When servitized manufacturers globalise: Becoming a provider of global services

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Abstract

Purpose: To increase the global competitiveness of their service business, servitized manufacturers transition towards global services. Yet, the literature has not addressed this development. This study is one of the first to investigate how servitized manufacturers can manage the globalisation of their service business.

Methodology: The study explores two cases of servitized manufacturers that transitioned from a local organisation of multi-domestic international services to a global-service organisation. The data were collected via semi-structured interviews, observations, and secondary sources.

Findings: We identify four elements of global service provision: operating model, global performance management, relationship governance, and staffing and employee development. We discuss each element and the connections between them, which we summarise in a proposed framework for global service provision.

Originality: The contributions of this research relate to the proposed framework of global service provision, which extends current conceptualisation of globalisation of routine services. We show the unique elements of global service provision of servitized manufacturers and discuss the theoretical and practical implications of our work.

Keywords: service operations; servitization; case study; global operations; network

1. Introduction

Many globally operating engineering and manufacturing companies, who have in recent decades integrated service offerings into their product portfolios (Baines & Lightfoot, 2014; Raddats et al., 2017), now seek to globalise their multi-domestic service business. This drive for a global strategy is often motivated by competitive pressures (Sun & Pang, 2017), driving companies to enhance their comparative advantage through accessing dispersed subsidiary level capabilities (Friesl & Silberzahn, 2012). The aim is to increase competitiveness through efficiency (Friesl & Silberzahn, 2012) by becoming a global service provider. Global services can be defined as the application of specialised knowledge possessed by a provider firm to support customers globally (Zhang et al., 2016, p. 81). Many servitized manufacturers have historically implemented multi-domestic service strategies (Lovelock, 1999) with different service operations and business models depending on the conditions and customer needs in the specific local market. As a result, many servitized arrangements can be characterised as international services (e.g., Hakanen et al., 2017; Jovanovic et al., 2019; Neto et al., 2015; Raja et al., 2018; Reim et al., 2019), with a dispersed set of service strategies. Integrating and centralising these service strategies to become a global service provider poses significant strategic and operational challenges. For example, global efficiency and local responsiveness can be difficult to combine (Friesl & Silberzahn, 2012), especially in servitized arrangements, where close customer contact often determines business success (Kreye, 2017b; Oliva & Kallenberg, 2003).

This study aims to answer the following research question: How can servitized manufacturers manage the globalisation of their service business? Based on two empirical case studies, we identify four core elements of global service provision, including the operating model, global performance management, relationship governance, and staffing

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and employee development. We discuss these characteristics through the lens of related literature streams, including servitization (Baines & Lightfoot, 2014; Kreye, 2016) and international business (Abdi & Aulakh, 2012; Faems et al., 2020), and develop a conceptual model of global services showing the connections between these elements. This research contributes to the literature by showing the unique elements of global service provision as well as their connections. We demonstrate the conceptual and practical differences from international services (Hakanen et al., 2017; Raja et al., 2018) and globalisation of routine services (Lovelock, 1999; McLaughlin & Fitzsimmons, 1996).

2. Theoretical background

Services are a mix of tangible and intangible elements provided as a total bundle of goods and (supporting or facilitating) services (Roth & Menor, 2003). Services are characterised by three main elements – complexity, labour intensity, and customisation (McLaughlin & Fitzsimmons, 1996), which characterise services in general and services provided by servitized manufacturers in particular. Servitization refers to the strategic move of many manufacturers towards integrating services in their business to *"offer fuller market packages or bundles of customer-focused combinations of goods, services, support, self-service, and knowledge"* (Vandermerwe & Rada, 1988, p. 314). The services provided by servitized manufacturers – often termed as engineering services (Zhang et al., 2016) – have specific characteristics based on the three main elements of services in general (McLaughlin & Fitzsimmons, 1996).

First, services are defined by the complexity of inputs and outputs (McLaughlin & Fitzsimmons, 1996). For example, the services typically provided by servitized manufacturers, including product maintenance and repairs, updates, fleet management or

product availability (Baines & Lightfoot, 2014), require complex operations of tangible and intangible elements (Kreye, 2019). Second, services are labour intense (McLaughlin & Fitzsimmons, 1996). This means that intellectual asset, such as people, system knowledge, and learning are critical to their delivery (Roth & Menor, 2003). This applies also to engineering services, where the knowledge and skills embodied by the individual service employee defines how the service is delivered and ultimately perceived by the customer (Pana & Kreye, 2021; Raddats et al., 2017). Third, services require close customer contact and involvement of the customer for providing inputs (Chase & Apte, 2007; Schmenner, 1986). Service activities with high customer contact (front-office) are often decoupled from low contact activities (back-office) enabling the parts of the service delivery system to be situation across a geographically dispersed set of nodes. *"While the back-room strategy differs relatively little from manufacturing strategy"* (McLaughlin et al., 1991, p. 63), front-office activities need close involvement with the customer and have hence an operational set-up based on customer needs and organized around customer interaction.

2.1 Provision of services globally

Global business services *"have emerged as the predominant model that progressive, and increasingly mainstream, organizations are employing to manage their collective shared services and outsourcing efforts (in a global context)"* (Wirtz et al., 2015, p. 6; cited from KPMG, 2013). Globally operating companies consist of a group of geographically dispersed organizations and include headquarters (HQ) and national subsidiaries (Gupta & Govindarajan, 2000). The national subsidiaries create a global network with both internal links between them and external links to (local) partners and customers (Faems et al., 2020; Meyer et al., 2011). As a result, each individual subsidiary has a unique and idiosyncratic

pattern of network linkages (Andersson et al., 2002) creating subsidiary-specific inter-organisational relationships (Faems et al., 2020) and hence determining the service offering delivered to the customer (Raddats et al., 2017).

"Globalization has different implications for different types of services and is affected by the nature of the process involved in creating and delivering a given service" (Lovelock, 1999, p. 281). Global services differ from international services, which are conducted in one country and consumed in another (Wirtz et al., 2015, pp. 571–572), in other words, spreading beyond national boundaries. Globalisation requires formulation of an integrated strategy across all countries in which the company elects to do business (Lovelock, 1999). Through globalisation, global services apply a global governance structure to the global network of subsidiaries (Zhang et al., 2016). Global services offer the benefit of global efficiency through the leveraging of available capabilities across the network (Zhang et al., 2016), including standardising processes and network integration (Zhang et al., 2016) and reversely implementing knowledge from different local markets into the global network (Monteiro & Birkinshaw, 2017). The type of services provided by servitized manufacturers require capabilities related to a variety of knowledge-intensive and creative processes (Baines & Lightfoot, 2014), including engineering skills and expertise (Zhang et al., 2016), legal services (Malhotra & Morris, 2009), insurance (Wirtz et al., 2015), and logistics (Pana & Kreye, 2021). If these service-related capabilities are transferred from one subsidiary to other units in the global network, the competence of the global service provider is upgraded (Andersson et al., 2002). However, these service capabilities are difficult to replicate across subsidiaries (Jovanovic et al., 2019).

The local characteristics of the delivered service are affected by a range of factors, including local context, such as institutional frameworks creating legal frameworks and

regulatory systems on business practices and strategies (Abdi & Aulakh, 2012; McLaughlin & Fitzsimmons, 1996). Similarly, local contexts differ regarding resource endowments that create location advantages and attract globally operating organisations (Meyer et al., 2011). Service providers must adapt their processes and governance in response to these differences (Meyer et al., 2011). As a result, *"Duplicating a service worldwide is best accomplished when routine services are involved"* (McLaughlin & Fitzsimmons, 1996, p. 51). Existing works have addressed particularly the global provision of services that require little customer interaction, are information-intensive, and labour-intensive (McLaughlin & Fitzsimmons, 1996). Little work has explored the ability to globalise engineering services that are as complex and require as close customer contact as the service provided by servitized manufacturers. This is the gap this paper aims to address.

2.2 Tensions in global service provision

Globally operating organisations in general and global service providers in particular experience tensions that drive either towards higher global integration or towards higher autonomy of local subsidiaries (Abdi & Aulakh, 2012; Begley & Boyd, 2003) as summarised in Table I. Geographic dispersion means that the global service network spreads across different institutional frameworks (Abdi & Aulakh, 2012), creating different legal conditions (Reim et al., 2019) and consequently drive differentiation between operating models of service delivery in local subsidiaries (Jovanovic et al., 2019). The result is the provision of international services (Wirtz et al., 2015). In contrast, gaps in the different institutional frameworks (Abdi & Aulakh, 2012) enables a global service provider to develop standardised service models and frameworks for engaging with local customers and other partners (McLaughlin & Fitzsimmons, 1996). This can result in the globalisation of the service

business (Lovelock, 1999) and provision of global services (Zhang et al., 2016).

<Please insert Table I about here>

As a result of these partly contradicting drivers, global service providers experience tensions embodied in the need to integrate and optimise the relative emphasis on global integration and local variations (Pana & Kreye, 2021; Zhang et al., 2016). In other words, global service providers face an "innovation-integration dilemma" (Monteiro & Birkinshaw, 2017) or the "paradox of external embeddedness" (Andersson et al., 2002) reflecting that local subsidiaries need to be locally embedded for successful service delivery and integrated into the corporate network to transfer those ideas. Tensions arise from doing both at the same time and finding the mix of between internal and external embeddedness (Meyer et al., 2011).

2.3 Globalising services

To investigate our research question "How can servitized manufacturers manage the globalisation of their service business?", we define a conceptual framework that integrates the different connected theoretical bodies of literature. The framework defines multiple levels of global service operations. These multiple levels stretch from HQ, local subsidiary, and individual service employee. The drivers for and against globalisation (Table 1) will be experienced differently across these levels of the global service provider and hence result in different reactions and operational adjustments. The global HQ typically forms the main driver for globalisation by defining the global service concepts (Hakanen et al., 2017) and operating models (Zhang et al., 2016). The local subsidiary is the main customer contact point and hence experiences the tension between internal integration in the global network and external integration in the local operating context, summarised in the need for multiple

embeddedness (Meyer et al., 2011). This tension requires a balance between internal and external integration (Meyer et al., 2011), which may result in operational adjustments to the global models and frameworks (Hakanen et al., 2017). Finally, the individual employees may be affected by the globalisation strategy through changes in management systems, such as human resource management of global career paths (Friesl & Silberzahn, 2012). Because the service delivery relies on individual service employees (Roth & Menor, 2003), and the differences in their culture, language, attitudes etc (Abdi & Aulakh, 2012), local employees may be the driver towards more localisation.

The objective of this research is to explore how the transition to global services affects these different levels individually and their interaction for the provision of global services. This aims to extend existing insights on servitization – which has focused on local capabilities needed for providing services in new relationships with customers (Baines & Lightfoot, 2014; Kreye, 2017b; Raddats et al., 2017). It also extends research on international services, which has focused on the localisation of services in their respective operational contexts (Wirtz et al., 2015). This research also aims to expand investigations on global services (Lovelock, 1999; McLaughlin & Fitzsimmons, 1996), which have focused on services of lower complexity, which are information rich and labour intense and hence offer high potential for a standardised service concept with (small) adjustments to service delivery based on local conditions (culture, language etc). This work aims to explore the ability to provide global services in globally operating servitized manufacturers and hence focuses on services that are complex, labour intense and often require customisation.

3. Method

This study aims to extend existing insights of globalising routine services to the novel

context of servitization and is hence theory elaborating in nature (Fisher & Aguinis, 2017).

Theory-elaborating research departs from existing theoretical concepts or models to develop new theoretical insights by executing empirical research in a novel context that enables the researcher to contrast, specify, or structure these concepts (Fisher & Aguinis, 2017). In this study, we present qualitative case studies for theory elaboration (Ketokivi & Choi, 2014) based on rich and in-depth data on the phenomenon of global services and contextual variables (Voss et al., 2002; Yin, 2018).

3.1 Case selection

We present insights from two empirical case studies from different industry and business contexts to enable contrasting observations (Fisher & Aguinis, 2017). While many manufacturing companies providing services operate globally, few provide global services in terms of integrated offerings across a global network. The cases presented in this paper can be characterised as rare based on the following reasoning. The cases are rare with regard to typical descriptions of servitization, as many companies, and most descriptions in the academic literature (Neto et al., 2015; Wirtz et al., 2015), focus on international services, where each local subsidiary provides its own set of service offerings based on local needs and requirements. The cases are further rare regarding globalisation of services, which has thus far focused on routine services (Lovelock, 1999; McLaughlin & Fitzsimmons, 1996). Instead, servitization typically focuses on complex services (Kreye, 2019). The services of our two cases, in particular, are performance based, which represent some of the most complex services included in servitization (Baines & Lightfoot, 2014). Finally, we research the transition towards global service provision, enabling unique comparison to a multi-domestic international set-up. Our case selection is hence based on rare cases, both in theoretical and

practical regard. As a result, case selection for this research was somewhat opportunistic based on the possibility to conduct in-depth studies with these companies.

The cases share important similarities to enable comparison. First, both cases represent nested cases of a globally operating manufacturing company with local subsidiaries. Case A concerns the global chemical production industry, within which Company A engineers and services equipment and whole chemical production plants. Case B concerns the maritime industry, with a focus on safety equipment on ships and vessels. Second, both cases focus on performance-based services. In Case A, the company provides operations and maintenance services for chemical production plants, including the provision of qualified staff, spare parts, performance reports, quality control, and process and technological innovations to reduce emissions. In Case B, the company provides services focused on ensuring safety and compliance with the safety regulations of products, including annual safety inspections, repairs, and refurbishment. Third, in both cases, the focal companies were one of the first in their respective industry sectors to transition from a local and international organisation of service provision to a global approach. Fourth, both case companies are headquartered in Scandinavia with local subsidiaries around the world. Despite these similarities, the cases differ in some potentially important factors, such as the technologies, industry setting, and institutional environment at large. We controlled for these differences during data analysis to ensure that insights are attributed to the phenomenon this research focuses on. Together, these similarities and differences support the theory-elaborating nature of this research (Fisher & Aguinis, 2017), mitigating the possible detrimental effects of our case study selection.

3.2 Data collection

Data collection processed iteratively and included multiple sources (Yin, 2018), including semi-structured interviews, observations from company visits, and secondary sources. We conducted 40 interviews across the two cases, spreading across the multiple levels defined in our conceptual framework. Interviewees included senior managers operating in HQ, service and national managers in the local subsidiaries and local operational employees and boundary spanners (Table II). The interviewees were selected on the basis of their knowledge of the internal operations of global service provision, including the transition from international services, and the technical and service tasks and requirements related to the respective product and its context (Gibbert & Ruigrok, 2010). Some interviewees were also identified by other interviewees as relevant and knowledgeable informants (snowballing). Data collection evolved iteratively from an initially more open approach to a subsequently more structured and focused approach based on collected insights and increasing understanding of the case companies' operations. Initial open questions explored the interviewees' views on the industry sector globally and locally as well as the company's approach to service provision. These discussions enabled an initial understanding of the potential for global services in the companies and offered an open approach to data collection. This open approach was deliberately chosen despite the theory-elaborating nature of this research to ensure the suitability of the selected cases and enable the researchers to capture new issues beyond the conceptual framework. In later stages of the data collection, a more structured approach was applied based on the conceptual framing, ensuring that the theoretically identified concepts were included in the interviews. This approach offered comparability between the cases (Yin, 2018). The Appendix includes the final list of questions and topics discussed in the interviews. The interviews ranged between

45 and 90 minutes in length. In addition, observations at the company sites and secondary

data (including company meetings, presentations, and company memos and reports)

complemented the collected insights and provided important background information.

<center><Please insert Table II about here></center>

3.3 Data analysis

All data were analysed iteratively using qualitative coding through thematic analysis in a

two-step process. First, within-case analysis focused on each individual case to understand

its specific dynamics and challenges. The conceptual framing offered a meaningful starting

point for the descriptive coding by defining the multiple levels (HQ, subsidiary and

individual) and hence offering an initial set of high-level codes to structure the data analysis.

Descriptive coding focused on the specific case dynamics detailing the global service

transition and interactions with contextual factors, including the technology, industry

setting, and institutional environment. Descriptive codes that could not be attributed to one

of these three levels were placed into a fourth category relating the interactions between

the levels. After multiple iterations of descriptive coding, the coding structure into the

multiple levels (HQ, subsidiary, and individual) was replaced by a more purposeful coding of

the interactions between these levels, eventually forming second-order codes for each case

(Miles et al., 2014).

Second, the cross-case comparison enabled contrasting of insights between both

cases. Here, the second- and first-order codes were compared between both cases,

identifying similarities and differences. The strong similarities between both cases provided

insights into different clusters of the identified concepts and were abstracted into aggregate

themes (Welch et al., 2011). Figure 1 illustrates how the identified concepts (first-order and

second-order) from the within-case analysis connect to aggregate themes. This two-step

analysis provides rigorous and consistent insights across the empirical data to combine

empirically derived concepts and theory (Miles et al., 2014; Yin, 2018).

<Please insert Figure 1 about here>

4. Findings

4.1 Case A: Chemical production

4.1.1. Case context

Case company A moved to global services in line with a general company strategy of

globalisation and increased standardisation. The Director of Business Performance

Operations and Maintenance (O&M) described the motivation as follows: *"If you are getting*

a contract with your client, what he is looking for is to be at the same level as the top players

in the market. (…) So, what they expect from us is that we operate and maintain their

facilities and offer them the possibilities to compete at that level." One of Company A's local

customers mirrored this assessment, as explained by the Production Process Manager:

"There are another two companies doing this job [i.e., offering the O&M service]. And when

the owner of this plant went to [Case company A] and not to any other local company, they

think they will be more standardised in the operation. Everything will be done according to

procedure." These evaluations demonstrate the need for global services to deliver service

quality at a level that is globally competitive (which in this case exceeds local

competitiveness). While the service business was previously operated locally within the

different local subsidiaries, the global service organisation requires a standardised and

integrated approach, as the Director of Business Performance O&M (HQ) explained: *"The*

first big step is to set the governance. To set the governance means [to define] what is the

basis to operate and maintain a [chemical production] facility. And in terms of real case,

what that means is if I take some of our facilities now, and I compare that facility with

another of our facilities, the way that we are running both facilities should be absolutely the

same. Even if we are talking about different processes, different size of operation, different

locations and different cultures." In other words, a global service organisation requires

standardisation, irrespective of local conditions and environments.

4.1.2. Operating model

The operating model of Company A is a globally standardised service with a global sales

strategy according to which sales managers from HQ are responsible for negotiating

contract terms with local customers. While smaller service packages (such as maintenance

or spare parts) can be sold by local sales managers, the negotiation of new O&M contracts is

initially performed by a sales manager from HQ to negotiate terms, which sometimes

involves other high-level managers from HQ—such as the Vice President of O&M—due to

the strategic importance and high value of the service. Meanwhile, local subsidiaries *"help*

out our sales team in HQ" (National Manager, local subsidiary). This involvement of HQ

extends to the start of operations, as the sales manager also supports local managers in

implementing the contract and interpreting contract terms. The General Manager Sales

O&M explained an exemplar contract: *"[The local project manager] had either daily or*

weekly meetings with the client. And then when things were piling up and they could not

reach an agreement, then I came there. I think in the beginning I was there every second

week discussing internal and relational issues." This statement demonstrates the

importance of HQ in supporting the management of customer relationships in a global

service organisation.

Local subsidiaries in Company A are responsible for delivering the service and translating the contract into operations. The National Manager (local subsidiary) described the need for customisation: *"It depends very much on the needs of the customers. So, while there are many common elements in each contract, there are still differences according to the needs of the customer."* This statement shows that instead of translating global standards into local conditions, the company needed translation based on the specific needs of each individual customer, leading to differences between plants. One example was the approach to communicating with the customer (e.g., regular informal meetings, reporting processes), which is based on specific customer requirements. As such, local subsidiaries are responsible for the primary customer contact, specifically in terms of relationship governance, such as solving potential disputes and effectively managing daily communications.

The global service organisation of Company A also includes regions, which are located hierarchically between HQ and local subsidiaries. The Service Line Manager (HQ) explained, *"We're structured now in seven regions. The region basically means sales and some execution capabilities. Some regions have more than others. And I think that this region—Region 1—is quite mature compared to others when you talk about services and aftermarket."* This statement indicates that smaller services (as opposed to full plant O&M contracts) are sold by regional sales managers, who implement global procedures but are closer to local customers. The regions were created to form a basis for standardisation across local subsidiaries, enabling the transformation from a previously international organisation to a global one.

4.1.3. Global performance management

The Director for Business Performance O&M explained, *"We found that, sometimes, we were running one plant based on a specific point of view and another with other points of view. But of course the plant team is already focused on their own problems, they do not have time to share. They do not have time to network with the others. So, we [at HQ] are facilitating that knowledge creation and that best-practices sharing."* Case company A hence defined key performance indicators for service operations, which "*are related to production, energy, costs, and inventory. Those four things that we follow every month will give us full visibility of our actions. So then we can show the results because there is a tangible report that we deliver to the whole organisation*" (Director of Business Performance O&M, HQ). The HQ introduces and communicates performance measures for the subsidiaries to enable transparency across the organisation. Digital technology can help bridge the geographical gap between HQ and the local subsidiary and ensure performance. The General Manager Technical Operations explained: *"We are getting all the data here [in HQ] and we can support our team [in the local subsidiary] from here with all our engineers. Because whatever they can see down there, we can see here also."* This statement demonstrates the supporting role digital technology can play for ensuring service quality and globally standardised levels of operations.

One main difficulty for Company A was the management of global logistics to provide spare parts when needed. The Region Director explained, *"It is very critical in services to react fast. And also, to have a supply chain. I mean, it is not just enough that you or me react fast, it is also [about] having the parts on site and get the job done."* Case company A resolved this challenge by centralising departments and processes related to

services. The Region Director elaborated, *"That time [between customer calling and the spare parts being on site] has been shortened quite a lot with centralised procurement. Procurement gets a good to go, and then it all has to happen very fast."* This statement demonstrates the importance of logistics to support global service provision through spare part availability, which is addressed in Case A through centralising procurement processes.

4.1.4. Relationship governance

A core aspect for global service provision for Case company A was the relationship with their customers. This is where the contract played a crucial element in governing this relationship as the General Manager Sales O&M explained: *"it was a little bit difficult in the beginning [when the contract was being implemented] because then we need to translate some of these articles into practical use and some interpretation needs to be done. … Lucky enough, this client was willing to sit down and understand and we could move on."* This indicates the central role of the contract in relationship governance – not only during negotiation as described above but also in the implementation and interpretation of contract clauses for operational practice. This would often set expectations for further engagement in the service relationship and hence shape the subsequent relational engagement. The relational engagement was realised via the interpersonal relationships between employees in the local subsidiary and customer. One example was the close inter-personal relationship between National manager and the Customer CEO, who eventually became relatively close personal friends as the National manager joked during the interview: *"There was a time when he [the customer CEO] called me and he said, 'I need your help for a situation but that will affect my relationship with my wife.'"*

4.1.5. Employee management

One important part in ensuring global service quality concerns employees. The Director of Business Performance O&M explained, *"If you want to run a company in terms of standardisation, the first [thing] that you need is to offer the same level of competency [of your employees], or at least to be comparable between facilities."* This requirement includes defining the competencies needed for different positions within the service organisation. It also includes training through development programmes and internal career paths. The Head of Operations O&M explained, *"We have been focusing on two things. One is leadership training, and here we have built custom-made leadership training for the [local subsidiaries]. And that has been built from here [HQ], and then it has been rolled out. (…) And the idea was to also have some follow-up sessions to make sure that the leadership training is implemented. That has been quite successful. And then we have been focusing a lot on technical training. And we are now rolling that out. It has not been fully completed, but we have made assessments of our people to go in and see, okay, what are the competence needs on the technical area?"* According to the Director Business Performance, this formal training programme is complemented by *"accelerated training, where you take the best of your people from the current sites, and you'll send those people to a new site."* The implication is that providing global services enables a company to draw on a wider talent pool and to develop that talent pool to enable higher levels of competitiveness by enabling staff to move between subsidiaries. However, merged with the local conditions, the global service provider needs *"to, from an organisation culture point of view, find our own formula of the degree of being a [local subsidiary] organisation with opportunities for [local employees] and the dynamics that that gives you, and blend that with the [global] company way of doing things (…) Every place is different and different qualifications in the labour market, different work ethics, different cultural settings, maybe different business*

environments altogether" (Vice President O&M). In other words, while training and employee development directed from HQ ensures global standardisation, the interaction with the local environment also shapes how the organisation in the local subsidiary unfolds.

4.2 Case B: Maritime safety

4.2.1. Context

Case company B transitioned towards global services due to environmental factors, enabling the company to stay competitive and lock-in customers as a provider of on-board safety. The customers' motivation to buy the services was described by the Corporate Development Executive as follows: *"Just imagine, the ship is shipping goods around the world. The safety equipment is such a minor thing of their daily task. They don't care about it at all, the only thing they basically need is an approval or a compliance certificate that says, 'this equipment is certified; you can sail.'"* In other words, the customer has a strong incentive to outsource this service as a non-core activity, providing a business opportunity for Case company B. However, providing this safety service globally is an organisational challenge, as the Senior VP Global Services emphasised: *"Before, you had a ship owner coming into a port, he did the service, the service station earn all the money. Now you have some sales going on in Germany, where you have the service [delivery and cost] in Singapore. The service in Singapore, you would never have had if the sales in Germany did not do their job."* This statement indicates that the local subsidiaries are intrinsically linked in the global service organisation for equipment safety based on the nature of the maritime industry. The Brand Communication Manager reflected on this dynamic: *"This is global organisation and there is a need to deliver all this in a uniform way, at global scales. It makes it an even larger challenge."*

4.2.2. Operating model

In Case company B's global-service organisation, HQ is responsible for *"owner agreements,*
selling excellence and planning excellence, which is basically the three departments driving
our service offerings, sales and planning (…) we own the development of concepts, we own
how we sell it, we make all the quotes, we train everybody, we make sure it works internally"
(Director Owner Agreements). The service concept changed through globalisation from
maintaining the customer's equipment to exchanging it. Service Manager 3 explained, *"In*
the past, everything that we did was built around when the vessel was in port. So we needed
to know when the vessel will arrive, then we had to add a truck next to the vessel, collect the
[equipment], bring them to the station, finish up the service as quickly as we could because
the vessel had to sail again in the evening. So that was a lot of time pressure caused by the
actual port stay of the vessel. Since we have the exchange contracts, that changed a lot for
us because now we have the [equipment] in stock, we can service them before the vessel is
even in the country and the only thing we have to do when the vessel is in is to exchange the
[equipment]." This statement indicates that changing from a service concept of low
complexity to a service concept of high complexity enabled Case company B to plan much of
the service operations and become less dependent on customer presence.

The global service concept also enabled a more consistent and thereby more
efficient workflow in the service stations. Service Manager 3 detailed, *"Years ago we could*
have extremely busy days on Monday and Tuesday, but no work for the rest of the week. We
are now able to spread out the work a lot better, which is a big advantage and a big change.
(…) We have a constant flow of work which enables us to be a lot more flexible in the way
we work and the times we work. I think we, as service station, we are able to be much more

efficient than we were in the past." This statement indicates that the global organisation

created efficiency gains, which were directly visible for the local subsidiaries. The financial

flow of Company B changed as the Senior VP Global Services (HQ) explained, *"The politics,*

the internal settle mode, how to split the money, what is included in the price, that is all

something we decide here [in HQ]. So this guy will not promise 200 km free transportation

for one customer and 100 for another customer and 50 for the third customer. (…) This is

where you control your risk, by setting up the internal instruction, the guidelines and politics

and so on." By simplifying and standardising processes, the company aimed to gain global

efficiencies and simplify their portfolio of service offerings.

The company *"divided all the subsidiaries into these regions (… with) their own*

management" (Corporate Sales Manager). The regions were defined based on geographic

characteristics and the connection between subsidiaries in terms of strategic positioning.

One example is South-West Europe (including Greece, the Netherlands, Belgium, France,

Spain, and Italy). Regions enable the company to implement the global strategy by creating

a bridge between HQ and local subsidiaries for testing new service concepts, training sales

employees, and fostering knowledge exchange between the subsidiaries. The Region

Director explained this notion as follows: *"[We are involved in] execution and sometimes*

that took telephone calls from me or from the other region directors to the service stations

to tell them, 'Listen, you have to accept the service [client coming into port right now].'" This

statement reflects the hierarchical relationship between regions and subsidiaries. This

organisation also enables logistics for service delivery, as the Global Customer Logistics

Manager explained, *"It's all about filling up stock at the service stations [i.e., local*

subsidiaries]. It's ensuring that we have stock levels between a minimum and a maximum,

making sure we transfer [pieces of equipment] between the station so we have like fully

serviced [pieces of equipment]. And they also order new ones, so they are the logistic part on all of this service [delivery]." Thus, by extension, the regions enable standardisation and capacity management across subsidiaries.

4.2.3. Global performance management

For global service provision, *"We need to make sure that there is good collaboration between countries"* (Senior VP Global Sales). This requires alignment across departments to foster a shared understanding and working in the same direction is a regular part of operations, as the Corporate Sales Manager explained: *"We meet every three weeks in our service value chain. [This includes] people in logistics, planning, IT, sales, and so on to share all of these things and understand that 'if this is what we want to achieve from sales, then what does that require from all of the other ones?' and 'if you need to do this in logistics, then maybe I should not sell this, maybe I should sell that instead.' So we meet to get more common ground and have an understanding of each other."* This regular engagement between all departments related to service provision, both from the front and back office, allows for aligning processes and activities within the individual departments by facilitating understanding of the wider service network involved in delivering value to the customer.

Performance feedback from customers and subsidiaries is communicated to HQ to obtain an understanding of what works in practice. The Senior VP Global Services explained, *"We knew if we could keep the satisfaction at [a] certain level, our retention rate on renewing the contract will be very, very high. We have focused on making sure that the customers are happy. So today any customer feedback that comes back with a score below certain level, there will be a process where the customer is being contacted, we follow up on the case and to see whether we can compensate and win the satisfaction back again so that,*

hopefully, one bad experience will not end the relationship in the long run. We try to eliminate the dissatisfaction as early as possible." In other words, Case company B has implemented a process to control the level of service quality experienced by the customer and to collect and interpret data that allows for comparison between subsidiaries. This process is an important step to ensure the long-term viability of the global-service organisation.

4.2.4. Relationship governance

Case company B's relationship management includes external partners, who may deliver the service locally as subcontractors. This inclusion not only produces internal complexity in service operations, but also adds operational challenges in the global organisation, as new service concepts need to be delivered by these partners. The Global Service Network Manager explained this notion: *"Whenever there's a company's service station [i.e., subsidiary], we can introduce policies and all that stuff. But as soon as we talk about independent service partners, then everything has to be contracted. (…) Everything has to be pinned out in a contract and that has to be negotiated back and forth. So this whole global policy does not fit so well with the partners because everything has to be translated into a contract and every single time you want to change something, it is up for negotiation again so it's not as easy to do as we do it internally."* This statement reflects the importance of centrally developing contractual governance capabilities to support the global service strategy in Case company B.

4.2.5. Employee management

Employee management is important to implement global service concepts and sales

processes and enable local and regional managers to deliver them. The Senior VP Global

Services explained, *"We do seminars. It is very important that our business is a global*

business. The customer is in Germany, the vessel is in Singapore, in Shanghai, in Miami and

Rio de Janeiro and so on. So we need to ensure that there is smooth communication between

the entities." The seminars are thus a tool not only to facilitate strategic communication

from HQ to the regions and subsidiaries, but also for knowledge exchange between the local

subsidiaries. The Corporate Sales Manager echoed this assessment for a set-up they

established for the sales employees: *"We have at least once a year a sales seminar, where*

all salespeople from around the whole organisation are meeting. There they have the

opportunity to share stories with each other about what worked, what didn't work and get

some good ideas from each other on how to approach service sales." This reflection

demonstrates the importance of network collaboration to ensure and maintain a globalised

organisation for service provision.

4.3 Cross-case comparison

Table III provides a comparison between the two cases and shows similarities and

differences in their operating model, global performance management, relationship

governance and employee management. Both cases exhibited strong similarities in the

operating model as each company defines regions in addition to local subsidiaries and HQ.

This operating model defined the roles and responsibilities of HQ, subsidiaries and regions

as well as their interactions. For example, the operating model determines how global

service concepts, performance indicators, management and training standards and

relationship governance are pushed from HQ into the global network. The operating model

hence formed the framing set-up for global performance management, relationship

governance and employee management in both cases.

<Please insert Table III about here>

Both cases also exhibited strong similarities for global performance management. Both cases emphasised the importance of ensuring equal levels of service performance across the global business. This is where employees affect performance through their skills and training as the Senior VP Global Services (HQ, Case B) summarised: *"The salesperson is making promises to the customer: 'This is your price; this is what you get.' The service station, they deliver the customer the promise, right? So, if they don't deliver what the salespeople promised, we will have a disappointed customer. But if they deliver what they promised, we will have a happy customer. [This is] why you need to control this [global service business]."* This suggests an important connection between employee management and global performance in global services. This connection explains the core concerns, which relate to *"ensuring the right people in the key positions"* (Head of O&M Chemical, HQ, Case A) to ensure globally consistent levels of employee competencies and enable standard service performance levels are met. Both case companies invest significant effort into developing and implementing global training schemes related to service sales, technical and engineering competencies, and leadership skills.

Finally, both cases indicate that global performance is also affected by how internal and external relationships are managed and governed. This was specifically related to contracts, which formed a critical tool to manage relationships in both cases. In Case A, contracts are related to the customer relationship and represent a key concern in managing global service provision, specifically, managing the operational risks and uncertainty of engaging with customers in different settings. The contract is also a tool to capture learnings from service delivery by updating the contract template and relate this to global

performance indicators. In Case B, contractual governance is focused on external partners, who provide (part of) the local service delivery. Contracts are seen as a central tool to ensure global performance standards are met even by external service partners, allowing for managing the risk and uncertainty of global service provision.

5. Discussion

This research set out to answer the RQ "How can servitized manufacturers manage the globalisation of their service business?" The case companies' motivation to provide global services (as opposed to the prior international organisation) align with descriptions in the literature in terms of responding to competitive pressures (Sun & Pang, 2017) and increasing capability use and global efficiency (Friesl & Silberzahn, 2012). Additional concerns emerged in both cases, as customers explicitly value the providers of global services over local competitors and choose the provider based on their globally standardised provision of service performance. This finding suggests an increasing importance of global service provision in practice and points to the need to build theory around global services as a means to deliver customer value and gain competitive advantage.

5.1 Elements of global services

The cases both employed a similar operating model despite the differences in context, such as industry sector and technology. Aligned with McLaughlin and Fitzsimmons' (1996, pp. 46–47) assertion that *"The globalization of front room operations with its verbal customer contact still depends heavily on cultural adaptation of the service"*, we also found some customisation of the globally defined service concept in the local delivery. However, in

contrast to international services (e.g. Hakanen et al., 2017; Jovanovic et al., 2019; Neto et al., 2015; Reim et al., 2019), a globally standardized service concept remains with these adaptations focusing on customer engagement and communication. This operating model is also distinctly different from globalising routine services (McLaughlin & Fitzsimmons, 1996), which lack this need for customisation and hence inherent drive to localisation. Here, the organisational structure with regions played an important role as an intermediary layer between HQ, driving global standardization, and subsidiaries, engaging with local customers. The regions enabled "harmonizing standards and government regulations" (Lovelock, 1999, p. 281) and hence superseded the need for differentiation based on national institutional frameworks and regulatory systems (Abdi & Aulakh, 2012; McLaughlin & Fitzsimmons, 1996). This structural choice differs from global production (Cheng et al., 2015; Ferdows, 2018), where standardisation can be driven through product design. In contrast, global services apply a standardised service concept with the additional structure of regions enabling implementation.

Global performance management enabled both case companies to align and standardise service performance outcomes across the global network. This finding contradicts performance management in other servitization arrangements, which is based on local customer interaction and responsiveness (Oliva & Kallenberg, 2003). In both cases, global performance standards enables internal integration (Meyer et al., 2011) through process connectivity and communication. One important aspect here was the definition of service based KPIs related to, for example, availability of the production equipment, customer satisfaction, and energy use. Defining performance criteria as a global standard enabled the case companies to implement the global service concept and compare subsidiaries. This extends beyond economic performance typically focused on in the

international business literature (Faems et al., 2020). Instead, global performance indicators focus on measurable aspects of the service delivery process.

Relationship governance emerged as an important theme related to managing the external relationships. Here, our cases pointed to contracts as a tool for standardisation to manage relationship expectations, direct performance, and incorporate learnings across the global network through contract templates. The case observations indicate that for global services, the customer relationships are managed and governed by all three hierarchical levels (HQ, regions, and local subsidiary). This notion differs from descriptions in the international services literature (Hakanen et al., 2017; Neto et al., 2015) and international business literature (Faems et al., 2020), which exclusively describe local subsidiaries as entities for customer relationship governance (or front-office processes). In contrast, our case insights extend descriptions of multiple touchpoints in business-to-business (B2B) services (Sampson & Spring, 2012) and demonstrate how in global services these touchpoints span different organisational units within the global network. These touchpoints even extend beyond the organisational boundaries of the global-service provider to external partners, who deliver (parts of) the service to local customers. While each of the touchpoints individually may serve a different purpose (sales, delivery, customer contact management, development etc.), they are each part of the customer experience of the service (Sampson & Spring, 2012) and hence require careful management by the global service provider.

Staffing and employee development was an important consideration for both case companies aligned with the service literatures across the streams of, e.g., international services (Hakanen et al., 2017; Wirtz et al., 2015) and servitization (Baines et al., 2013; Kreye, 2016). The case observations indicated a need for standardising the employee skill

portfolio across the global network, which includes defining the competencies needed in

key roles (especially customer contact and managerial roles in local subsidiaries and

regions); defining and implementing a global training scheme for technical, engineering and

management competencies; and enabling global career tracks by transferring employees

between local subsidiaries. These insights contradict the role of employee management in

the international business literature, where cultural adaptation are highlighted as the main

reason for local differentiation (Abdi & Aulakh, 2012; Meyer et al., 2011) because *"the*

customer contact or front room operations require sensitivity to the local culture"

(McLaughlin & Fitzsimmons, 1996, p. 51). Cultural adaptation did not emerge from the

cases. One reason for this could be the B2B nature of the servitized arrangements, where

some of the customers were multinational organisations themselves. These customers

explicitly valued the provision of global services over local (and hence culturally adjusted)

competitor offerings. Our findings hence suggest that while local employees play a crucial

role in delivering global services, their skills and competencies are based on a globally

defined standards rather than local differentiation based on culture.

5.2 Towards a model of global service provision

Our study further suggests relationships between the elements discussed in Section 5.1. Our

case findings suggest that the operating model determines in how far the other elements of

global services can be implemented (section 4.2). This aligns with the literature, which has

highlighted that structural choices define other aspects of the service strategy, including

performance, policies and behaviour (Roth & Menor, 2003). Our findings point towards

global standardisation and hierarchical implementation of a global service strategy as core

elements of the operating model to create a unified approach for achieving and managing

global performance, for managing internal and external relationships, and for staffing key positions for service deliver and managing these employee developments. Thus, we suggest that the operating model for global services has an overarching role affecting the remaining three identified elements of global service provision.

Furthermore, our research suggests global performance management is affected by relationship governance. In other words, the effectiveness of managing the internal and external relationships drives in how far performance criteria are achieved. The connection between managing customer relationships and performance management has been reported in the service literature (Raddats et al., 2017) and can be ascribed to the central role of customers within the service delivery process (Chase & Apte, 2007; Schmenner, 1986). Similar, the role of managing relationships with external partners for achieving performance outcomes has been explored, for example, in the service triad (Kreye, 2017a) literature. Our research suggests that a standardised approach to managing these relationships can facilitate global performance management for global services, resulting in a connection between relationship governance and global performance management.

Staffing and employee development affects global performance as summarised by the Director Business Performance (Case company A) summarised: *"The competency level of our people is a key factor in order to offer the deliverables that we said in our contract."* The connection between employee skills and service performance is well recognised in the service operations literature (Roth & Menor, 2003). Our research extends these insights by suggesting that defining a global strategy for staffing and employee development can aid the achievement of global performance indicators. This extends initial expectations from the literature, which indicate that individual employees enable performance through delivering a customised service (Abdi & Aulakh, 2012; Roth & Menor, 2003). Our research hence

suggests a direct connection between staffing and employee management and global performance management for global services.

Figure 2 summarises these connections between the four identified characteristics of global services: operating model, global performance management, relationship governance, and staffing and employee development. In line with Lovelock's (1999, p. 279) assertion that *"Many globalization challenges are extension of those already found in large, domestic economies, but they take place on a much larger stage that presents sharper economic, cultural and political distinctions,"* our research indicates that each individual element connects to insights from the literature, including services and servitization (Baines & Lightfoot, 2014; Roth & Menor, 2003), globalisation of services (McLaughlin & Fitzsimmons, 1996), global production (Cheng et al., 2015; Ferdows, 2018), and international business (Abdi & Aulakh, 2012; Faems et al., 2020). Our research indicates that global service provision is a unique hybrid between these theoretical streams with partially unexpected connections between them. Thus, globalisation in servitization goes beyond the economic, cultural and political distinctions of existing models and gives opportunities for further efforts of theory building and extension.

<Please insert Figure 2 about here>

6. Conclusions

This research explored the following research question: How can servitized manufacturers manage the globalisation of their service business? Based on two empirical case studies, we propose a conceptual framework of global service provision (Figure 2), which details four elements and connections between them. The four elements include the operating model, global performance management, relationship governance, and staffing and employee

development. The contributions of this research relate to the proposed framework of global

service provision, which extends current conceptualisation of globalisation of routine

services (Lovelock, 1999; McLaughlin & Fitzsimmons, 1996). Our research shows the unique

elements of global service provision as well as their connections and hence demonstrates

the conceptual and practical differences from international services (Hakanen et al., 2017;

Wirtz et al., 2015).

This research has strong managerial implications for managers of the global

transition of a dispersed service business. The following four implications emerge. First, the

findings suggest that the structure of global services demands an additional, intermediary

layer to bridge the distance between HQ and the local subsidiary. This additional layer can

be based on geographical regions, which allow managers to standardise processes across

local subsidiaries within a region and enable implementation of top-down decisions, such as

sales approaches, into the local subsidiaries. Thus, the first managerial implication relates to

the structure of global operations in the form of an intermediary level between HQ and

subsidiary. Second, managers are advised to identify global performance indicators that

focus performance efforts and approaches. Identifying globally preferred KPIs for the

service business in terms of customer-observable output (e.g., response speed, equipment

availability, emissions) focuses operational efforts and defines the direction for the service

business globally. Thus, the second managerial implication is the need to define global

service KPIs. Third, managers need to define competencies of key positions within the global

service network and build a global training programme to develop and nourish these

competencies among operational and managerial employees. While this is a complex and

time-consuming task, it is required to achieve global standardisation in terms of service

delivery and management. Thus, the third implication is the need to build a global training

programme for the service business with pre-defined competencies for key roles and

approaches to develop these competencies among individual employees. Fourth and finally,

managers must focus on developing contractual capabilities needed to manage external

relationships with customers and partners within the global network. These contractual

capabilities include the use of contract templates, which need regular review and update

based on learnings from service delivery and implementing and enforcing contract

templates globally. Thus, the fourth managerial implication of this research is the

importance of developing and maintaining contractual capabilities for the global service

business.

This research points towards two future research opportunities related to the

limitations of this research. First, both cases focused on the transition from dispersed

international services to globally standardised business. The described insights inevitably

derive from observations from this transition and thus may not be generalisable to

established or mature global service organisation. Future work should therefore explore the

operational considerations of mature global services. Second, both cases focus on highly

complex services in the form of performance-based agreements. The case evidence

suggests that these services themselves created a drive towards globalisation of the service

business. However, global services can also extend to less-complex offerings, including

maintenance services and repairs. Future research therefore should explore the connection

between service complexity and global services in terms of their characteristics and

operations.

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Appendix

Personal experience:
Role in company:
Experience in company (in years):
Experience in role outside company (in years):

Industry context
1. How have the business conditions in [your] industry changed globally in the last 20 years?
2. How has the situation [in your local context] developed in the last years?

Company development
3. How has this affected your company? How has the company changed over this period?
4. What has changed for you and your role personally?
5. How have employees been supported and guided through these changes [in the local subsidiary]?

Contract example
6. Can you summarise for me what the aim or purpose of this service is/was?

Customer relationship
7. What is your strategy of approaching customers to sell the services?
8. How do you engage with customers locally for selling the service?
9. What is the nature of your interaction with the customer and how has this developed over time?

Further changes
10. What is happening at (company name) currently in terms of changes?

HR issues
11. How do you address employee skills and competencies for service provision?
12. What is your experience with implementing training programmes locally?

Additional information
13. Is there anything else you would like to add or clarify?
14. Could you please point out any documents that could help my research project?
15. Do you know anyone who could be relevant to speak to on this topic?

Tables and Figures

Table I. Drivers towards and against global integration

	Drivers towards global integration	Drivers towards local autonomy and differentiation
Operational context	Institutional frameworks represent shared practices, structures, and processes across organisations and hence drive similarities across organizational boundaries (Abdi & Aulakh, 2012) Regulatory institutions provide a pre-existing default constitution of responsibilities and obligations for exchange partners (Abdi & Aulakh, 2012)	Global operations spread across different institutional frameworks (Begley & Boyd, 2003) and create differences in terms of content and structure of models (Abdi & Aulakh, 2012) countries differ in terms of the legal frameworks, which often define business exchanges and interfirm relationships and fair enforcement of regulations (Abdi & Aulakh, 2012)
Service system	Global integration allows higher efficiencies in the global network (Friesl & Silberzahn, 2012) and can improve the local subsidiary's competitive capabilities in its local market (Andersson et al., 2002) Internal collaboration enables a local subsidiary to access operational and technical knowledge from the global network (Faems et al., 2020; Gupta & Govindarajan, 2000) and hence increase its ability to deliver the service in its local environment (Hakanen et al., 2017) Knowledge about market needs and customer requirements as well as from the external network of subsidiaries (Andersson et al., 2002) is absorbed into the global network to create and improve the standardised service concept (Hakanen et al., 2017), including technical capabilities and channels of distribution (McLaughlin & Fitzsimmons, 1996) Knowledge from external networks of subsidiaries Global knowledge sharing enhances creation of a global operating model and processes (Hakanen et al., 2017) and can improve a local subsidiary's ability to function in its local network with external partners (Faems et al., 2020) Contractual tools enable the global service provider to standardise external relationships (Abdi & Aulakh, 2012)	intraorganizational practices differ across countries with different institutional frameworks (Abdi & Aulakh, 2012), which drive the development of differentiated service concepts, including choices of service delivery, across the global network (Abdi & Aulakh, 2012) Subsidiaries need external embeddedness in their (local) external network to absorb knowledge and retain competitiveness on the local market (Andersson et al., 2002; Faems et al., 2020) favouring independent development and implementation of service concepts by local subsidiaries (Lovelock, 1999) represented in a multidomestic (or 'multilocal') approach
People	Pre-existing institutions create behavioral norms, rules and expectations, which define and socially enforce the appropriate and acceptable behaviors of individual service managers and employees acting in the service relationships (Abdi & Aulakh, 2012) Institutionalized understanding and shared cognitive frameworks enhance "interpretive concordance" among service partners and reduce the possibility of misunderstandings (Abdi & Aulakh, 2012) Employee behaviour can further be directed towards collective goals (Begley & Boyd, 2003)	Cultural diversity of global operations (Begley & Boyd, 2003) require front-office operations with close customer contact depends on cultural adaptation due required human behaviour of service personnel based on local norms, language etc. (McLaughlin & Fitzsimmons, 1996) Recommendation to hire and train locals for activities involving customer interactions (Begley & Boyd, 2003)

Table II. Data collection.

Sources	Case A	Case B
Interviews	Vice President O&M Head O&M Chemical General manager O&M Sales Head O&M Technical Global Procurement manager Regional Finance Manager Head of Operations O&M Service Line Manager Project Manager HR Global Manager Senior Competency Development Manager Director of Business performance Director Regional Chemical Service National Manager (Local subsidiary) General maintenance manager (Local subsidiary) Operations Director (Local subsidiary) Supply Manager (Local customer) Production and process manager (Local customer) HSE Manager (Local customer)	Senior Vice-President Global Services Senior Vice-President Global Sales Corporate Sales Manager Service Centre Manager Corporate Development Executive Global Customer Logistics Manager Global Service Network Manager Brand Communication Manager IT Director Director of Owners Agreements Business Development Executive Global Service Manager Team leader Customer Logistics Global Service Coordinator Corporate Sales Coordinator Business Process Specialist Region Director Sales Director Service Manager 1 (Subsidiary 1) Service Manager 2 (Subsidiary 2) Service Manager 3 (Subsidiary 3)
Observations	Multiple visits to HQ One-day stay at local subsidiary	Five working days at HQ Service business meeting
Secondary data	Marketing material for global O&M services Local marketing material Internal communications regarding service performance (power point slides etc) Training material for global leadership programme Annual reports 2012-2019 Training material for employees and managers Internal and external case reports for local plant performance	Service planning flow presentation Service contract document Meeting minutes Roles and responsibilities of the units supporting the services presentation 40-minute video presentation of the business service PowerPoint presentation of the business service Company website

Table III: Summary of cross-case comparison

	Case A – Chemical production	Case B – Maritime safety
Motivation	Standardising the offerings across global network to ensure delivery of same value Generation of global efficiencies through standardised service operations Fulfilling customer needs by providing service quality at globally competitive quality levels.	Increase in overall (global) service business by working globally Addressing customer needs by ensuring equipment certification
Operating model	**HQ**: global sales, including contract negotiation and (initial) implementation support; definition of standardised protocols for service operations and performance. **Region**: contract negotiations and service sales; service execution **Subsidiary**: Service delivery and customisation of contract terms through operational engagement with customer	**HQ**: Development and roll-out of service offerings, including sales processes, planning activities, price and (internal) financial flow **Region**: Service sales and spare parts management across subsidiaries **Subsidiary**: Service delivery based on standardised template, efficiencies through product exchange instead of maintenance set-up
Global performance management	Performance management through implementing global Key Performance Indicators (KPIs) for the subsidiaries and collecting regular updates on performance; Digital technology offers direct remote service deliver from HQ to local subsidiaries; Issue of spare part management for local subsidiaries to trade-off part availability and financial commitment	Performance management by controlling delivered service quality through customer feedback enabling alignment between subsidiaries and enabling a consistent customer experience
Employee management and training	Staffing: ensuring right person for key positions, especially in management positions of local subsidiaries and regions through defining core competencies needed in these roles. Standardised employee and management training, implemented through HQ and local subsidiaries Global career paths: Transferral of managers horizontally (i.e., between local subsidiaries) and vertically (from local subsidiary to region or HQ) enabling knowledge retention and knowledge sharing within the global network	Employee training and development through standardising processes, implemented by HQ; Cross-departmental meetings (across HQ, regions and subsidiaries) between managers in sales, service delivery, planning, IT etc to align on current issues and approaches
Relationship governance	Importance of contract management to standardise interactions and performance expectations across the global network and integrate learnings in updated contract templates. Relationship with **customers**: Interactions across all three hierarchical levels (HQ, regions, subsidiary), with specific roles. Contracts form important template to define expectations with relational engagements and close interactions between provider and customer defining the nature of the relationship	Contractual governance with external service partners (to whom parts of the service delivery is outsourced), use of contracts to align delivered service quality from external partners with internal expectations of global service performance.

First-order concepts	Second-order concepts	Aggregate themes

First-order concepts:
- Motivation to provide services
- Motivation to provide global services
- Motivation to buy services from global provider
- Drawbacks to receiving services
- Increased efficiency
- Business models
- Commercial set-up
- Repeatable operating model

- Increasing local demand
- Customer segmentation
- Competition globally
- Local disruption
- Legislation
- Regional set-up services

- Global sales
- Global identity
- Global brand
- Creation of regions
- Organisational structure
- Internal complexity
- Internal transition to global operations

- Technical expertise
- Digital technology
- Digital services

- Internal finance flow
- Performance assessment (KPIs)
- Global service quality
- Translating global procedures to local operations
- Local culture
- Problems logistics spare parts
- Performance motivation comparison of global provider
- Network collaboration
- Cross-departmental integration
- Internal communication and reporting

- Training customer employees
- Performance improvements
- Increasing interest in safety
- Safety incidents and management
- Internal improvements in subsidiaries

- Contracting
- Customer contact
- Partnering
- Formal operational interactions
- Informal operational interactions
- Disputes locally
- Management meetings formal
- Informal inter-personal relationships
- Performance evaluation customer

- Staffing
- Subsidiary resistance
- Global career paths
- Employee development

Second-order concepts:
- Service offerings
- Industry developments
- Global standardisation
- Technology
- Global performance
- Additional performance
- External relationships
- Employee management

Aggregate themes:
- Operating model
- Global performance management
- Relationship governance
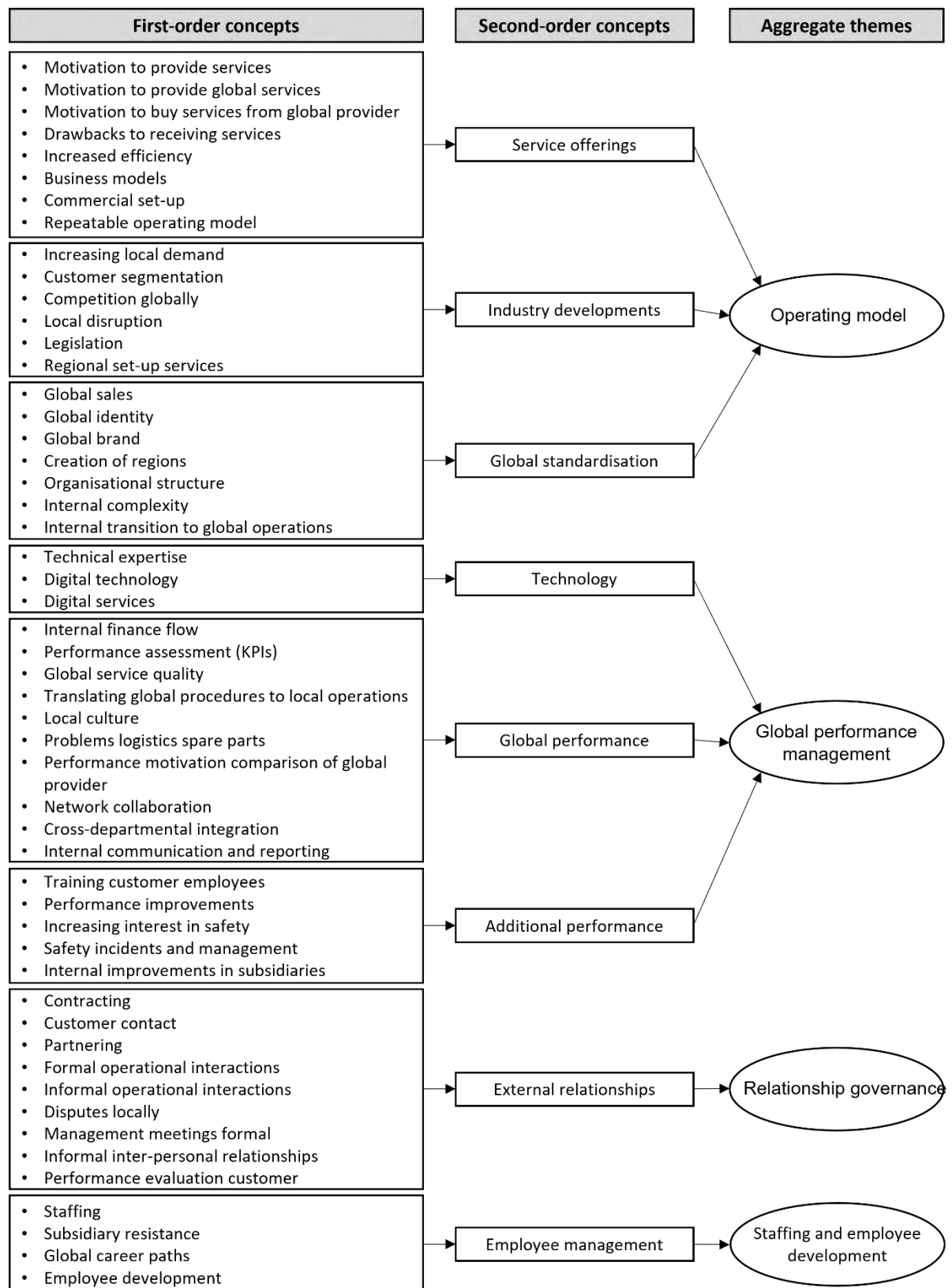- Staffing and employee development

Figure 1: Coding structure

Figure 2: Model of global service provision showing core elements and the connections between them