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DEVELOPMENT OF A GLOBAL IT CHARGING MODEL FOR BASF GROUP

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**A project carried out on the topic of Managerial Accounting & Advanced
Managerial Accounting, under the supervision of Professor Leonor Ferreira.**

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ABSTRACT

With 'GS Strategy 2025' BASF Business Services GmbH was formed to centrally steer all IT related topics of BASF group. Thus, a global charging system has to be designed, which complies to international transfer price regulations and the strategy of BASF SE. This work project develops a charging system with a following evaluation. The direct charging system benefits from its cost transparency upsides but comes with a higher administrative effort due to volume-based charging. In contrast, the indirect charging system convinces because of easy handling, which is the result of the application of suitable allocation keys. Regarding the complex group structure of BASF SE with more than 300 legal entities in 80 countries, the lower administrative effort of the indirect charging system outweighs the benefits of the direct charging model and should be used by BASF group.

GENERAL OVERVIEW

BASF SE (Badische Anilin und Soda Fabrik [Societas Europea]) is the biggest chemical company in the world, measured by revenue (73.9 bn. EUR) and market capitalization (66.9 bn. EUR), with core business in chemicals, performance products, functional materials, agricultural solutions and oil & gas. BASF SE is organized in a group structure, which steers more than 300 legal entities¹ in 80 countries² in all 6 continents (see figure 1) with more than 100,000 employees around the world.



Figure 1: BASF SE Worldwide Sites³

During the last decade BASF SE has grown not only organically but also due to a number acquisitions. For example in 2009, BASF SE bought the CIBA Holding AG⁴ (specialist chemicals) and in 2010, Cognis⁵ (nutritional chemicals) was acquired. Today, BASF SE continuous to grow and looks likely to maintain the position of market leader. In 2013, the EBIT totalled 7,273 million €, which represents an increase by 7.9% in comparison to the

¹ BASF SE, Annual Report 2013, Notes, p.163.

² BASF SE, Annual Report 2013, Management Report, p. 19.

³ BASF SE, Annual Report 2013, Management Report, p. 19.

⁴ BASF SE, Annual Report 2009, Introduction p. 2.

⁵ BASF SE, Annual Report 2010, Introduction p. 3.

year 2012.⁶ BASF SE is structured in segments, competence centre and corporate units. The segments are responsible for generating profits and steered as a profit centre. On the other hand, the competence centre and corporate units are cost centre since they get a budget assigned and are evaluated by their cost.⁷ The competence centre Information Services & Supply Chain (see figure 2) is accountable for global shared service operations, global business relationship management, global process and enterprise architecture. The focus of this work project is in the area of global shared service operations, which is responsible for network infrastructure, help desk, customer workplaces and collaboration as well as all applications within the BASF group.⁸

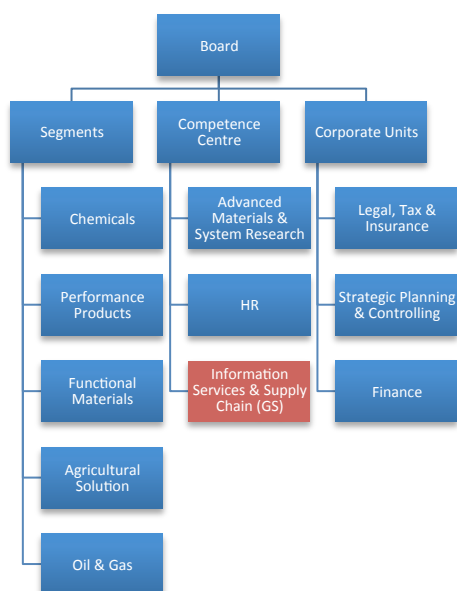


Figure 2: BASF SE Organisational Chart 20.09.2014⁹

PURPOSE OF THE PROJECT

The reason for the necessity to develop a global reporting and charging model for IT (=Information Technology) costs within the BASF group, arose with the implementation of GS Strategy 2025 ‘We create chemistry for a sustainable future’, which aims to enhance the department ‘Information Service & Supply Chain’ (in the following mentioned as ‘GS’ [=Governance]) to be the best global business solution provider now and in the future.

⁶ BASF SE, Annual Report 2013, Introduction, p. 2.

⁷ cf. Jung, 2010 p. 284.

⁸ Internal source (BASF SE intranet).

⁹ Internal source (BASF SE intranet), own creation.

Previously, the area Information Service was steered as the legal entity BASF IT Services GmbH ('Gesellschaft mit begrenzter Haftung' [analog: limited company]), which acted as a regional IT provider mainly in Europe for the BASF group. Given this, several subsidiaries of BASF group could purchase IT services or IT hardware from BASF IT Services GmbH. However, the different subsidiaries also had their own IT departments, which hired other provider and/or used different IT hardware. For example, special purpose hardware like laboratory - or research IT. This has been especially true in an acquired subsidiary like Cognis or CIBA, which already had a complete IT infrastructure and mostly kept this running after the acquisition. At the start of the year 2014, the new 'GS Strategy 2025' has been implemented, which determines the strategy for 'GS' from now to 2025. With 'GS Strategy 2025', the BASF IT Services GmbH merged with the department Supply Chain and they formed a new legal entity named BASF Business Services GmbH (see figure 3).

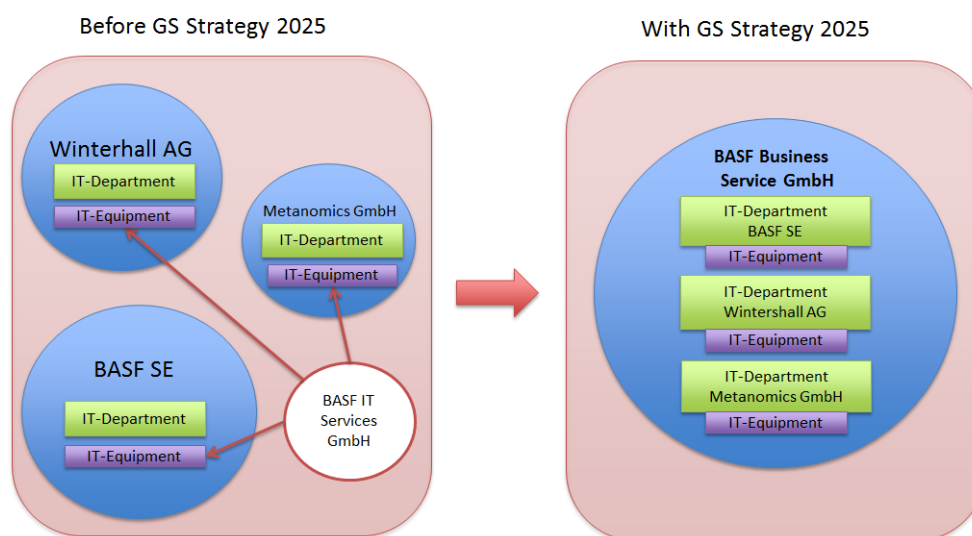


Figure 3: Organizational Restructuring with GS Strategy 2025¹⁰

In so doing, the scope of work has been expanded and BASF Business Services GmbH is now accountable for all IT related topics for BASF group worldwide. This new organization is aligned with the matrix structure of BASF group. Consequently, the former independent IT departments are now functionally advised by BASF Business Services GmbH but disciplinarily they are steered by their former legal entity. This means that

¹⁰ Own creation.

certain employees work functionally for BASF Business Services GmbH but organizationally for one legal entity within BASF Group, e.g. BASF Corporation.

While the organizational transition was already realized with the founding of BASF Business Services GmbH, the technical changes to provide the requirements for the implementation of a global IT charging model will be performed at the end of year 2014. With this planned transition there are still many hurdles to overcome. First of all, BASF Business Services GmbH runs a different SAP system named BOSS, while the BASF group as well as BASF SE runs a SAP system called COBALT. Although these systems are basically compatible for daily business due to certain interfaces, they run different cost accounting systems. Thus, the projects IBC (Implementation BOSS to COBALT) and CARS (Cost Accounting and Reporting Service) have been set up, which aim to adapt the commonly used SAP COBALT system of BASF group for the BASF Business Services GmbH and the harmonization of their cost centre accounting systems to provide global cost transparency and cost reporting for all entities within BASF group. The last challenging task is the development of an appropriate service pricing and service charging model between all legal entities. As mentioned before, not only is BASF Business Services GmbH providing IT services to BASF SE, but also to other legal entities within BASF group. Consequently, there are several service providing entities and many service utilization entities, which have to be considered in the development of a charging system.

The building of a theoretical concept to realize global service charging in compliance with international regulations to align international strategy with the group's organizational structure will be core of this project. However, with more than 300 legal entities in the BASF group in more than 80 countries, different third-party provider, miscellaneous local

tax rules as well as international transfer pricing regulations, there are many hurdles to overcome.¹¹

This work project proceeds as follows: In section ‘Legal Framework’ the juridical requirements for the charging system will be identified. Furthermore, in the section ‘Discussion of the Topic’ the BASF Business Services GmbH service pricing and service charging opportunities will be applied on the legal framework and evaluated afterwards in the ‘Conclusion’.

LEGAL FRAMEWORK

Due to the increasing globalization, companies need to conduct their businesses in international markets. To access these markets, multinational enterprises form group structures with several subsidiaries in different countries, which are steered by their parent company. Given these constellations, the output of goods and services follow a certain supply chain between legally independent subsidiaries across borders, but within a group structure. This exchange of goods and services can be semi-finished goods or finished goods as well as provision of services and they have to be evaluated by transfer prices. The function of transfer prices is the coordination, the steering and determination of success in a company, which is important as a basis for future decisions.¹² However, the economic, mathematical programming and accounting models provided by Myers/Collins 2011 see the central function of transfer prices in maximizing total profits, which highlights controversy in literature.¹³ Apart from that, transfer prices can also be used to move capital and lower the overall taxation, if tax rates differ in the operating countries (see figure 4).

¹¹ GS Strategy 2025, internal source (BASFSE intranet).

¹² cf. Horváth, 2011 p. 521.

¹³ cf. Myer/Collins, 2011 p.10.

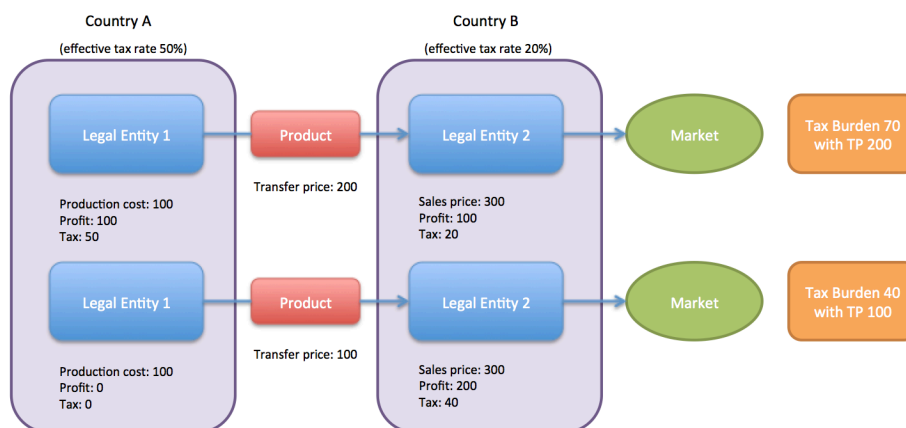


Figure 4: Transfer Price Model¹⁴

From 2003 to 2005, Amazon saved almost 2 billion US Dollar in tax with transferring profits from USA to Europe due to complex tax structuring and differing tax rates^{15,16}. Therefore, globalization not only affected business towards an international operation but also countries which cannot access profits for taxation reasons since companies can move their earnings across borders.¹⁷ To avoid arbitrary behaviour, industrial nations have committed themselves to an international standard for transfer prices determination at arm's length principle defined by the OECD (Organisation for Economic Co-operation and Development).¹⁸ This standard requires subsidiaries to act as equal to each other as two independent third party companies.¹⁹ Internal service providers in a group structure like BASF Business Services GmbH, which offer services across borders have to comply with the following principles to establish arm's length principle in according to the OECD:

- Determination whether intra-group services have been rendered;
- Reasonable charging concept;
- Transfer price method.

These principles will be explained and applied to the BASF group in the following paragraph.

¹⁴ Own creation.

¹⁵ cf. Handelsblatt.

¹⁶ cf. Reuters.

¹⁷ cf. Wehnert/Wellens, 2003 ch. A p. 1 *et seq.*

¹⁸ cf. Weiss/Blank, 2004 p. 30.

¹⁹ cf. OECD-MA, art. 9th. / Rugman & Brewer 2009, p. 602 *et seq.*

DISCUSSION OF THE TOPIC

Given the theoretical framework, the next task is to develop a suitable charging model, which complies with the given regulations. To facilitate the complex world within BASF group and to comply with the given framework of this work project, only five organizational cost centres, four end-services and eleven production services have been selected.

DETERMINATION WHETHER INTRA-GROUP SERVICES HAVE BEEN RENDERED

To determine if an intra-group service has been rendered when an activity is performed in according to the arm's length principle, the generated economic value is crucial. Only activities with a recognizable value adding impact can be considered as rendered services for the OECD. A possible investigation would be the question if a comparable enterprise in a similar situation would have been paid for such service. In case the payment did not take place, this intra-group service should not be considered under the arm's length principle and must not be charged.²⁰

To investigate if an intra-group service was rendered in accordance with the arm's length principle, four services have been selected, namely, SAP, workplace, telecommunication and messaging. These services are the core businesses of the department information service of BASF Business Service GmbH and form a representative sample size²¹. SAP is the ERP-System (Enterprise Resource Planning) for BASF group, which is used to steer Finance , Controlling, Human Capital Management, Logistic. Secondly, workplace was selected, which represents mainly user-centric hardware to conduct daily operations, e.g. notebook, desktop, workstations and all necessary infrastructure and services behind like

²⁰ cf. OECD-RL 2010, 7.6.

²¹ SAP, Workplace, Telecommunication and Messaging are the biggest cost drivers in the IS portfolio.

servers, licenses, network, onsite support etc. Telecommunication includes all services, which belong to landline telephony, e.g. VoIP (Voice over IP) as well as the infrastructure and licences. The last selected service is messaging, which consist of the email service within BASF group and the required infrastructure to provide this service.

An indicator of a generated economic value would be if these services are offered by other companies and customers are willing to pay for them. The BASF group uses SAP but also Microsoft, BMW, Coca Cola, Burger King and many others multinational companies.²² However, the right to use this ERP-System is purchased with licences from SAP AG while the service provided by BASF Business Services GmbH for the BASF Group is internal SAP hosting. The same services are offered by ATOS, Freudenberg IT, Fujitsu/TDS, HP, IBM, T-Systems, etc. to their customers²³, which proves that SAP hosting is a service available on the market and companies are willing to pay for it. Consequently, SAP hosting could be regarded as a service rendered in accordance with the arm's length principle. Comparable services like workplace is also offered from the provider ComputaCenter with the name 'contemporary workplace'²⁴ and companies like SAP AG, Henkel AG and the German government²⁵ belong to their customers. Therefore, the service workplace can also be regarded as rendered in according to the arm's length principle. The last two services telecommunication and messaging are also provided by ATOS²⁶ for their customers Air France, KLM, EDF Energy,²⁷ etc. In conclusion, all four selected services are provided by other companies to the market and therefore it can be assumed that these services add value to their customers, which is the requirement for the alignment with the definition of rendered services in according to the OECD. On the other hand, an example for a service,

²² cf. Central Michigan University, 2014.

²³ cf. IS Report, 2014.

²⁴ cf. ComputaCenter (WP), 2014.

²⁵ cf. ComputerCenter (Customers), 2014.

²⁶ cf. ATOS SE, 2014.

²⁷ cf. Computer Weekly, 2014.

which would not contribute to an economic value would be the right to use a brand name ‘BASF’ for another subsidiary within the group. Therefore, this service could not be regarded as a service in accordance with the arm’s length principle and must not be charged.²⁸

TRANSFER PRICE METHOD

A transfer price method defines the process how a price for a certain product or service is derived. In Germany, the following three transfer price methods are accepted. First of all, the ‘Comparable Uncontrolled Price Method’ considers internal or external prices as an argumentation for an appropriate transfer price. An internal price comparison would consider comparable goods or services traded between a company and their supplier while an external comparison would be the evaluation of external market prices between two third party companies in order to get a comparable transfer price at arm’s length.²⁹ Secondly, the ‘Resale Price Method’ considers the resale price of goods or services from the selling subsidiary to the external market reduced by their margin as a reasonable transfer price. The profit margin can be diverted from internal or external transactions similar to the comparable price method.³⁰ Finally, the ‘Cost Plus Method’ sums up all production costs and charges an additional product related profit margin. Thus, production costs plus profit margin represent an appropriate transfer price. In order to determine the production costs, the subsidiary has to apply the same cost calculation for internal sales as well as external sales. The profit margin mark up has to be reasonable in comparison to internal or external transactions.³¹

²⁸ cf. Renz/Wilmanns, 2013 p. 272.

²⁹ cf. Vögele/Raab in Vögele et al., 2004 ch. D p. 203 *et seqq.*

³⁰ cf. Günkel (WPg), 1996 p. 844.

³¹ cf. Wehnert/Wellens, 2003 ch. B p. 19.

Given this information, it is important to identify the most appropriate transfer price method for BASF Business Services GmbH regarding the representative four selected services. The ‘Comparable Uncontrolled Price Method’ considers internal or external price information as necessary to apply this method. Furthermore, it is key that these goods or services are definable to enable an appropriate comparison with the market.³² However, BASF Business Services conducts business only between legal entities within the BASF group and has no third party business. On the other hand, these four selected services are provided from other suppliers in the market but they differ significantly in scope for every customer. Due to particular customization for each customer in terms of hardware manufacturer, hardware features, service included, etc., a precise comparison to the services provided by BASF Business Services GmbH is hardly possible. In conclusion, there is no possibility to gather the necessary price information neither internally nor externally and thus the ‘Comparable Uncontrolled Price Method’ has to be rejected. The ‘Resale Price Method’ cannot be applied in the service area either, since the service cannot be resold. This method is rather applied for companies, which trade tangible products.³³ For IT companies in the service sector the ‘Cost Plus Method’ seems most appropriate due to a lack of comparable prices as well as the impossibility to resale services.³⁴ This method is very common especially for North American companies according to the empirical study conducted by Frese/Glaser 1980³⁵ and Ho/Lau 2002³⁶. In order to determine a reasonable mark-up for BASF Business Service GmbH the empirical study of Renz/Wilmanns has been considered, which illustrates a mark-up range from 2.5% until 12.8% in the information technology industry.^{37,38} However, the central finance department of BASF

³² cf. Renz/Wilmanns, 2013 p. 280.

³³ cf. idem.

³⁴ cf. idem.

³⁵ cf. Frese/Glaser, 1980 p. 109 *et seq.*

³⁶ cf. Ho/Lau, 2002 p. 3.

³⁷ cf. Renz/Wilmanns, 2013 p. 287 (C.III-4).

³⁸ cf. Scherz, 1998 p. 188.

group determines “5% additional profit charges over production costs for information services to be appropriate”.³⁹ In conclusion, the ‘Cost Plus Method’ with an additional 5% mark-up will be selected for the development of an international charging model for BASF group.

THE CHARGING SYSTEM

There are two different charging models, which claim to follow the arm’s length principle. The following two examples shall illustrate the difference between direct and indirect charging. The direct charging system considers only determinable quantities of services. In so doing, every services rendered internally will be invoiced and charged separately (see figure 5).

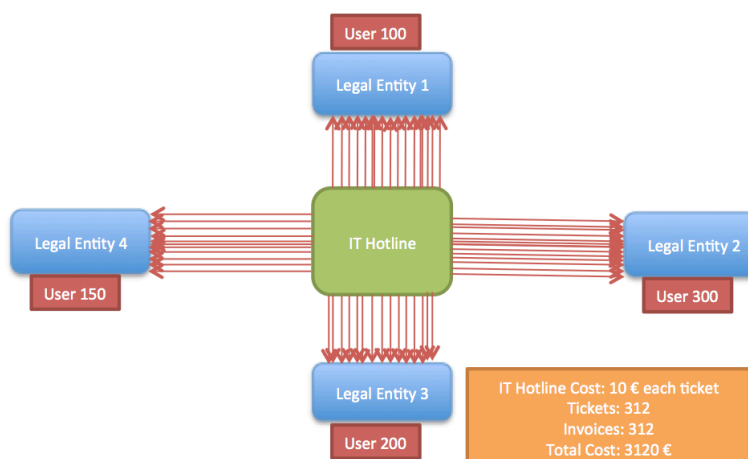


Figure 5: Direct Charging System⁴⁰

In figure 5, IT hotline services are charged directly to four legal entities on a ticket basis⁴¹. In so doing, every call, which causes the technician to create a ticket, 10 Euros will be charged and invoiced. Consequently, the hotline has to open and invoice 312 tickets in this example.

³⁹ cf. BASF SE Inter Company Transfer Pricing Guidelines 2014, p. 13.

⁴⁰ Own creation.

⁴¹ Tickets are created in according to ITIL (IT Infrastructure Library) in the framework of IT service management in according to ISO/IEC 20000.

The indirect charging system allows room for estimations and focuses on a reasonable determination for the cost basis and an appropriate definition of allocation keys. Widely used allocation keys in the IT industry are for instance PCs quantities, user quantities, email account quantities, etc.

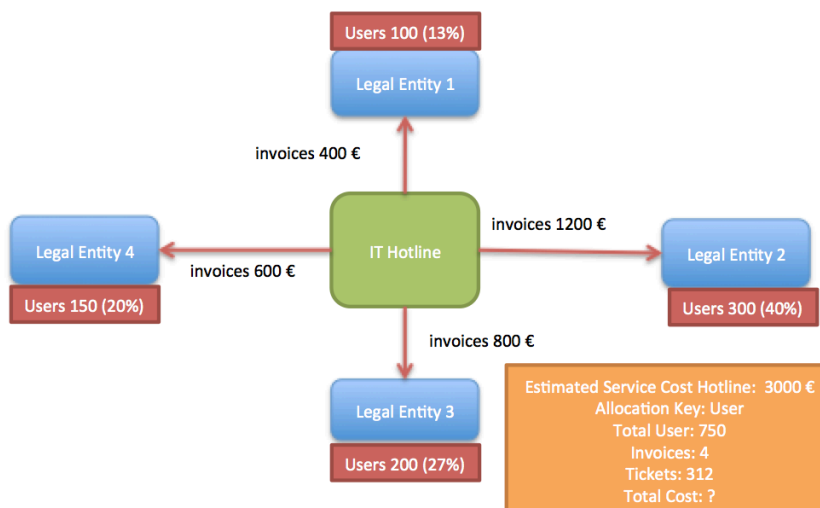


Figure 6: Indirect Charging System⁴²

In comparison to previous example, in figure 6 hotline services are charged indirectly. First of all, the service cost has been calculated at 3000 and these costs are allocated in according to the user quantity of each legal entity. Thus, only 1 invoice has to be created for the charging of this service to each legal entity. However, if the rendered service quantity differs from the calculated one, the cost allocation is inaccurate.

IT SERVICE PRICE CALCULATION WITHIN BASF GROUP

Before describing a direct and indirect charging system for BASF group, the price calculation of the actual services has to be explained to create a profound understanding (for the numerical example see appendix 1). As mentioned before, the representative services SAP, workplace, telecommunication and messaging were selected to develop the global charging system for BASF group. The previously determined ‘Cost Plus Transfer Price Method’ requires a very detailed cost calculation to maintain cost transparency for

⁴² Own creation.

the mark-up of 5% at the end. First of all, on-going costs like hardware depreciation, personnel cost, allocations, communication or third-party costs accrue on organizational cost centres (see figure 7).

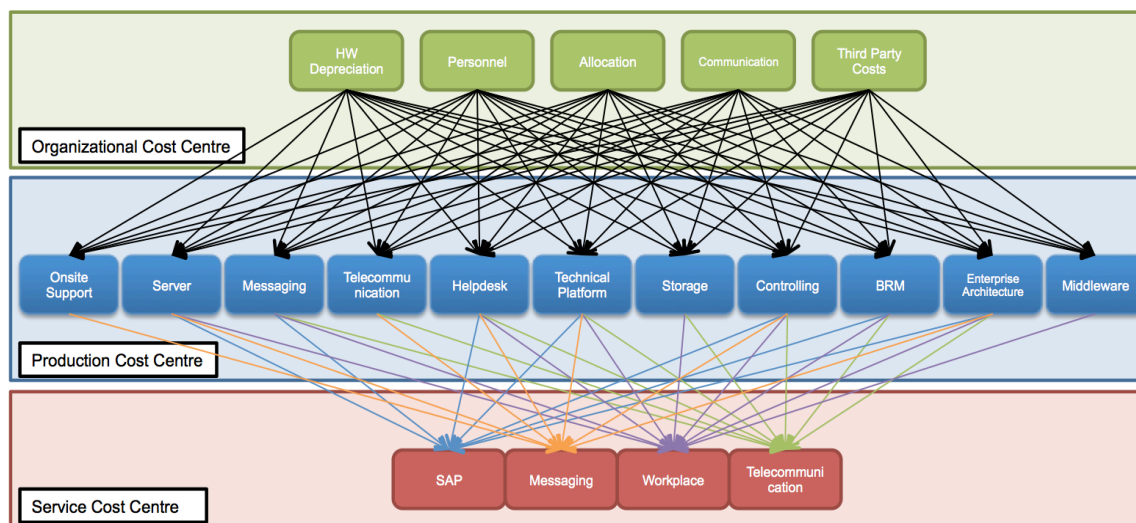


Figure 7: Service Calculation BASF Business Service GmbH⁴³

The costs occurring on these cost centres are allocated to the production cost centres⁴⁴ in the next layer. This allocation is highly complex but essential since it has to be determined how much service has been provided to which production cost centre. The allocation used was provided by the service architects, which calculate the exact costs for every single service. The production cost centres represent the basic IT services, which are necessary to assemble a full service like SAP or messaging. Table 1 explains their functions.

Production Service	Explanation
On-site Support	Support end user with IT services locally
Server	Hosting of servers
Messaging	Messaging
Telecommunication	Telecommunication
Helpdesk	Hotline to organize IT issues for end users
Technical Platform	Maintenance and updating servers
Storage	Tape drives to handle enormous storage capacities
Controlling	Central function controlling
BRM	Business Relationship Management (Sales)
Enterprise Architecture	Process design
Middleware	Datacentre

Table 1: Production services and explanations⁴⁵

⁴³ Own creation (conceptual due to confidentiality reasons).

⁴⁴ The terminology ‘production’ is confusing when talking about services, however these services have to be produced and therefore this layer is called ‘production’.

⁴⁵ Own creation.

It is important to mention that central function like controlling, BRM (=Business Relationship Management) and enterprise architecture are also considered as a part of the service production since their cost have to be allocated to the final service as well. Yet, not all of these production services are allocated to all final services. For example, the service SAP needs only server, technical platform, helpdesk, BRM, controlling and enterprise architecture to be provided. Moreover, not all production services are provided 100% by BASF Business Service GmbH due to the global scope of BASF group. For example, to host a global SAP service it is necessary to have servers located in South America, Asia, North America and Europe. However, BASF Business Services GmbH does not have subsidiaries outside Europe and due to tax reasons it is not possible to locate an owned server in other subsidiaries without funding a subsidiary in this country. Consequently, several IT services are provided by other BASF group subsidiaries. The following figure emphasizes the global structure of IT service provision and highlights the split between functional and disciplinary activities. Employees could work disciplinarily with an employment contract for BASF Shanghai but as soon as they maintain servers there, they work functionally for BASF Business Services GmbH and their personnel cost have to be considered in the cost calculation for IT services:

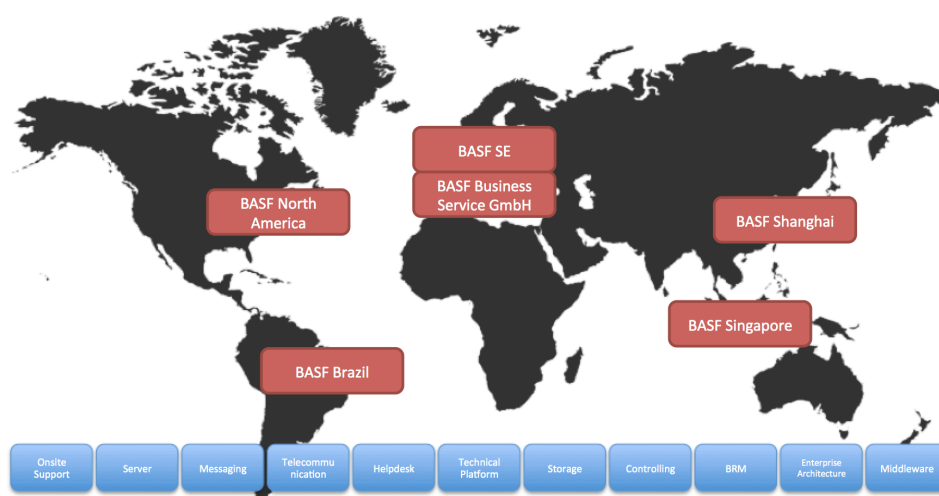


Figure 8: Global IT services production within BASF group⁴⁶

⁴⁶ Own creation (conceptual due to confidentiality reasons).

Since other subsidiaries partially provide IT services they have to be reimbursed in according to the scope of the provision or they have to invoice these services to the legal entities. This is an essential hurdle to overcome in designing an appropriate charging model. In the end, all production costs were allocated to the four selected services, which represent the basis for the development of the direct and indirect charging model within BASF group.

OPTION A: DIRECT CHARGING WITHIN BASF GROUP

The following charging models consider 16 legal entities whereas one represents the BASF Business Service GmbH (mentioned as 'BBS') and the further legal entities are named with letters B-P. Moreover, the models start with the service production, continue with the service utilization and end with the invoicing process.

The direct charging model (see appendix 2 for the numerical example) shows in the blue layer (see figure 9), which legal entities contribute to the global service production in a cost@source view. It is noticeable that only seven out of 16 legal entities produce services and the central function services BRM, controlling and enterprise architecture are actually only provided by BBS. The red layer presents which legal entity utilizes the provided services in according to the cost@destination view. It is important to see that all legal entities utilize the four services SAP, Workplace, Telecommunication and Messaging. Consequently, some legal entities only utilize, and some legal entities provide and utilize services, which has to be considered in the invoicing process. Moreover, the direct charging model considers volume based allocations like SAP systems⁴⁷, PC quantities, minutes per call, mailbox quantities, which enhance a very precise invoicing. The green layer describes the invoice flow and is based on the cost@source view in the blue layer.

⁴⁷ BASF group uses several different SAP systems since not all are migrated in SAP COBALT. SAP BOSS, which was used by BASF Business Services GmbH is an example for one. Especially, smaller legal entities use an independent SAP system.

Each producing legal entity invoices their productions costs to the utilizing subsidiary in according of the degree of utilization. However, there is no invoicing to themselves even though some legal entities have also utilized their own produced services. Therefore, the producing subsidiaries have to add a mark up for their captive use, which is covered by the invoiced legal entities. In conclusion, each of the seven producing legal entities invoice their costs@source for each of the 11 production services to the 15 utilizing companies for 4 end-services and add a mark-up of 5% to comply with the before determined ‘Cost Plus Transfer Price Method’ at arm’s length principle. Unfortunately, this model creates a vast administrative effort since 3,360 invoices (for numerical explanation see excel file) in total have to be created and tracked respectively, but it assures a high degree of cost transparency.

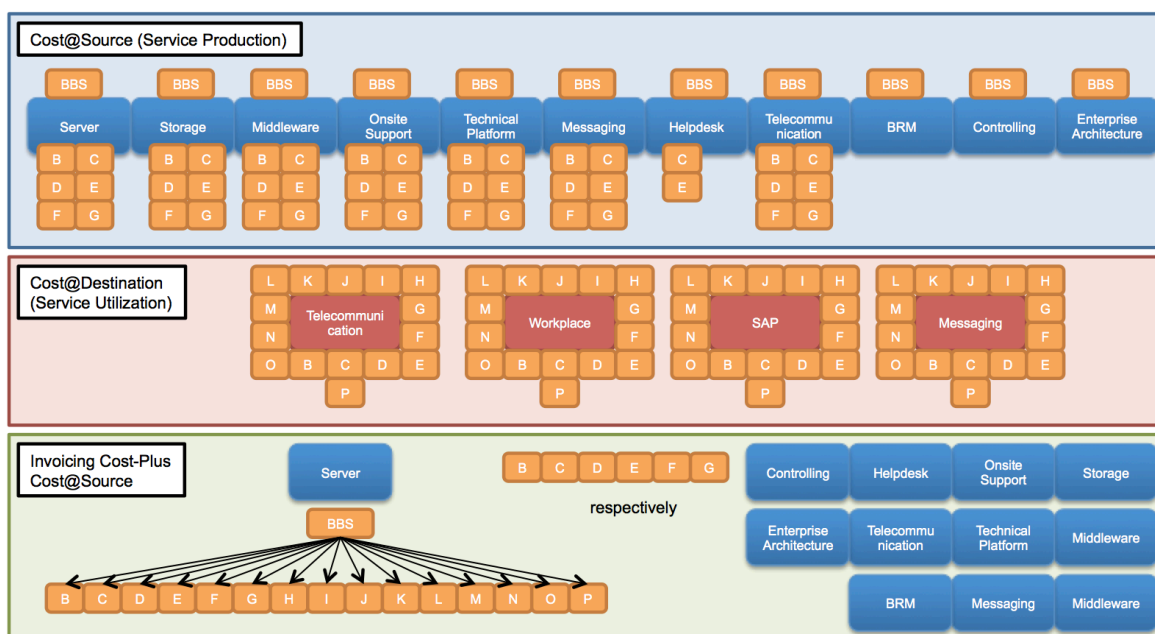


Figure 9: Direct Charging Model⁴⁸

OPTION B: INDIRECT CHARGING WITHIN BASF GROUP

The indirect charging model (see appendix 3 for the numerical example) takes the same basis but has conceptual differences. First of all, the service production at cost@source view is identical with the direct charging model since the same legal entities provide the

⁴⁸ Own creation.

same production services. Furthermore, the red layer (see figure 10) does not differ in comparison to the direct charging model because the same legal entities utilize the same services but the allocations keys are different. The costs are allocated in according to the user quantities to determine the costs@destination for each user in each legal entity. This procedure is less accurate but easier to handle for big companies. The first difference occurs in the purple layer where BBS is now reimbursing all production costs@source to the service producing entities. In so doing, BBS includes the entire production costs@source in their own company. Thus, BBS can invoice the entire amount of costs@destination to all 15 legal entities since they can act as if only BBS would have produced the services. BBS also adds the captive use to their charges since they do not invoice to themselves and the previously defined 5% cost-plus mark-up. In conclusion, this model has a lower administrative effort since only 15 invoices have to be created and tracked within the whole BASF group but has a poorer cost transparency due to vast aggregations.

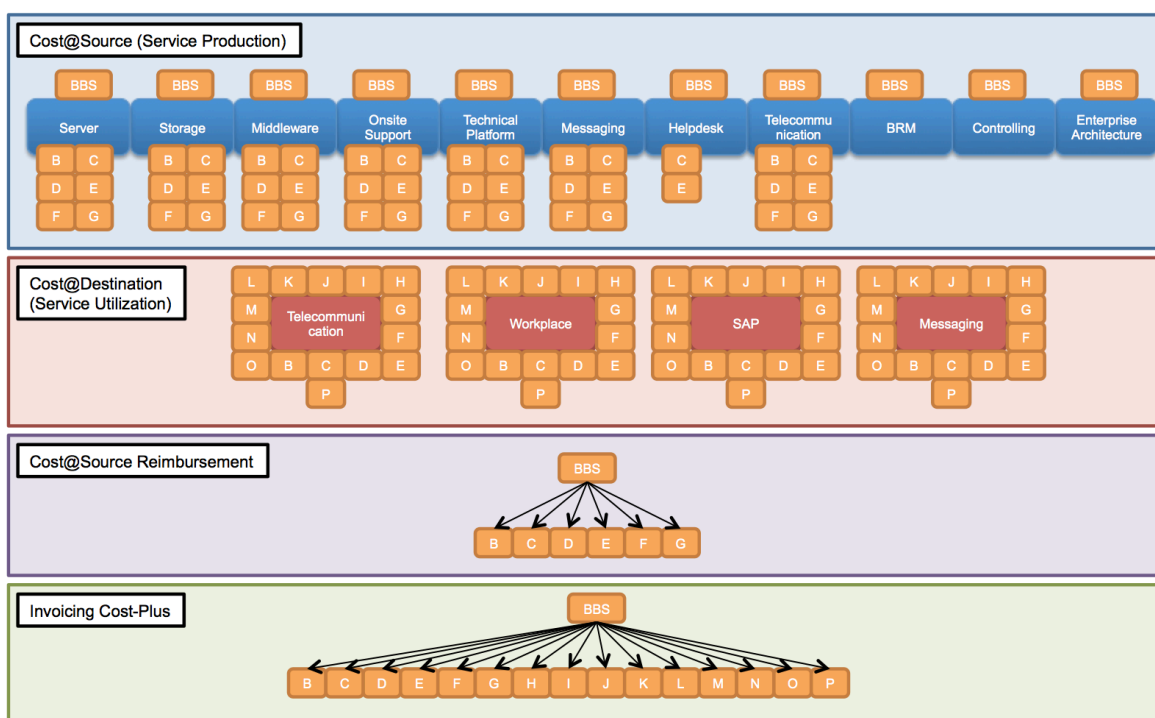


Figure 10: Indirect Charging Model⁴⁹

⁴⁹ Own creation.

CONCLUSION

The direct charging model benefits from its volume-based allocation. Consequently, this method is very accurate since all legal entities only get charged for the utilized services. Moreover, this volume-based allocation cannot fluctuate like the allocation keys ‘user quantities’, which represent another upside for this charging model. However, this leads also to its biggest downside. Due to the very precise cost calculation, a huge administrative effort is necessary to determine the cost for each legal entity. For instance, every service has to be invoiced to each legal entity and the payment has to be tracked and booked. Thus, only in the provided example with four services, 11 production services and 16 legal entities, 3,360 invoice have to be created. Furthermore, the cost accounting has to be homogenous in every legal entity participating in the global charging model to assure that $\text{cost@source} = \text{cost@destination}$. Given that, the global steering is also very difficult to conduct, which makes efficiency measures, cost control and external benchmarks very difficult since each legal entity is responsible only for their costs. The captive use model applied with direct charging leads to the fact that not-producing legal entities subsidize producing legal entities, which represents a disadvantage regarding cost transparency. Yet, it is prohibited to invoice self-produced services to the self-producing legal entity and therefore the captive use model is unavoidable.⁵⁰

In contrast, the indirect charging model disappoints with its inaccurate and fluctuating allocation key ‘users’, which supports cross-subsidizing between legal entities if actual user quantities differ from previously measured user quantities. This leads to a lower cost transparency in comparison with the direct charging model. Moreover, all costs are centralized at BASF Business Services GmbH and therefore all legal entities subsidize their captive use. Thus, this is also an argument for a lower cost transparency. However,

⁵⁰ cf. IAS 38 Intangible assets have to be capitalized to manufacturing costs and must not be invoiced to the self-producing company.

this problem exists also with the direct charging model due to legal conditions. On the other hand with indirect charging only 15 invoices have to be created amongst all legal entities, which depicts a lean and user-friendly process. Furthermore, BASF Business Services GmbH could centrally steer the costs, benchmark them and establish efficiency enhancements if necessary due to the aggregation of all costs@source in BASF Business Services GmbH.

	Advantages	Disadvantages
Indirect Charging Model	<ul style="list-style-type: none"> • Only 15 invoices with yearly billing. Thus, lean invoice process. • Central invoicing, cost control and invoice tracking. • Single point of contact for cost efficiency measures or benchmarking. • Charging model pretends that only BBS produces the services and LEs B-G utilize them. 	<ul style="list-style-type: none"> • Allocation key 'User' fluctuates daily and therefore inaccurate. Therefore, cross-subsidizing for LE with fewer user quantity by LE with higher user quantity. • Lower cost transparency because of fluctuating allocations keys. • LEs B-G subsidize BBS due to the captive use mark-up.
Direct Charging Model	<ul style="list-style-type: none"> • Volume-based allocation is very precise and does not differ like the allocation key 'Users'. 	<ul style="list-style-type: none"> • Not-producing-LEs significantly subsidize producing LEs. • Huge cost accounting effort to determine the utilized volumes for each LE and their costs. This has to be homogenous to assure cost@source = cost@destination within BASF group. • 3.360 invoices with yearly billing. Thus, high administrative effort for creation and tracking. • Decentral cost control. Difficulties with improvement measures or benchmarking.

Table 2: Pros and Cons of Direct and Indirect Charging Models

With 'GS Strategy 2025' BASF Business Services GmbH has to align their charging to the complex matrix structure within BASF group. For the first time, costs@source are subdivided in different companies, which has to be considered in the charging method. Moreover, it is essential that the charging system is manageable although the structure is highly sophisticated. Therefore, only the indirect charging model can be applied to achieve these requirements. The fact that the steering is centralized as well as the significantly lower amount of invoices outweigh the cost transparency upsides of the direct charging model. Even the OCED acknowledges that direct charging in a group structure with separate invoicing for each service is hardly applicable.^{51,52} The developed indirect charging model represents best practices with the legal framework to ensure maximum cost

⁵¹ cf. OECD-RL 2010, 7.22 & 7.23.

⁵² cf. Renz/Wilmanns, 2013 p. 282 *et seq.* / OECD-RL 2010, 7.20-7.22.

transparency with lowest administrative effort and therefore should be used by the BASF group.⁵³

The obstacles in the near future are the implementation of the indirect charging model for all IT services and for all legal entities within BASF group. Thus, all services have to be priced in consideration of their local contribution. Another challenge for the realisation of a group-wide charging model is the dynamic business strategy of BASF SE with upcoming mergers and acquisitions. Consequently, there is a need of a standardized process to implement newly purchased companies in the developed global IT charging system.

“The indirect charging model enables BASF Business Service GmbH to centralize all IT costs within BASF group in one legal entity. This is the basis for an establishment of globally aligned service prices and the requirement of a global service portfolio. However, the application of this model for each provided service is a vast task for 2015.”

Winfried Schweigert, manager of the controlling department of BASF Business Services GmbH

⁵³ cf. Renz/Wilmanns, 2013 p. 283 *et seq.*

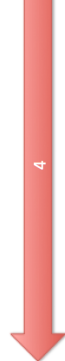
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APPENDIX

1. Service Calculation

Organizational Cost Centre (Necessary for Service Production)									
BBS GmbH									
THIRD PARTY	PERSONNEL	HARDWARE DEPRECIATION	COMMUNICATION	ALLOCATION	THIRD PARTY	PERSONNEL	HARDWARE DEPRECIATION	COMMUNICATION	ALLOCATION
1.000.000,00 €	10.000.000,00 €	3.200.000,00 €	2.000.000,00 €	500.000,00 €	0,1	0,05	0,1	0,05	0,1
16.700.000,00 €									
Production Costs									
SERVER	1.070.000,00 €	STORAGE	1.545.000,00 €	MIDDLEWARE	100.000,00 €	ONSITE	100.000,00 €	TECHNICAL PLATFORM	1.070.000,00 €
MESSAGING	1.145.000,00 €	TECHNICAL PLATFORM	1.570.000,00 €	MIDDLEWARE	1.070.000,00 €	ONSITE	1.145.000,00 €	TECHNICAL PLATFORM	1.545.000,00 €
HELPEDESK	935.000,00 €	MESSAGING	935.000,00 €	TECHNICAL PLATFORM	100.000,00 €	ONSITE	100.000,00 €	MIDDLEWARE	500.000,00 €
TELECOMMUNICATION	2.845.000,00 €	HELPEDESK	2.845.000,00 €	TELECOMMUNICATION	500.000,00 €	MESSAGING	500.000,00 €	TECHNICAL PLATFORM	1.000.000,00 €
BRM	1.720.000,00 €	TELECOMMUNICATION	1.720.000,00 €	HELPEDESK	320.000,00 €	TELECOMMUNICATION	320.000,00 €	HELPEDESK	320.000,00 €
CONTROLLING	1.220.000,00 €	BRM	1.220.000,00 €	CONTROLLING	320.000,00 €	BRM	320.000,00 €	CONTROLLING	320.000,00 €
ENTERPRISE ARCHITECTURE	2.645.000,00 €	ENTERPRISE ARCHITECTURE	2.645.000,00 €	ENTERPRISE ARCHITECTURE	100.000,00 €	ENTERPRISE ARCHITECTURE	100.000,00 €	ENTERPRISE ARCHITECTURE	100.000,00 €
SUM	16.700.000,00 €	SUM	16.700.000,00 €	SUM	1.070.000,00 €	SUM	1.145.000,00 €	SUM	1.570.000,00 €
Production Service to Service Allocation (Necessary for direct charging cost calculation)									
SERVER	18%	TELECOMMUNICATION	0%	TELECOMMUNICATION	0%	TELECOMMUNICATION	11%	TELECOMMUNICATION	11%
STORAGE	9%	TELECOMMUNICATION	9%	TELECOMMUNICATION	9%	TELECOMMUNICATION	9%	TELECOMMUNICATION	9%
MIDDLEWARE	0%	TELECOMMUNICATION	0%	TELECOMMUNICATION	0%	TELECOMMUNICATION	0%	TELECOMMUNICATION	0%
ONSITE	10%	TELECOMMUNICATION	11%	TELECOMMUNICATION	11%	TELECOMMUNICATION	11%	TELECOMMUNICATION	11%
TECHNICAL PLATFORM	11%	TELECOMMUNICATION	6%	TELECOMMUNICATION	6%	TELECOMMUNICATION	6%	TELECOMMUNICATION	6%
MESSAGING	0%	TELECOMMUNICATION	18%	TELECOMMUNICATION	18%	TELECOMMUNICATION	18%	TELECOMMUNICATION	18%
HELPEDESK	13%	TELECOMMUNICATION	13%	TELECOMMUNICATION	13%	TELECOMMUNICATION	13%	TELECOMMUNICATION	13%
TELECOMMUNICATION	24%	TELECOMMUNICATION	25%	TELECOMMUNICATION	25%	TELECOMMUNICATION	25%	TELECOMMUNICATION	25%
BRM	0%	TELECOMMUNICATION	8%	TELECOMMUNICATION	8%	TELECOMMUNICATION	8%	TELECOMMUNICATION	8%
CONTROLLING	15%	TELECOMMUNICATION	15%	TELECOMMUNICATION	15%	TELECOMMUNICATION	15%	TELECOMMUNICATION	15%
ENTERPRISE ARCHITECTURE	10%	TELECOMMUNICATION	6%	TELECOMMUNICATION	6%	TELECOMMUNICATION	6%	TELECOMMUNICATION	6%
SUM	100%	SUM	100%	SUM	100%	SUM	100%	SUM	100%
Allocation Production Costs to Service Costs in %									
SERVER	0,5	WORKPLACE	0,2	TELECOMMUNICATION	0	MESSAGING	0,3	TELECOMMUNICATION	1
STORAGE	0	WORKPLACE	0,7	TELECOMMUNICATION	0,3	MESSAGING	0	TELECOMMUNICATION	0
MIDDLEWARE	0	WORKPLACE	1	TELECOMMUNICATION	0	MESSAGING	0	TELECOMMUNICATION	0
ONSITE	0	WORKPLACE	0,5	TELECOMMUNICATION	0,2	MESSAGING	0,3	TELECOMMUNICATION	0,3
TECHNICAL PLATFORM	0,2	WORKPLACE	0,3	TELECOMMUNICATION	0,2	MESSAGING	0,3	TELECOMMUNICATION	0,3
MESSAGING	0	WORKPLACE	0	TELECOMMUNICATION	1	MESSAGING	0	TELECOMMUNICATION	1
HELPEDESK	0,25	WORKPLACE	0,25	TELECOMMUNICATION	0,25	MESSAGING	0,25	TELECOMMUNICATION	0,25
TELECOMMUNICATION	0	WORKPLACE	0	TELECOMMUNICATION	1	MESSAGING	0	TELECOMMUNICATION	1
BRM	0,25	WORKPLACE	0,25	TELECOMMUNICATION	0,25	MESSAGING	0,25	TELECOMMUNICATION	0,25
CONTROLLING	0,25	WORKPLACE	0,25	TELECOMMUNICATION	0,25	MESSAGING	0,25	TELECOMMUNICATION	0,25
ENTERPRISE ARCHITECTURE	0,25	WORKPLACE	0,25	TELECOMMUNICATION	0,25	MESSAGING	0,25	TELECOMMUNICATION	0,25
SUM	535.000,00 €	SUM	214.000,00 €	SUM	321.000,00 €	SUM	1.070.000,00 €	SUM	1.070.000,00 €
Allocation Production Costs to Service Costs in %									
SERVER	- €	WORKPLACE	1.081.500,00 €	TELECOMMUNICATION	463.500,00 €	MESSAGING	- €	TELECOMMUNICATION	1.545.000,00 €
STORAGE	- €	WORKPLACE	1.070.000,00 €	TELECOMMUNICATION	572.500,00 €	MESSAGING	- €	TELECOMMUNICATION	1.070.000,00 €
MIDDLEWARE	- €	WORKPLACE	572.500,00 €	TELECOMMUNICATION	314.000,00 €	MESSAGING	- €	TELECOMMUNICATION	1.145.000,00 €
ONSITE	- €	WORKPLACE	471.000,00 €	TELECOMMUNICATION	935.000,00 €	MESSAGING	- €	TELECOMMUNICATION	1.570.000,00 €
TECHNICAL PLATFORM	314.000,00 €	WORKPLACE	- €	TELECOMMUNICATION	711.250,00 €	MESSAGING	471.000,00 €	TELECOMMUNICATION	935.000,00 €
MESSAGING	- €	WORKPLACE	- €	TELECOMMUNICATION	711.250,00 €	MESSAGING	- €	TELECOMMUNICATION	2.845.000,00 €
HELPEDESK	- €	WORKPLACE	711.250,00 €	TELECOMMUNICATION	430.000,00 €	MESSAGING	- €	TELECOMMUNICATION	935.000,00 €
TELECOMMUNICATION	- €	WORKPLACE	- €	TELECOMMUNICATION	305.000,00 €	MESSAGING	- €	TELECOMMUNICATION	1.720.000,00 €
BRM	430.000,00 €	WORKPLACE	430.000,00 €	TELECOMMUNICATION	661.250,00 €	MESSAGING	- €	TELECOMMUNICATION	2.645.000,00 €
CONTROLLING	305.000,00 €	WORKPLACE	661.250,00 €	TELECOMMUNICATION	2.899.500,00 €	MESSAGING	- €	TELECOMMUNICATION	16.700.000,00 €
ENTERPRISE ARCHITECTURE	661.250,00 €	WORKPLACE	5.516.500,00 €	TELECOMMUNICATION	5.327.500,00 €	MESSAGING	- €	TELECOMMUNICATION	16.700.000,00 €
SUM	2.956.500,00 €	SUM	16.700.000,00 €	SUM	16.700.000,00 €	SUM	16.700.000,00 €	SUM	16.700.000,00 €



Invoicing Cost@Source BBS

Service Provision BBS % with captive use

	BBS GmbH	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	SUM
SERVER	0%	56,71%	3,90%	2,16%	4,44%	4,33%	2,49%	2,27%	2,38%	2,60%	4,33%	2,92%	2,60%	3,35%	2,81%	2,71%	100%
STORAGE	0%	58,48%	4,38%	3,20%	3,09%	3,20%	1,71%	2,03%	2,13%	4,59%	3,20%	2,88%	2,03%	3,95%	2,13%	2,99%	100%
MIDDLEWARE	0%	62,77%	5,32%	3,19%	2,13%	3,19%	1,06%	1,06%	1,13%	4,36%	3,19%	3,19%	1,06%	4,26%	2,13%	1,06%	100%
ONSITE	0%	55,61%	3,74%	3,21%	3,74%	3,21%	2,14%	2,67%	2,14%	4,81%	3,21%	2,67%	2,67%	3,74%	2,14%	4,28%	100%
TECHNICAL PLATFORM	0%	56,36%	3,56%	2,80%	4,09%	3,66%	2,26%	2,59%	2,05%	3,45%	3,66%	2,69%	2,91%	4,09%	2,80%	3,02%	100%
MESSAGING	0%	48,39%	2,15%	3,23%	5,38%	3,23%	3,23%	4,00%	2,15%	5,88%	3,23%	2,15%	4,30%	3,23%	2,15%	7,53%	100%
HELPEDESK	0%	55,53%	3,50%	2,70%	4,31%	3,77%	2,43%	2,70%	2,16%	3,50%	3,77%	2,16%	2,96%	3,77%	2,70%	3,50%	100%
TELECOMMUNICATION	0%	48,39%	2,15%	3,23%	5,38%	3,23%	3,23%	4,00%	2,15%	5,88%	3,23%	2,15%	4,30%	3,23%	2,15%	7,53%	100%
BRM	0%	55,53%	3,50%	2,70%	4,31%	3,77%	2,43%	2,70%	2,16%	3,50%	3,77%	2,16%	2,96%	3,77%	2,70%	3,50%	100%
CONTROLLING	0%	55,53%	3,50%	2,70%	4,31%	3,77%	2,43%	2,70%	2,16%	3,50%	3,77%	2,16%	2,96%	3,77%	2,70%	3,50%	100%
ENTERPRISE ARCHITECTURE	0%	55,53%	3,50%	2,70%	4,31%	3,77%	2,43%	2,70%	2,16%	3,50%	3,77%	2,16%	2,96%	3,77%	2,70%	3,50%	100%

Service Provision BBS € with captive use

	BBS GmbH	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	SUM
SERVER	-	€ 303.398,27 €	20.844,16 €	11.580,09 €	23.739,18 €	23.160,17 €	13.317,10 €	12.159,09 €	12.738,10 €	13.896,10 €	23.160,17 €	15.633,12 €	13.896,10 €	17.949,13 €	15.054,11 €	14.475,11 €	535.000,00 €
STORAGE	-	€ 722.868,73 €	54.083,24 €	39.573,11 €	38.254,00 €	39.573,11 €	21.105,66 €	25.062,97 €	26.382,07 €	56.721,45 €	39.573,11 €	35.615,80 €	25.062,97 €	48.806,83 €	26.382,07 €	36.934,90 €	1.236.000,00 €
MIDDLEWARE	-	€ 537.276,69 €	45.531,91 €	27.319,15 €	18.212,77 €	27.319,15 €	9.106,38 €	9.106,38 €	18.212,77 €	36.425,53 €	27.319,15 €	27.319,15 €	9.106,38 €	36.425,53 €	18.212,77 €	9.106,38 €	856.000,00 €
ONSITE	-	€ 318.395,72 €	21.430,48 €	18.368,98 €	21.430,48 €	18.368,98 €	12.245,99 €	15.307,49 €	12.245,99 €	27.553,48 €	18.368,98 €	15.307,49 €	15.307,49 €	21.430,48 €	12.245,99 €	24.491,98 €	572.500,00 €
TECHNICAL PLATFORM	-	€ 796.335,13 €	50.246,77 €	39.588,36 €	57.859,91 €	51.769,40 €	31.975,22 €	36.543,10 €	28.929,96 €	48.724,14 €	51.769,40 €	38.065,73 €	41.110,99 €	57.859,91 €	39.588,36 €	42.633,62 €	1.413.000,00 €
MESSAGING	-	€ 361.935,48 €	16.086,02 €	24.129,03 €	40.215,05 €	24.129,03 €	24.129,03 €	32.172,04 €	16.086,02 €	40.215,05 €	24.129,03 €	16.086,02 €	32.172,04 €	24.129,03 €	16.086,02 €	56.801,08 €	748.000,00 €
HELPEDESK	-	€ 1.105.792,45 €	69.783,02 €	53.679,25 €	85.886,79 €	75.150,94 €	48.311,32 €	53.679,25 €	42.943,46 €	69.783,02 €	75.150,94 €	53.679,25 €	59.047,17 €	75.150,94 €	53.679,25 €	69.783,02 €	1.991.500,00 €
TELECOMMUNICATION	-	€ 135.725,81 €	6.032,26 €	9.048,39 €	15.080,65 €	9.048,39 €	9.048,39 €	12.064,52 €	6.032,26 €	15.080,65 €	9.048,39 €	6.032,26 €	12.064,52 €	9.048,39 €	6.032,26 €	21.112,90 €	280.500,00 €
BRM	-	€ 955.040,43 €	60.269,54 €	46.361,19 €	74.177,90 €	64.905,66 €	41.725,07 €	46.361,19 €	37.088,95 €	60.269,54 €	64.905,66 €	46.361,19 €	50.957,30 €	64.905,66 €	46.361,19 €	60.269,54 €	1.720.000,00 €
CONTROLLING	-	€ 677.412,40 €	42.749,33 €	32.884,10 €	52.614,56 €	46.037,74 €	29.595,69 €	32.884,10 €	26.307,28 €	42.749,33 €	46.037,74 €	32.884,10 €	36.172,51 €	46.037,74 €	32.884,10 €	42.749,33 €	1.220.000,00 €
ENTERPRISE ARCHITECTURE	-	€ 1.468.652,29 €	92.681,94 €	71.293,80 €	114.070,08 €	99.811,32 €	64.164,42 €	71.293,80 €	57.035,04 €	92.681,94 €	99.811,32 €	71.293,80 €	78.423,18 €	99.811,32 €	71.293,80 €	92.681,94 €	2.645.000,00 €
SUM	-	€ 7.382.833,31 €	473.738,67 €	373.825,44 €	541.941,37 €	479.273,89 €	304.724,26 €	346.633,92 €	284.003,82 €	504.100,23 €	479.273,89 €	358.277,89 €	373.360,65 €	501.554,97 €	337.819,91 €	470.539,80 €	13.217.500,00 €

Invoicing B-P accordingly (see excel file)

Miral Invoicing

	BBS GmbH	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	SUM
Cost@Source (invoiced)	13.217.500,00 €	539.250,00 €	866.950,00 €	619.650,00 €	666.700,00 €	208.700,00 €	581.250,00 €	-	-	-	-	-	-	-	-	-	16.700.000,00 €
Relief@Source	13.217.500,00 €	539.250,00 €	866.950,00 €	619.650,00 €	666.700,00 €	208.700,00 €	581.250,00 €	-	-	-	-	-	-	-	-	-	16.700.000,00 €
Cost@Destination (real)	1.172.395,00 €	8.926.072,11 €	58.625,00 €	441.870,00 €	640.510,00 €	560.130,00 €	361.675,00 €	414.380,00 €	334.570,00 €	604.155,00 €	560.130,00 €	418.730,00 €	443.375,00 €	584.020,00 €	391.990,00 €	575.345,00 €	16.700.000,00 €
Cost@Destination (paid)	289.296,85 €	8.926.072,11 €	58.625,00 €	441.870,00 €	640.510,00 €	560.130,00 €	361.675,00 €	414.380,00 €	334.570,00 €	604.155,00 €	560.130,00 €	418.730,00 €	443.375,00 €	584.020,00 €	391.990,00 €	575.345,00 €	16.700.000,00 €
Cost@Destination (Dif)	882.898,15 €	287.972,11 €	28.386,62 €	25.986,85 €	36.767,66 €	610.190,44 €	384.588,06 €	454.958,30 €	368.623,69 €	664.192,90 €	617.056,82 €	461.363,82 €	486.764,64 €	642.115,57 €	431.219,22 €	631.711,46 €	16.700.000,00 €
INVOICING COST PLUS	13.878.375,00 €	566.213,59 €	910.297,50 €	650.632,50 €	700.935,00 €	219.135,00 €	610.312,50 €	40.578,30 €	34.053,69 €	603.973,90 €	56.926,82 €	42.633,82 €	43.389,64 €	58.095,57 €	39.229,22 €	56.866,46 €	17.635.000,00 €
MARK-UP / PROFIT	660.975,00 €	26.562,50 €	43.347,50 €	30.982,50 €	33.335,00 €	10.435,00 €	29.062,50 €	-	-	-	-	-	-	-	-	-	835.000,00 €
																	835.000,00 €
																	3360

REAL WORLD	Total Legal Entities	Production Services	Invoices
Production Entities	80	300	300
			7.200.000

3. Indirect Charging

Service Costs (Basis for Allocation)									
Costs	Allocation	User Total	Cost/User Int	User A	User Rest	Mark up	Cost/User Ext		
SAP	User	70000	42,24 €	4200	65800	0,37 €	44,93 €		
WORKPLACE	PC	90000	61,29 €	5400	84600	0,26 €	65,21 €		
TELECOMMUNICATION	User	90000	59,19 €	5400	84600	0,26 €	62,97 €		
MESSAGING	User	90000	32,22 €	5400	84600	0,49 €	34,27 €		
SUM		16.700.000 €							

User quantity in each Legal Entity in %																
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	SUM
USER	6%	55%	3%	2%	3%	1%	1%	2%	4%	3%	3%	1%	4%	2%	1%	100%

Production Costs@Source in %																
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	SUM
SERVER	50%	20%	5%	1%	3%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
STORAGE	80%	5%	4%	6%	1%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
MIDDLEWARE	80%	5%	3%	3%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
ONSITE	50%	20%	5%	10%	3%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
TECHNICAL PLATFORM	90%	3%	2%	1%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
MESSAGING	80%	3%	2%	7%	5%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
HELPEDESK	70%	10%	0%	10%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
TELECOMMUNICATION	30%	10%	15%	25%	10%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
BRM	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
CONTROLLING	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
ENTERPRISE ARCHITECTURE	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%

Production Cost@Source in €																
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	SUM
SERVER	535.000,00 €	214.000,00 €	53.500,00 €	107.000,00 €	53.500,00 €	32.100,00 €	74.900,00 €	-	-	-	-	-	-	-	-	1.070.000 €
STORAGE	1.236.000,00 €	771.250,00 €	61.800,00 €	92.700,00 €	15.450,00 €	15.450,00 €	46.350,00 €	-	-	-	-	-	-	-	-	1.845.000 €
MIDDLEWARE	856.000,00 €	53.500,00 €	32.100,00 €	42.800,00 €	32.100,00 €	21.400,00 €	1.070.000 €	-	-	-	-	-	-	-	-	1.070.000 €
ONSITE	572.500,00 €	229.000,00 €	37.250,00 €	57.250,00 €	114.500,00 €	57.250,00 €	1.145.000 €	-	-	-	-	-	-	-	-	1.145.000 €
TECHNICAL PLATFORM	1.413.000,00 €	15.700,00 €	47.100,00 €	31.400,00 €	157.000,00 €	157.000,00 €	31.400,00 €	-	-	-	-	-	-	-	-	1.570.000 €
MESSAGING	748.000,00 €	28.050,00 €	18.700,00 €	65.450,00 €	46.750,00 €	9.350,00 €	18.700,00 €	-	-	-	-	-	-	-	-	935.000 €
HELPEDESK	1.991.500,00 €	-	284.500,00 €	-	284.500,00 €	-	284.500,00 €	-	-	-	-	-	-	-	-	2.845.000 €
TELECOMMUNICATION	280.500,00 €	93.500,00 €	140.250,00 €	233.750,00 €	93.500,00 €	46.750,00 €	46.750,00 €	-	-	-	-	-	-	-	-	935.000 €
BRM	1.720.000,00 €	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.720.000 €
CONTROLLING	1.220.000,00 €	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.220.000 €
ENTERPRISE ARCHITECTURE	2.645.000,00 €	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.645.000 €
TOTAL COST@SOURCE	13.217.500 €	539.250 €	866.950 €	619.650 €	666.700 €	208.700 €	581.250 €	-	-	-	-	-	-	-	-	16.700.000 €

Cost@Destination in €																
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	SUM
SAP	177.390 €	1.855.676 €	157.261 €	94.356 €	62.904 €	94.356 €	31.452 €	62.904 €	125.809 €	125.809 €	94.356 €	31.452 €	62.904 €	62.904 €	31.452 €	3.133.890 €
WORKPLACE	330.990 €	3.462.484 €	293.431 €	176.059 €	117.372 €	176.059 €	58.686 €	117.372 €	234.745 €	234.745 €	176.059 €	176.059 €	234.745 €	117.372 €	58.686 €	5.847.490 €
TELECOMMUNICATION	319.650 €	3.343.856 €	283.378 €	170.027 €	113.351 €	170.027 €	56.676 €	113.351 €	226.702 €	226.702 €	170.027 €	170.027 €	226.702 €	113.351 €	56.676 €	5.647.150 €
MESSAGING	173.970 €	1.819.899 €	154.219 €	92.537 €	61.691 €	92.537 €	30.846 €	61.691 €	123.383 €	123.383 €	92.537 €	92.537 €	123.383 €	61.691 €	30.846 €	3.073.470 €
TOTAL COST@DESTINATION	1.022.000 €	10.481.915 €	888.298 €	532.979 €	355.319 €	532.979 €	177.660 €	355.319 €	710.638 €	710.638 €	532.979 €	532.979 €	710.638 €	355.319 €	177.660 €	17.702.000 €
WITHOUT CAPTIVE USE	1.022.000 €	9.853.000 €	835.000 €	501.000 €	334.000 €	501.000 €	167.000 €	334.000 €	668.000 €	668.000 €	501.000 €	501.000 €	668.000 €	334.000 €	167.000 €	16.700.000 €
CAPTIVE USE MARK UP	-	628.915 €	53.298 €	31.979 €	21.319 €	31.979 €	10.660 €	21.319 €	42.638 €	42.638 €	31.979 €	31.979 €	42.638 €	21.319 €	10.660 €	1.002.000 €

Invoicing from LEs Perspective																
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	SUM
COST@SOURCE	-	539.250 €	866.950 €	619.650 €	666.700 €	208.700 €	581.250 €	-	-	-	-	-	-	-	-	2.404.000 €
COST@DESTINATION	10.481.915 €	888.298 €	532.979 €	355.319 €	532.979 €	177.660 €	177.660 €	355.319 €	710.638 €	710.638 €	532.979 €	532.979 €	710.638 €	355.319 €	177.660 €	16.700.000 €
REIMBURSEMENT FROM BBS	539.250 €	866.950 €	619.650 €	666.700 €	208.700 €	581.250 €	-	-	-	-	-	-	-	-	-	3.482.500 €
INVOICED COST PLUS BY BBS	11.006.011 €	932.713 €	559.628 €	373.085 €	559.628 €	186.543 €	186.543 €	373.085 €	746.170 €	746.170 €	559.628 €	559.628 €	746.170 €	373.085 €	186.543 €	17.535.000 €
COST PLUS MARK UP	524.096 €	44.415 €	26.649 €	17.766 €	26.649 €	8.883 €	8.883 €	17.766 €	35.532 €	35.532 €	26.649 €	26.649 €	35.532 €	17.766 €	8.883 €	835.000 €
TOTAL	12.536.107 €	1.428.078 €	1.052.576 €	734.576 €	1.052.576 €	293.971 €	293.971 €	593.939 €	1.165.170 €	1.165.170 €	1.165.170 €	1.165.170 €	1.165.170 €	593.939 €	293.971 €	19.535.000 €

Invoicing / Reimbursement from BBS GmbH Perspective			
	BBS GmbH	Production Entities	REAL WORLD
COST@SOURCE	-	13.217.500 €	80
COST@DESTINATION	17.535.000 €	-	80
REVENUE	-	17.535.000 €	80
REIMBURSEMENT	-	3.482.500 €	15
INVOICING COST PLUS	-	-	15
COST PLUS MARK UP	-	-	15
PROFIT	835.000 €	-	15

Production Entities			
Production Entities	Total Legal Entities	Services	Employees
80	300	300	100.000
15	259	259	259