already make the operation of the data centre more climate-friendly and reduce the CO_2 footprint of the corresponding municipality.

The data centre in the "Eurotheum" high-rise building in Frankfurt am Main can be used as a prime example of such an implementation. A Dresden-based company has used the former premises of the ECB's data centre as well as the existing IT infrastructure as a basis to put a cloud data centre into operation.[51] The waste heat generated is used to heat all of the Eurotheum's premises, including offices, restaurants and the hotel located there. This already allows 70% of the waste heat from the data centre to be recycled and saves over 700 tonnes of CO_2 per year. A relevant success factor of the ecological and at the same time economical design of the waste heat utilisation is the use of a hot water direct cooling system, which enables a significantly higher temperature level than air-cooled server systems. Due to the higher temperature level, the waste heat can be used directly to heat the building without having to use a heat pump or similar, which would incur additional costs. In addition, a software solution allows data to be processed at exactly the location where it is most energy efficient or where the most waste heat is needed.

This type of waste heat utilisation is rather limited in the case of large hyperscalers and Colocation providers, as these data centres are often not located on the same site with other building complexes and few common rooms are needed in the data centre itself.

However, the waste heat can also be used beyond the plot of land. Thus, facilities on neighbouring plots of land can also be heated; swimming pools, greenhouses and laundries are particularly conceivable, as they require heat throughout the year.[52] An example of this is provided by the Swiss municipality of Uitikoner, which uses the waste heat from a nearby data centre to heat a swimming pool. To do this, the waste heat is passed through heat exchangers and the heated water is then pumped into the swimming pool. The municipality receives this supply free of charge, in return for a partly assumption of the costs for implementing the system. This example shows that the use of waste heat is not only climate-friendly, but can also offer direct economic benefits for the municipalities.

Probably the greatest potential economic benefit comes from feeding waste heat into local and district heating networks. Local heating networks include smaller residential and commercial areas, while district heating networks include entire cities or even conurbations.[53] The main difference in

[50] Cf. Abwärmenutzung im Rechenzentrum, p. 7.

[51] Cf. on this and the following Rechenzentren in Europa – Chancen für eine nachhaltige Digitalisierung, p. 14.

[52] Cf. on this and the following Abwärmenutzung im Rechenzentrum, p. 6.

[53] Cf. on this and the following Abwärmenutzung im Rechenzentrum, p. 5.

terms of waste heat utilisation is the different temperature level requirements, so the required temperature level for local heating networks is significantly lower than for district heating networks.

This creates the challenge of heating the waste heat to certain temperatures so that it can be considered for this type of use. To achieve this, heat pumps can be used, which can usually raise the temperature level using electricity.[54] This means that electricity prices are essential for the economic viability of waste heat utilisation by means of heat pumps. Whether and to what extent this type of utilisation makes sense from an economic point of view for the data centre operator or the municipality must therefore be examined on a case-by-case basis, as electricity prices can be a significant obstacle, especially in Germany. However, this is helped by the fact that the German government has decided to abolish the EEG levy as of 1 July 2022.[55] Against this background, it is more likely that municipalities will also be able to derive economic benefits from the use of waste heat for local and district heating networks.

In Sweden – unlike in Germany – this form of waste heat utilisation is already used extensively. In 2018, 30 data centres were already connected to the approximately 2,800-kilometre district heating network and could thus supply 10,000 households.[56] This corresponds to about 12 terawatt hours per year and thus about one per cent of the heating systems in Stockholm. According to the case study, supplying the heat to a 10 megawatt data centre with an initial investment in heat pumps pays for itself after about five years. The consumers of the district heating also benefit, since according to the district network operator, the costs are lower than they would be for generating the district heating.

Furthermore, waste heat can be used not only to generate heat, but also to generate cooling.[57] Using ad- and absorption chillers, the waste heat can be used to cool systems and elements inside and outside the data centre. Such a solution is particularly suitable if the data centre's IT systems are water-cooled. Consequently, there is also potential for using waste heat from data centres in summer – and thus all year round.

The use of waste heat outside the data centre premises can open up relevant environmental and economic benefits for municipalities. These benefits can also be realised with the help of large hyperscale data centres and Colocation and Server Hosting providers.

It is crucial to plan in advance, in cooperation with the data centre, to what extent the use of waste heat is possible for the operator and for the municipality and who bears the costs for the implementation of the project. Arrangements and agreements should be made before the data centre is established, as some aspects must be taken into account, especially when using waste heat for local and district heating networks, because district heating networks cannot be flexibly converted or

[54] Cf. on this and the following Abwärmenutzung im Rechenzentrum, p. 10.

[55] Cf. https://www.bundesregierung.de/breg-de/suche/eeg-umlage-faellt-weg-2011728, as of 10.5.2022.

[56] Cf. on this and the following https://www.datacenter-insider.de/datacenter-in-schweden-und-in-deutschland-best-practices-versus-ignoranz-a-718973/, as of 25.05.2022.

[57] Cf. on this and the following Abwärmenutzung im Rechenzentrum, p. 8.

newly installed.[58] When locating a data centre, it would accordingly be advantageous if the site offers access to the local or district heating network or if there are suitable plants in the vicinity that can benefit from the waste heat. Furthermore, the operator and the municipality should agree on whether the waste heat should be made available for use free of charge.

7.2. Coupling with energy benefits in the form of renewable energy systems

Against the background of the regulation made in Sec. 6 **EEG** 2021 (German Renewable Energies Act), it also makes sense to contractually obligate the data centre operators to erect PV systems (as ground-mounted systems) or wind turbines on the free areas of the ceded properties.

Sec. 6 EEG 2021 allows municipalities to participate financially in the added value created in the course of operating PV systems or wind turbines. Pursuant to Sec. 6 para. 2 EEG, in the case of wind power plants, amounts totalling 0.2 cents per kilowatt hour may be offered by the respective plant operators to the municipalities concerned for the quantity of electricity actually fed into the grid if the plant has an installed capacity of more than 750 kilowatts; in the case of ground-mounted PV plants, Sec. 6 para. 3 EEG provides for a participation for the municipalities concerned totalling 0.2 cents per kilowatt hour for the quantity of electricity actually fed into the grid.

This would generate amounts of approximately €2,000 to €4,000 per megawatt of installed capacity. With an installed capacity of 50 megawatts, the municipalities would receive payments of €100,000 per year.

The installation of wind power or PV systems on any open spaces can thus prove to be a win-win situation for the data centre operators and the municipalities.

7.3. Involvement of the data centre operator in social projects

It is also conceivable to involve the data centre in social projects. The city of Hattersheim has – as an example – involved the data centre operator NTT, which has settled in the municipality, in the activities of the association "Taunus Innovation Campus".[59] In this project, laboratories are set up to show how data is collected and stored and, in addition, a small container data centre was built to make digitisation more tangible and understandable for local residents.

Through social commitment on the part of the data centre operator, it can improve its image towards sceptical residents. At the same time, citizens benefit directly from such projects, which results in an increase in benefits for the entire community.

[58] Cf. Abwärmenutzung im Rechenzentrum, p. 6.

[59] Cf. on this and the following https://www.datacenter-insider.de/dem-charme-eines-globalen-datacenter-betreibers-sind-wir-erlegen-a-1007897/, as of 25.05.2022.

Appendix 1: Calculation model (calculation tool)

Overview

Model	Guarantee payment / Trade Tax Revenue (Model 1) p.a.	Guarantee payment / Trade Tax Revenue (Model 1) throughout the defined term
Model 1: Wage Totals	0,00 €	0,00 €
Model 2: Cost Key	0,00 €	0,00 €
Model 3a: Revenues from Server Rental	0,00 €	0,00 €
Model 3b: Revenues from Colocation Services	0,00 €	0,00 €
Model 3c: Revenues from Cloud Services	0,00 €	0,00 €
Model 4: 90/10-Key	0,00 €	0,00 €
Model 5: Industry Comparison	0,00 €	0,00 €

Defined term of the guarantee payments (in years)	0 years

Defined variables according to the analysis (corresponding to the guarantee payments mentioned above)	
M1	0,00 €
M2	0,00 €
M3a	0,00 €
M3b	0,00 €
M3c	0,00 €
M5	0,00 €

G_{fix} = Max (M1; M2; M3a; M3b; M3c; M5)	**0,00 €**
Z = Trade Tax expenses (variable per year) of the operating company	**0,00 €**
G = G_{fix} - Z = Guarantee payment less the effective Trade Tax burden of the operating company	**0,00 €**
	Click here for calculation

Note: It should be noted that the effective Trade Tax expenses are only known ex post, therefore estimates can only be used for the calculations in advance. The actual settlement agreement should state an adjustable Z in order to minimse possible constitutional risks.

Boxes to be filled in by the municipality

Model 1: Wage Totals

Model 1: Wage Totals	
Trade Tax Multiplier of the Operating Municipality	%
Trade Income[60]	€
Wage Totals of employees on site[60]	€
Wage Totals employees overall[60]	€
Proportionate Trade Income	0,00 €
Proportionate Base Rate for Trade Tax	0,00 €
Proportionate Trade Tax	**0,00 €**
	Click here for calculation

Note: Original Allocation Standard for Trade Tax purposes pursuant to Sec. 29 para. 1 no. 1 GewStG: Ratio of the Wage Totals paid by the operating company to the Wage Totals attributable to the employees deployed in the Operating Municipality.

Boxes to be filled in by the municipality

Fictitious figures for purposes of illustration:

Model 1: Wage Totals	
Trade Tax Multiplier of the Operating Municipality	*490 %*
Trade Income[60]	*20.000.000,00 €*
Wage Totals of employees on site[60]	*1.100.000,00 €*
Wage Totals employees overall[60]	*5.400.000,00 €*
Proportionate Trade Income	*4.074.074,07 €*
Proportionate Base Rate for Trade Tax	*142.592,59 €*
Proportionate Trade Tax	***698.703,70 €***

[60] To be requested from respective operating company.

Model 2: Cost Key

Model 2: Cost Key	
Annual net profit[61]	€
Total expenses of the operating company[61]	€
Depreciation on servers[61]	€
Depreciation on other IT infrastructure[61]	€
Depreciation on buildings[61]	€
Cost Key	0,00 %
Proportionate profit attributable to the Operating Municipality	0,00 €
17 %[62] from that = guarantee payment	**0,00 €**
	Click here for calculation

Note: The Cost Key is derived from the share of depreciation on the servers and other IT infrastructure as well as buildings (in each case, if relevant in the specific case) of the data center in the Operator Municipality in the total expenses of the operating company.

Boxes to be filled in by the municipality

Fictitious figures for purposes of illustration:

Model 2: Cost Key	
Annual net profit[61]	*20.000.000,00 €*
Total expenses of the operating company[61]	*50.000.000,00 €*
Depreciation on servers[61]	*11.000.000,00 €*
Depreciation on other IT infrastructure[61]	*7.000.000,00 €*
Depreciation on buildings[61]	*2.500.000,00 €*
Cost Key	*41,00 %*
Proportionate profit attributable to the Operating Municipality	*8.200.000,00 €*
17 %[62] from that = guarantee payment	***1.394.000,00 €***

[61] To be requested from respective operating company.

[62] 17 % corresponds to (rounded) 17.15 % = 3.5 % (Federal Rate) x 490 % (presumed Trade Tax Multiplier).

Model 3a – 3c

Model 3a: Revenues from Server Rental	
Annual net profit[63]	€
Total turnover operating company[63]	€
Revenues from Server Rental in Operator Municipality[63]	€
Allocation key	0,00 %
Proportionate profit attributable to the Operating Municipality	0,00 €
17 %[64] from that = guarantee payment	**0,00 €**
	Click here for calculation

Note: Allocation key represents the ratio of Revenues from Server Rental to the total turnover of the operating company.

Model 3b: Revenues from Colocation Services	
Annual net profit[63]	€
Total turnover operating company[63]	€
Revenues from Colocation Services[65] in Operator Municipality[63]	€
Allocation key	0,00 %
Proportionate profit attributable to the Operating Municipality	0,00 €
17 %[64] from that = guarantee payment	**0,00 €**
	Click here for calculation

Note: Allocation key represents the ratio of Revenues from Colocation Services to the total turnover of the operating company.

Model 3c: Revenues from Cloud Services	
Annual net profit[63]	€
Total turnover operating company[63]	€
Revenues attributable to the Operator Municipality[63]	€
Allocation key	0,00 %
Proportionate profit attributable to the Operating Municipality	0,00 €
17 %[64] from that = guarantee payment	**0,00 €**
	Click here for calculation

Note: Allocation key represents the ratio of sales in the Operator Municipality with reference to the regional component to the total sales of the operating company.

Boxes to be filled in by the municipality

[63] To be requested from respective operating company.

[64] 17 % corresponds to (rounded) 17.15 % = 3.5 % (Federal Rate) x 490 % (presumed Trade Tax Multiplier).

[65] Revenues from Colocation Services comprise rental revenues and service fees.

Fictitious figures for purposes of illustration:

Model 3a: Revenues from Server Rental	
Annual net profit[66]	*20.000.000,00 €*
Total turnover operating company[66]	*100.000.000,00 €*
Revenues from Server Rental in Operator Municipality[66]	*30.000.000,00 €*
Allocation key	*30,00 %*
Proportionate profit attributable to the Operating Municipality	*6.000.000,00 €*
17 %*[67] *from that = guarantee payment	***1.020.000,00 €***

Model 3b: Revenues from Colocation Services	
Annual net profit[66]	*20.000.000,00 €*
Total turnover operating company[66]	*100.000.000,00 €*
Revenues from Colocation Services[68] *in Operator Municipality*[66]	*70.000.000,00 €*
Allocation key	*70,00 %*
Proportionate profit attributable to the Operating Municipality	*14.000.000,00 €*
17 %*[67] *from that = guarantee payment	***2.380.000,00 €***

Model 3c: Revenues from Cloud Services	
Annual net profit[66]	*20.000.000,00 €*
Total turnover operating company[66]	*100.000.000,00 €*
Revenues attributable to the Operator Municipality[66]	*100.000.000,00 €*
Allocation key	*100,00 %*
Proportionate profit attributable to the Operating Municipality	*20.000.000,00 €*
17 %*[67] *from that = guarantee payment	***3.400.000,00 €***

[66] To be requested from respective operating company.

[67] 17 % corresponds to (rounded) 17.15 % = 3.5 % (Federal Rate) x 490 % (presumed Trade Tax Multiplier).

[68] Revenues from Colocation Services comprise rental revenues and service fees.

Model 4: 90/10-Key

Model 4: 90/10-Key	
Trade Tax Multiplier of the Operating Municipality	%
Trade Income[69]	€
Allocation key pursuant to Sec. 29 para. 1 no. 2 GewStG	90,00 %
Proportionate Trade Income	0,00 €
Proportionate Base Rate for Trade Tax	0,00 €
Proportionate Trade Tax Revenue	**0,00 €**
	Click here for calculation

Note: Transfer of the renewable energy model (Sec. 29 para. 1 no. 2 GewStG) to the industry of data centers: municipality is allocated certain share of total revenues.

Boxes to be filled in by the municipality

Fictitious figures for purposes of illustration:

Model 4: 90/10-Key	
GewSt-Hebesatz der Gemeinde	*490 %*
Trade Income[69]	*20.000.000,00 €*
Allocation key pursuant to Sec. 29 para. 1 no. 2 GewStG	*90,00 %*
Proportionate Trade Income	*18.000.000,00 €*
Proportionate Base Rate for Trade Tax	*630.000,00 €*
Proportionate Trade Tax Revenue	***3.087.000,00 €***

[69] To be requested from respective operating company.

Model 5: Industry Comparison

Model 5: Industry Comparison	
Plot size in ha	ha
Trade Tax Revenue per SME[70]	€
Required plot size per SME in ha[70]	ha
Trade Tax Revenue in total	0,00 €
Guarantee payment	**0,00 €**
	Click here for calculation

Alternative: Figures from internal review (analysis)	
Plot size in ha	ha
Trade Tax Revenue per SME (on average)	254.000,00 €
Required plot size per SME in ha	3,50 ha
Trade Tax Revenue in total	0,00 €
Guarantee payment	**0,00 €**
	Click here for calculation

Boxes to be filled in by the municipality

Fictitious figures for purposes of illustration:

Model 5: Industry Comparison	
Plot size in ha	*40 ha*
Trade Tax Revenue per SME[70]	*100.000,00 €*
Required plot size per SME in ha[70]	*3,00 ha*
Trade Tax Revenue in total	*1.333.333,33 €*
Guarantee payment	***1.333.333,33 €***

Alternative: Figures from internal review (analysis)	
Plot size in ha	*40 ha*
Trade Tax Revenue per SME (on average)	*176.000,00 €*
Required plot size per SME in ha	*3,50 ha*
Trade Tax Revenue in total	*2.011.428,57 €*
Guarantee payment	***2.011.428,57 €***

[70] On average, from empirical values of the Operator Municipality.

Appendix 2: Glossary

Definition	**Explanation/ *German wording***
Administrative Board	*Verwaltungsrat*
Allocation Standard	*Zerlegungsmaßstab*
approx.	approximately
Association Assembly	*Verbandsversammlung*
Association Committee	*Verbandsausschuss*
Association Management	*Verbandsleitung*
Base Rate for Trade Tax	*Gewerbesteuermessbetrag*
BEPS	Base Erosion and Profit Shifting
B2B	Business to Business
B2C	Business to Consumer
cf.	compare
Civil Law Partnership (**GbR**)	*Gesellschaft bürgerlichen Rechts*
Commercial Business (**BgA**)	*Betrieb gewerblicher Art*
Contractual Joint Venture	As explained under Sec. 1
Cost Key	*Kostenschlüssel*
Corporate Income Tax (**CIT**)	Körperschaftsteuer
District Allocation	*Kreisumlage*
ECB	European Central Bank
e.g.	for example
etc.	et cetera
et seq.	and the following

External Revenue	As explained under Sec. 5.3.2
Factual Agreement	*Tatsächliche Verständigung*
Federal Court of Justice (**BGH**)	*Bundesgerichtshof*
Federal Financial Compensation	*Bundesstaatlicher Finanzausgleich*
Federal Fiscal Court (**BFH**)	*Bundesfinanzhof*
Federal Rate	*Gewerbesteuermesszahl*
Foundation Model	*Stiftungsmodell*
German Administrative Procedure Act (**VwVfG**)	*Verwaltungsverfahrensgesetz*
German Basic Law (**GG**)	*Grundgesetz*
German Civil Code (**BGB**)	*Bürgerliches Gesetzbuch*
German Corporate Income Tax Act (**KStG**)	*Körperschaftsteuergesetz*
German Fiscal Code (**AO**)	*Abgabenordnung*
German Real Estate Transfer Tax Act (**GrEStG**)	*Grunderwerbsteuergesetz*
German Renewable Energies Act (**EEG**)	*Erneuerbare-Energien-Gesetz*
German Reorganization Tax Act (**UmwStG**)	*Umwandlungssteuergesetz*
German Trade Tax Act (**GewStG**)	*Gewerbesteuergesetz*
German Value Added Tax Act (**UStG**)	*Umsatzsteuergesetz*
Headquarter Municipality	*Stammhauskommune*
Intermunicipal Financial Compensation	*Interkommunaler Finanzausgleich*
Internal Revenues	As explained under Sec. 5.3.2
i.e.	that is
Industry Comparison	*Branchenvergleich*
Ministry of Economic Affairs, Innovation, Digitalization and Energy of the State	*Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes*

of North Rhine-Westphalia *(***MWIDE**)	*Nordrhein-Westfalen*
Municipal Limited Liability Company	*Kommunale GmbH*
NRW Law on Communal Cooperation (**GkG NRW**)	*Gesetz über kommunale Gemeinschaftsarbeit NRW*
Operating and Business Equipment (**BGA**)	*Betriebs- und Geschäftsausstattung*
Operator Municipality	Municipality where the data centre is located
Para.	Paragraph
PE	Permanent establishment
PE Municipality	*Betriebsstättenkommune*
Principle of Equal Treatment	*Gleichbehandlungsgebot*
Principle Of Proportionality	*Grundsatz der Verhältnismäßigkeit*
Prohibition On Excessiveness	*Übermaßverbot*
Public-law Entity (**JPdöR)**	*Juristische Person des öffentlichen Rechts*
Public-law (Settlement) Agreement	*Öffentlich-rechtlicher (Vergleichs-)Vertrag*
PV	Photovoltaics
Real Estate Transfer Tax (**RETT**)	*Grunderwerbsteuer*
Regional Component	*Regionalkomponente*
Regional Tax Offices (**OFD**)	*Oberfinanzdirektionen*
Rheinisches Revier	Rhineland‘s former coal mining area
Separate and Uniform Determination of the Bases of Taxation (**GuE**)	*Gesonderte und einheitliche Feststellung der Besteuerungsgrundlage*
SME	Small or medium-sized enterprise(s)
Special Purpose Association	*Zweckverband*
Standard Land Values	*Bodenrichtwerte*

Trade Income	Taxable income for Trade Tax purposes (*Gewerbeertrag)*
Trade Tax	*Gewerbesteuer*
Trade Tax Allocation	*Zerlegung der Gewerbesteuer*
Trade Tax Law	*Gewerbesteuerrecht*
Trade Tax Multiplier	*Gewerbesteuerhebesatz*
Trade Tax Rate	*Gewerbesteuersatz*
Trade Tax Revenue	*Gewerbesteueraufkommen*
Undefined Legal Concepts	*Unbestimmte Rechtsbegriffe*
Value Added Tax (**VAT**)	*Umsatzsteuer*
Withholding Tax	*Kapitalertragsteuer*
90/10-Key	*90/10-Schlüssel*

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