Scaling a Multidimensional Organization Horizontally

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ABSTRACT

Customers of multinational enterprises (MNEs) exist almost everywhere. Cross border B2C e-commerce is expected to double by 2022 according to Forrester Research. How do MNE's efficiently leverage their product portfolios across geographic markets? This is called *horizontalization*. Synergies exist in terms of resources needed in these products due to relatedness between them. Economies of scale can be exploited to reduce costs of needed resources. In this case study an MNE utilized a multidimensional organization design to reach customers in many parts of the world. The author presents findings from this case and ultimately extracts nineteen propositions to guide support function synergies. Absent these measures, risk of revenue loss is enhanced significantly.

Keywords: global markets; global leadership; enterprise resource planning; capacity management; standardization; synergy; relatedness

DIMENSIONAL DESIGNS

The most common form of multidimensional design is a matrix. Other designs with more dimensions are viewed as novel, with very little coverage in the literature. The idea of the matrix organization surfaced in the 1970's and 1980's. Some who have experienced this design have had difficulties due to the ambiguity in roles. Multinational enterprises (MNEs) have taken this a step further with multi-dimensional organizational designs. While the organizational chart may not indicate this, functionally it is how many of them actually work. Workers may report to one boss, but they are expected to network to be successful in the company. Consequently, when product managers are uncomfortable with the challenges associated with a matrix design, the situation is amplified and more complex in a multidimensional context.

Organizational design changes encourage leaders to network internally, but they are also market driven. Customers have multiple channels in which to purchase the same product from the same company. Companies are giving consumers multiple ways to buy from them. Furthermore, complexity has increased as products are more *technical* and multiple items must integrate or be *regressively compatible* with other parts. Generational expectations have also changed. Younger workers expect that the boundaries in the organizational design and functional silos are easily penetrated. Larger companies leverage *economies of scale* by centralizing certain functions and cost sharing. These functional areas must become centers of excellence for the benefit to be realized and allocation formulas need to be fair to understand performance.

In the context of this research paper, an MDD is discussed that was deployed as an organizational design to meet scaling needs in an MNE. They difference between the matrix structure and an MDD

can be illustrated as per the figure below. In a matrix organization, the node where the two dimensions meet represents the employee who reports to two bosses, potentially with individual objectives or agendas. In the multidimensional model for the case organization, the node is put forward as a profitability enhancing opportunity, or growth synergy opportunity, where representatives who are associated with the lines from each dimension can meet and align the entrepreneurial energy around discovered opportunities. The difference then is that a matrix design has a person at the node, while the MDD in this study has an opportunity at the node.

In this design, managers are stakeholders in the exploitation of discovered opportunities. They own the lines in the structure. The leader in each dimension reports in to the same person, allowing for alignment through a singular agenda. While the profitability of the client oriented profits and losses (P&L) is dominant, the P&Ls for products, the support functions, and for locations are also important as they contribute significantly to profitability. Profitability or cost is, therefore, measured and monitored in each of the four dimensions through dimension-specific P&Ls.

This study explores horizontal scaling within the MDD. This entails scaling using product managers who span geographic locations and support functions needed to service client in an MNE. Only a few studies have been accomplished that explore the implementation of these designs to exploit synergies across physical locations along multiple dimensions (Strikwerda & Stoelhorst, 2009). Some firms studied were organized along the lines of key accounts, professional services, support functions, or facility management (Strikwerda & Stoelhorst, 2009).

The MDD is illustrated in Figure 1 below. To explain how the design works in the context of scaling consider the following. A client (C6) could want more of the company's products or services. A location (L7) could expand its product or service portfolio due to a local market unmet need. An enterprise resource planning (ERP) system (S1) could be used by other divisions to leverage profitability, whereupon they would share the cost of the system, improving profitability at the company. Lastly, a product (Prod 4) could be sold to other clients, possibly external to the company. Selling products at additional locations is horizontal scaling. The scalability of the MDD points to profitability as all of these instances exploit existing skills, infrastructure, and resources. This figure illustrates the scalability of the MDD products and services across business units that have an unmet need regardless of where they are.
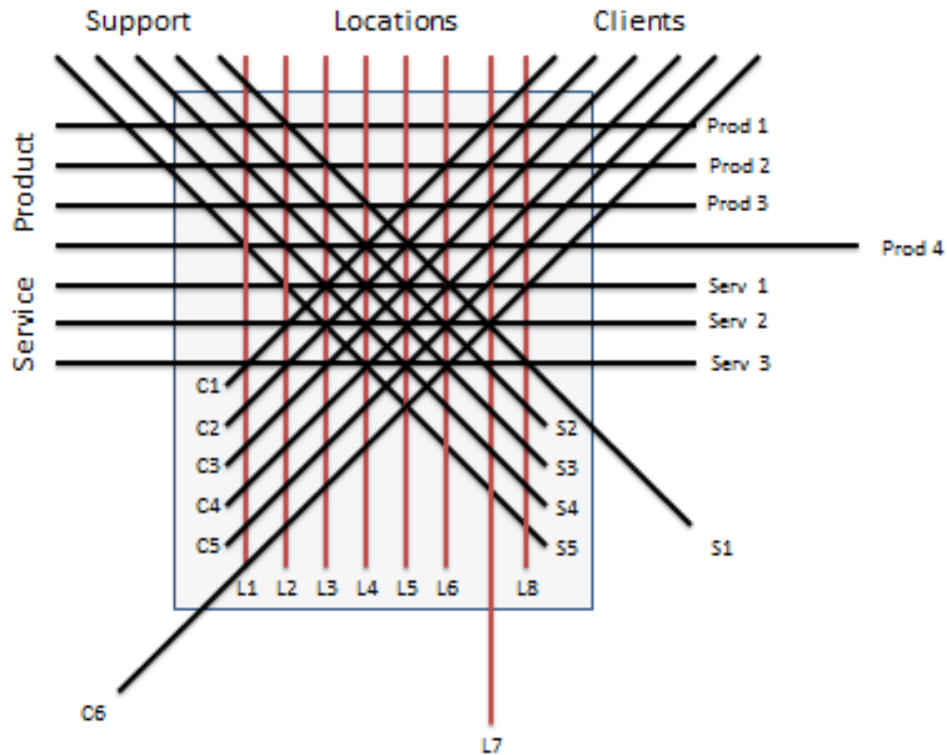
Figure 1. **MDD scalability. This figure shows how the MDD lines can scale depending on the need and the dimension.**

The multidimensional structure deployed in the case company, that is being evaluated in this article, includes the client as the primary profit center (diagonal) (Galbraith, 2005), the products and services as the secondary dimension (horizontal), the locations as the third dimension (vertical), and the performance of support services as a fourth and final dimension (diagonal). The management information system (MIS) makes it possible for all stakeholders to obtain the same information in real-time, eliminating information asymmetries between and across dimensions. Cases are also used across and within all dimensions for monetizing opportunities made visible through business intelligence provided by the MIS or an enterprise resource planning (ERP) and customer resource management (CRM) systems. The goal of all efforts is profits through the exploitation of growth synergies.

Data and Analysis
The purpose of this qualitative phenomenological research study, using Moustakas, (1994) modified van Kaam method, was to explore the real-time experiences of stakeholders, or co-researchers, as they lived and influenced events occurring around them. Moustakas (1994) provided eight essential steps for conducting a modified van Kaam method of data analysis. Each step must be conducted thoroughly on all of the data for each of the participants. The steps are: (1) horizonalization, (2) reduction and elimination to determine the invariant constituents, (3) clustering and thematizing the invariant constituents, (4) final identification of the invariant constituents and themes by the application of validation, (5) constructing an individual textural description, (6) constructing an individual structural description, (7) constructing a textural-

structural description, and (8) finally developing a composite description of the meanings and essences representative of all the research participants (Moustakas, 1994, pp. 121-122).

By examining sense-making and the development of mental models through actual lived, shared experiences, this study captures the subjective processes that have been largely ignored in the context of the connection between organizational design and growth in a multi-unit firm. Using the experience of stakeholders, the author presents a conceptualization of how individual participants in this study made sense of their lived experience. This was an ongoing process for participants as they refined their understanding of lived experiences and established new equilibriums. Consequently, each question included individual textual descriptions as well as composite descriptions concisely oriented and illustrated in a theme map structure. Moustakas (1994) suggested that the integration of textual and structural descriptions into a composite description, such as a relational table, is a path for understanding the essence of an experience.

Coding
Data collection was facilitated by an interview protocol with specific questions oriented in a sequenced schema. Twenty participants were solicited as volunteers from a pool of leaders based on a willingness to share information about the transformation of the case company division. Each volunteer co-researcher participated in the changes personally. Following each question, the participants' response was determined to be linked to the question asked and was determined to be meaningful prior to continuing. Each answer was recorded and numbered. For example, *RH25* was the 25th data entry answer from RH. An answer could trigger a clarifying question, or a question formed to solicit a more fulsome answer, if needed. The additional information modified the answer and once again was determined to be fulsome or not. The data was added then to the data sheet and coded. Sub-code themes were also determined and grouped by code and sub-code. The data was surveyed by the author, who, due to personal experience, was able to apply an *analysis for good* (ANOG) to validate the collected statements. Slight modifications were made as needed to reduce the noise in the data and ensure completeness and clarity. This was accomplished by consolidating like data points and simplifying others by stripping out noise and redundancy in the answers. The data was then re-sorted and generalized through categorizing. A pivot-table was used to extract themes in the wording. The curated raw data was then posted in a table. In some cases most of the themes were unique, in which case a table was not used. From this data, dependencies, relationship, and the sequence of events were determined and organized into a theme relationship map. In some cases the data collected appeared as though the participant was confused about the question. In these cases the author followed up with the participant and then added the newly acquired information to the raw data previously collected.

Patterns that emerged in the data are presented as textural responses (what happened), structural responses (how did it happen), or composite descriptions (what the group experienced). Data responses that occurred most frequently within the theme category were given more significance and were typically mentioned first. Data was interpreted into theme patterns. These were broken into themes and then concisely into propositions, or findings of the study. Data items that referred to individuals, functions, line of business, locations, systems, or company names were obfuscated, eliminated, or given a pseudonym. The propositions, or findings, were formed and listed numerically. Within each proposition, a two-word summary was formed along with a statement that sums up the finding.

Horizontalization

Horizontal leaders in this case study are defined as leaders with responsibility for any aspect of a product or service category through direct contact with an asset or a deliverable (Van Wart & Kapucu, 2011). The functions within this scope included product, support function, location, and customer related functions. The table below illustrates the critical themes in the coded data collected from participants who provided 17 themes and 267 rich data descriptions with regard to their role and the roles of their peers. This data explains what the participant leaders learned as a result of the transition to an MDD about what they would need to focus on in order to successfully execute their responsibilities as an effective leader.

Table 1. Horizontal role attributes by category.

Theme Category	Count
ERP	40
Capacity	33
Cost	31
Standardization	26
Communication	24
Revenue	21
Performance	17
Leadership	14
Strategy	11
Financial	10
Problem solving	8
Knowledge	7
Security	7
Best practices	6
Asset	5
Transparency	4
Culture	3
Total	**267**

ERP System

Williamson (1975) suggests that corporate management needs to control the opportunism of business level managers who would otherwise neglect their contribution to cross-business issues and shared resources (Luo, Van de Ven, Jing, & Jiang, 2018). The transparency of an organization-wide business system enables a decentralized approach. It is then no surprise that the data suggests that MDD leaders can contribute to profitability. They need to be accountable for results. This accountability is augmented and encouraged by the transparency provided by an ERP system. Consequently, the first category in the horizontal theme data table relates to the ERP system. It is no surprise that leaders in an MDD who influence multiple facilities in different areas of the world value an ERP system that enables them to see what is happening at all locations simultaneously.

Without such a system, change management becomes very difficult. The raw data suggests that the overall concern is the ability to use the system consistently. This is critical such that data is entered correctly with the consequent benefit of the exploitation of that data. The raw data suggests that MDD leaders have six areas of concern; (a) that existing departments are using the system correctly, (b) that new modules become available for critical workflows that exist or may be deployed, (c) that other departments in the supply chain are brought into the system, (d) that other disparate systems are supported or integrated, (e) that development efforts are optimized, and (f) that tools are developed as appropriate and timely. Further detail in the data suggests that for (a) existing departments may need training before they use the system. Leadership's commitment to the system is also necessary for the transition.

> *"[We need to] partner with local teams to coordinate deployments and enhancements of [the] ERP for [product] pipeline services." (RH25)*

> *I will be joined at the hip on security / chain of custody issues. This area is getting more significant all the time and we need to make sure the worldwide (WW) facilities are unified in terms of compliance and process. We also need to work together on making the ERP [Line of Business] management functions so they properly track assets for all our facilities. (RH144)*

Additional data for (b) suggests that there is the need for several specific modules within functional areas that were called out by the stakeholders, in this case billing and ingesting source materials. With these new modules there is connectivity between functions within a business unit that results in data entry efficiency, supply chain visibility, and the ability to extract business intelligence from the data.

> *"[MDD leaders need to] be a hub to communicate with each facility and prioritize internal/ external client enhancement request. When [a] global enhancement is being deployed, communicate with the each facility beforehand to incorporate requests from individual facilities." (RH52)*

Additional data for (c) suggests that there are other businesses that could be brought into the system that have not yet been introduced. This would create connectivity with other parts of the supply chain, enhancing data visibility and trends.

> *"[MDD leaders need to] assist in rolling [the ERP] out to our other locations." (RH57)*

Additional data for (d) suggests that there is the need, prior to their integration, for the support of other existing systems. This is necessary for business continuity and data exploitation. Further efficiencies are gained by repurposing existing synergistic modules in new areas. Where systems already exist, the code can be imported and leveraged, eliminating development efforts.

> *"[The] coordination and influence of ERP development will be more effective and efficient if we stay aligned with our priorities." (RH131)*

> *"Migration to the ERP will also be a big area for [LOB] and it needs to be done as a coordinated effort and leveraging [name] experience with business systems." (RH136)*

Finally, additional data for (e) suggests that there is the need for development that is collaborative, locally sensitive, sensitive to client requests, and sensitive to internal enhancement requests. The purpose of system development efforts is to promote consistent usage that makes the system agile, scalable, and attracts new business. The system optimizes workflows that evolve and so constant updates are needed.

> *[MDD leaders can] help me push projects like the implementation of a physical source retention policy for all sites so vaults do not fill up with material and increase storage needs/costs. [This] could include helping push the ERP enhancement to include 'source return date', implementation of new policy in Client Services. (RH62)*

To conclude, it is clear that a system, continuously in the improvement-deployment cycle, is necessary for the role of a horizontal leader in an MDD with responsibility over multiple facilities. The figure below illustrates the theme dependencies in the data. The coding path for the data map starts with the theme category, then goes to the theme attribute, and then to the raw data theme.
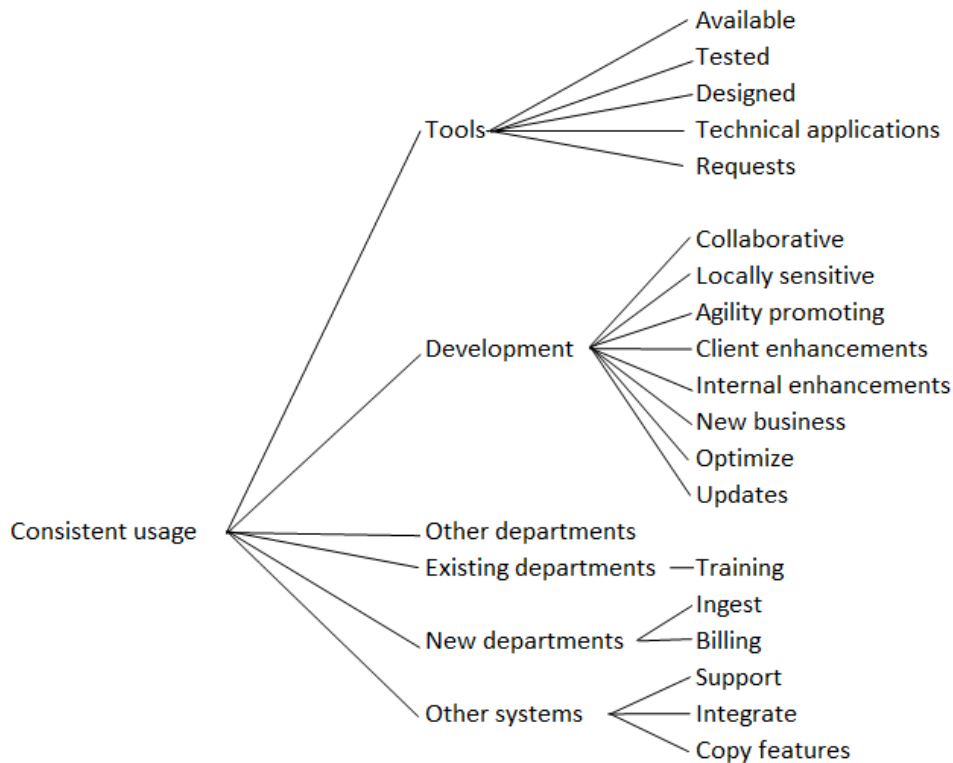

Figure 2. **ERP: Consistent usage theme map. This figure breaks out the consistent usage of the ERP as a theme category into descriptive sub-groupings and contributing components.**

In summary, the data suggests that ERP systems are critical for the realization of synergistic growth in a multi-unit firm. An ERP system is an asset to be used. The utilization of the system is dependent on functional capability, the consistent usage of the capability, and the extent of coverage that the system has on the supply chain. This capability must be location agnostic in a fast-paced global supply chain.

The following propositions summarize the key findings of this section:

1. Proposition 1 (system usage): The consistent accurate use of an ERP is an aligning platform that enables accountability for performance and synergistic growth through transparency.
2. Proposition 2 (deployment rate): The rate at which enhancements, called out by stakeholders, are developed and deployed broadly relates to the growth rate of an enterprise in a moderately dynamic marketplace.
3. Proposition 3 (system consolidation): The transparency of relevant data is enabled by the consolidation of disparate systems that hold valuable data otherwise not easily made available.

Capacity Management

Horizontal leaders in an MDD indicated, by way of the second most frequently cited category, that management of capacity is critical to their role. The need for coordination of capacity on a global scale is critical to the success of business units that are constrained by resources being allocated to a business with extreme swings in capacity demand as illustrated in the figure below. This business phenomenon relates to profitability as local markets often offer up revenue opportunities that are beyond the capacity of the local facility, either by volume or type, which may be followed by times of very low volume. A significant concern of the businesses is the ability to sell any product to any market size using the strength of the MDD. The raw data suggests that the overriding concern here relates to the ability to utilize capacity on-demand in accordance with the work load.

> *"[MDD leaders] enable [the company]...facilities WW to leverage one another*
> *as a 'globalized' capacity to enable load balancing, service flexibility, [and*
> *the] capture of 'limitless' customer demand." (RH98)*

The desirable attributes of capacity availability are (a) scalability, (b) local availability, (c) strategic planning, and (d) the appropriate allocation of capacity. Capacity management is directly linked to meeting client expectations and profitability. Additional data for (a) includes the ability to give the impression to clients and location leaders that the *production network* has *infinite capacity*. This encourages a willingness to take on *bulk* orders and *rush* orders. This has become a market expectation trend.

The MDD leaders also need to encourage locations to scale back capacity when the demand shrinks. This may depend on the ability to move work from location to location. Additional data for (b) suggests that capacity planning needs to be local, cross-business, and external to the division. Additional data for (c) suggests that capacity strategy needs to include an off-load methodology that includes the financial aspect of site-based revenue recognition and embraces the idea of functional centralization. Finally, additional data for (d) suggests that the allocation of capacity is driven by visibility into available resources, especially any latent capacity. A leader's success in the MDD relates to the ability to manage capacity effectively across the network of facilities; however, resources expended need to match the work that is being run.

> *"[MDD leaders] determine the needs of each local facility in ... production*
> *and level of support required." (RH14)*

> *"[MDD leaders] work closely with facility leaders worldwide, to establish*
> *effective load balancing and off-load methods to eliminate capacity*
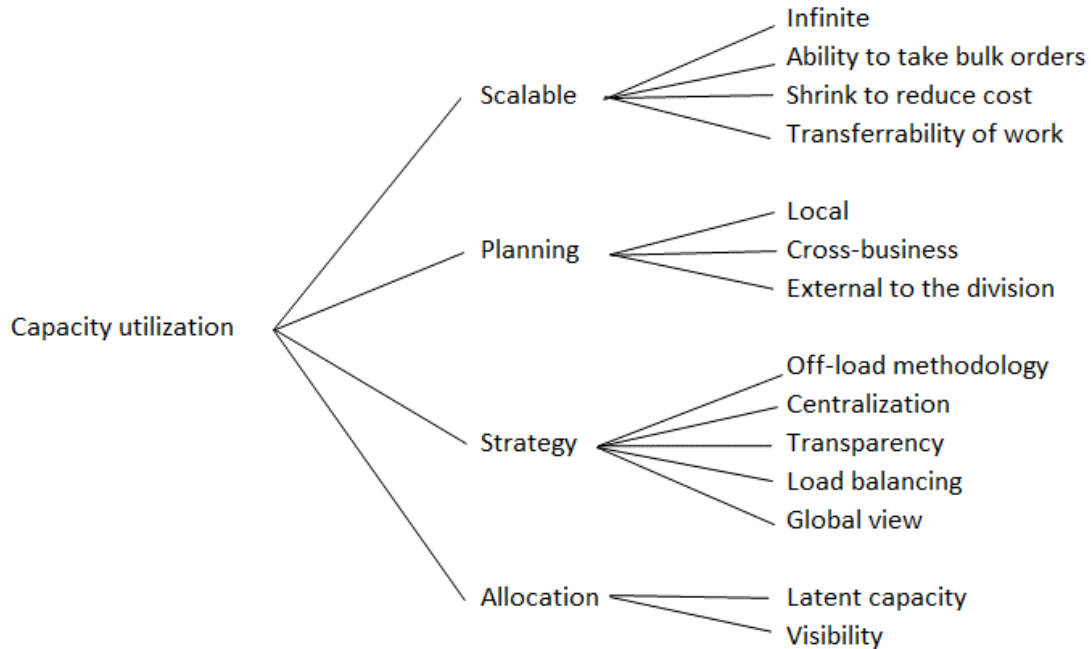> *constraints in local offices." (RH16)*

***Figure 3.* Capacity utilization theme map. This figure breaks out capacity utilization as a theme category into descriptive sub-groupings and contributing components.**

In summary, the data suggests that capacity is critical to the network-based production (NBP) model. MDD leaders are able to scale capacity within the network, regardless of volume trends. This includes the ability to take spikes in a pooled capacity construct. This capability is dependent on the ability to shift work anywhere in the network and is subject to planning, a methodology for work shifting, and transparency about capabilities and resources.

The following propositions summarize the key findings of this section:
1. Proposition 4 (allocated capacity): Clients will allocate volume work to vendors perceived to have both the technical ability to meet their specifications and the availability of more than sufficient capacity to process the volume.
2. Proposition 5 (local markets): As local markets originate orders, local facilities need to leverage known available network capacity to meet client expectations.

Cost Mitigation
The third category within the horizontal role attributes relates to cost management. Profitability relates directly to cost efficiencies and mitigations in a dynamic environment. Existing and growth-oriented revenue needs to be fulfilled in the most efficient way possible. These efficiencies have the follow-on effect that leads to the ability to take on more work and increase market share. An MDD leader needs to understand and manage cost in order to help the organization experience growth synergies as illustrated in the figure below.

> *"[I] drive various cost savings initiatives, locally and globally, in regard to stock purchasing, courier and freight services, and off-site media storage."*
> *(RH235)*

The desirable attributes of cost mitigation are (a) measurement, (b) waste reduction, (c) workflow efficiency, (d) centralization, or pooling resources, and (e) workflow alignment. Additional data for

(a) suggests that measurement should include accurate cost allocations, financial performance measurements, and the application of key performance indicators that accurately reflect the performance of the business unit. Additional data for (b) suggests that there is a need for waste reduction that includes streamlining, lean sigma projects, and a zero defect mentality. Additional data for (c) suggests that focus needs to be placed on workflow efficiency in two focus areas: core workflows and profitability by line of business. Additional data for (d) suggests that there is opportunity for centralization, specifically for ingest, but also for other functional areas. Finally, additional data for (e) suggests that workflow synergistic alignment can help to negate redundancy, but an MDD leader should also look outwards to discover opportunities for other business consolidations. In conclusion, the MDD leaders indicated that cost management was critical to MDD leadership.

"[I] increase LOB profits by creating efficiencies and lowering costs within the operation." (RH178)
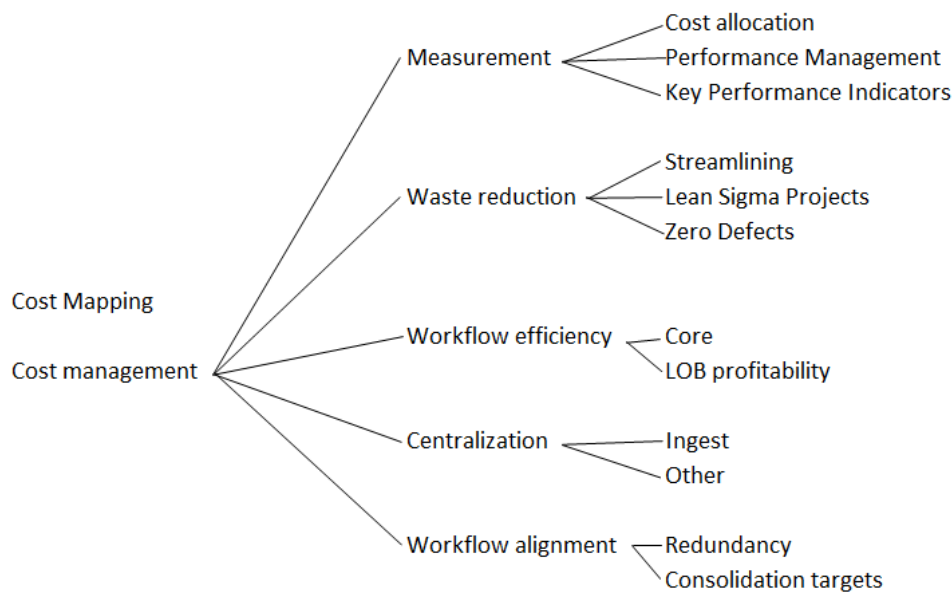

Figure 4. **Cost mapping and management theme map. This figure breaks out cost mapping and specifically cost management as a theme category into descriptive sub-groupings and contributing components.**

In summary, the data suggests that cost mapping is critical to the measurement of business unit performance. This cannot be achieved without transparency, accuracy, and timely reporting. Cost performance is enhanced by waste discovery and reduction. This is further enhanced by opportunities for alignment that provide for compatibility within workflows. Core workflows experience most of the volume and should be given significant cost-performance attention.

The following propositions summarize the key findings of this section:
1. Proposition 6 (cost measurement): Accurate cost measurement for each LOB creates awareness of workflow profitability variation that may lead to targeted cost mitigations.
2. *Proposition 7 (workflow design): Workflow synergistic alignment and capacity pooling, where there is demand variability, improve utilization and increase profitability.*

Standardization
The fourth category relates to activities concerning unity and consensus. The MDD leaders brought up standardization as it ensured performance through the reduction of complexity. In a chaotic environment, the enhancement of predictability is desirable for financial and capacity forecasting accuracy.

> *"[I will] establish [location] as a center of excellence for… workflows through bi-directional visibility, process alignment, and procedural standardization."*
> *(RH74)*

The beneficial attributes of capacity availability are (a) unification, (b) workflows, (c) scalability, (d) data efficacy, and (e) predictability. Additional data for (a) suggests that unification enables the capability to update a system, to audit a system, to take a system to another facility, and to describe the system with common semantics. Additional data for (b) suggests that standardization as illustrated in the figure below is made possible in workflows through the deployment of work instructions and procedures that guide the activities in the operation. Standardization is also possible with inputs and outputs that have meaningful specifications that are universally known. Additional data for (c) suggests that scalability is important for, and a constraint for, growth. Additional data for (d) suggests that standardization enables the use of metrics. Without metrics, an operation cannot assess its performance status. Additional data for (e) suggests that predictability is a benefit of standardization that enables accurate and profit bearing pricing, the creation of tools, and consistency.

> *"[I will] partner with local leaders to drive unification, standardization, centralization, and operational efficiencies across key WW locations."*
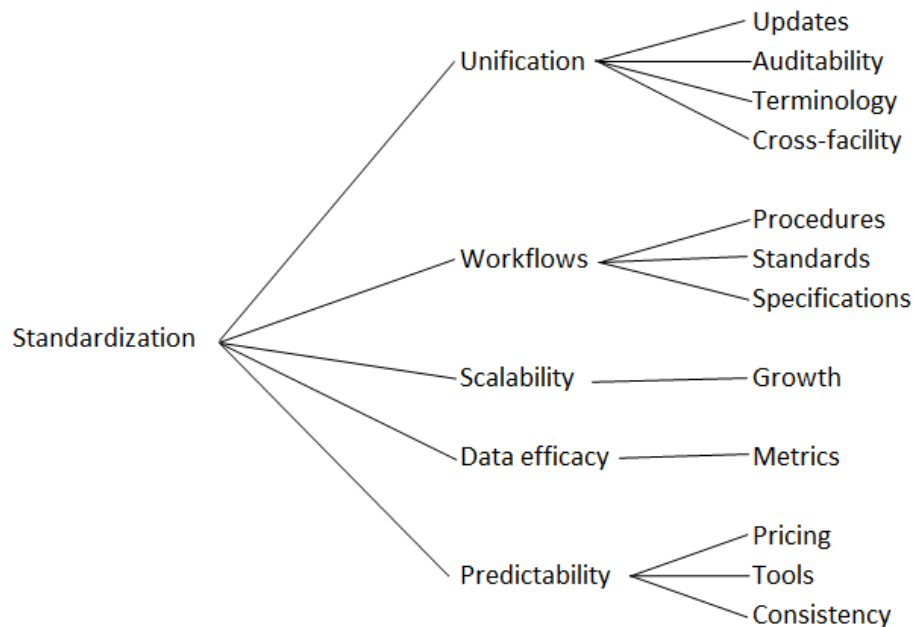> *(RH264)*

Figure 5. **Standardization theme map. This figure breaks out standardization as a theme category into descriptive sub-groupings and contributing components.**

In summary, the data suggests that creating commonality and compatibility between workflows in all locations is desirable. Standardization, guided by documentation, can achieve scalability. Performance predictability is encouraged by tools, automation, and performance monitoring. Unification of practice and semantic unity enable both monitoring and the discovery of enhancements.

The following propositions summarize the key findings of this section:
1. Proposition 8 (chaos reduction): Standardization is a complexity reduction technique that enhances scalability, capability, predictability, updatability, and transportability in a chaotic environment.
2. Proposition 9 (best practice): Standardizing on best practice includes both deploying a common language needed for more accurate profitability measurement and creating a platform for efficient organizational evolution.

Communication
The fifth category of interest within the horizontal roles of an MDD relates to communication. While communication is often cited as a reason for issues, its significance is typically underestimated. Unbelievable communication may create cognitive dissonance and frustration. Dissonance could occur when logic, opinions, and environmental knowledge are inconsistent (Festinger, Riecken, & Schachter, 2008). MDD leaders need to exchange information that would result in dissonance reduction. Furthermore, there is an optimal level of communication that, when exceeded, is ignored and when minimized, creates an information vacuum that breeds insecurity and frustration. An MDD leader needs to understand the optimal way to communicate, recognizing that execution is situational.

> *"[I] establish cohesion and strategy of inter-facility operations, and unify best practices among … WW … facilities through free-flowing communication."*
> *(RH95)*

> *"[I] establish lines of communication between [support functions] encouraging cooperation and streamlining intercompany transactions."*
> *(RH193)*

The data suggests that the desirable attributes of communication relate to (a) plans, (b) transparency, and (c) the method used. Additional data for (a) suggests that communication plans need to include a deployed escalation plan, a single point of contact, periodic communication, and a flow of information.

There is also an optimal level of transparency that should be achieved through the communication strategy. MDD leaders required that there was the ability to be transparent about policies and capabilities. They wanted a common terminology to enhance communication efficacy. Additional data for (b) suggests that, like (a) above, communication needs to be routed to a business unit, across business units, to a client, or to a vendor. While routing is important, transparency provides information about policies, capabilities, and includes terminology that is understandable both internally and external to the business unit. Additional data for (c) suggests that the method chosen is relevant. MDD leaders need to be able to hold a presence and communicate clearly one-on-one and in a video conference event, as applicable. The importance of one-on-one communication

should not be underestimated. The ability to read and react to body language may be critical to both maintaining attention and guiding thought patterns. The rate at which an organization or individual is influenced may depend significantly on face-time. To be successful in achieving growth synergies an MDD leader needs to be an effective communicator both internal and external to their assigned organization as illustrated in the figure below.

"[I] work closely with facility leaders worldwide, to develop and implement organizational communication plans for effective communication between all key [operational] groups in WW [LOB] operations." (RH269)
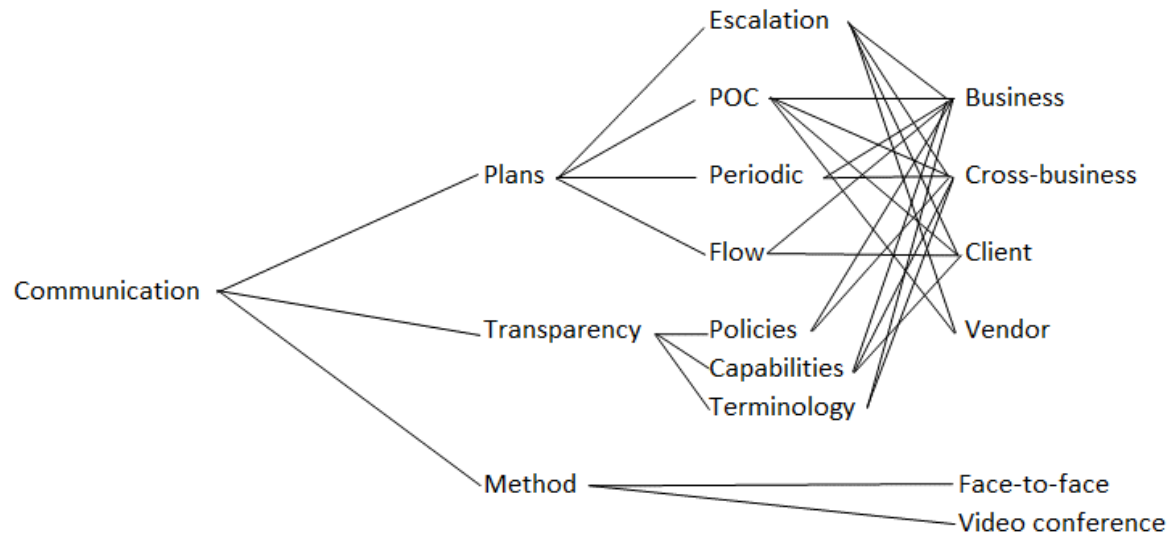

Figure 6. **Communication theme map. This figure breaks out communication as a theme category into descriptive sub-groupings and contributing components.**

In summary, the data suggests that an MDD leader needs to be able to create and execute communication strategies both internal to the business unit and external. Clients have commented in surveys about their desires regarding the case company's ability to communicate.

"[I will do a] better job of interacting across all company departments in communicating difficulties in working with certain formats and/or advising easiest way to proceed with [workflows] when multiple options exist." (CS52)

The complexity of these strategies should not be underestimated. Not only does the strategy include content, but it also includes frequency, audience, volume, method, and consideration for the local market "climate." An MDD leader needs to be able to correctly plan for each of these variables. In addition, the MDD leader needs to determine the optimal method for delivery of the content.

The following propositions summarize the key findings of this section:
1. Proposition 10 (structured communication): Communication is situationally routed and structured to include escalation paths, optimal timing, and a focused scope.
2. Proposition 11 (communication strategy): Communication should be optimally frequent, transparent, correctly routed, and timely executed to reduce ambiguity driven waste.

Revenue Growth

The sixth aspect of *horizontalization* relates to revenue, specifically as it relates to profitable growth. Growth synergies, when experienced, will improve financial performance depending on the revenue opportunity. With cost controls, this will turn into an enhanced contribution margin. To ensure profitability, revenue must be pursued with a margin in mind. An MDD leader needs to be able to stimulate revenue locally and globally.

> *"[I will] partner with both inter-divisional and extra-divisional resources …*
> *to capitalize on synergistic opportunities and coordination of business*
> *strategy to motivate revenue capturing opportunities along the … supply*
> *chain." (RH102)*

The desirable attributes of capacity revenue growth potential relate to (a) adjacent markets, (b) a growth strategy, (c) portfolio diversification, and (d) profitability enhancement activities. Additional data for (a) suggests that it could be possible to transform existing products, services, and infrastructure to penetrate adjacent markets with products that are synergistic to the existing portfolio, infrastructure, and workflows. Additional data for (b) suggests that growth should be considered in the context of local markets, across geographic boundaries, with the goal to increase market share, and in regards to new business opportunities. Additional data for (c) suggests that diversification should be pursued with two interests in mind: expanding the product and service offering and creating next-generation products to stay ahead of the industry and penetrate or create new markets. Additional data for (d) includes the ability to pursue profitability enhancement by billing for line items that are not being used and also through consistency and integrity in the rate card itself. Pricing schemes may not be appropriate. Billable items that were previously given away for free may need to be considered for invoicing to enhance profitability as illustrated in the figure below.
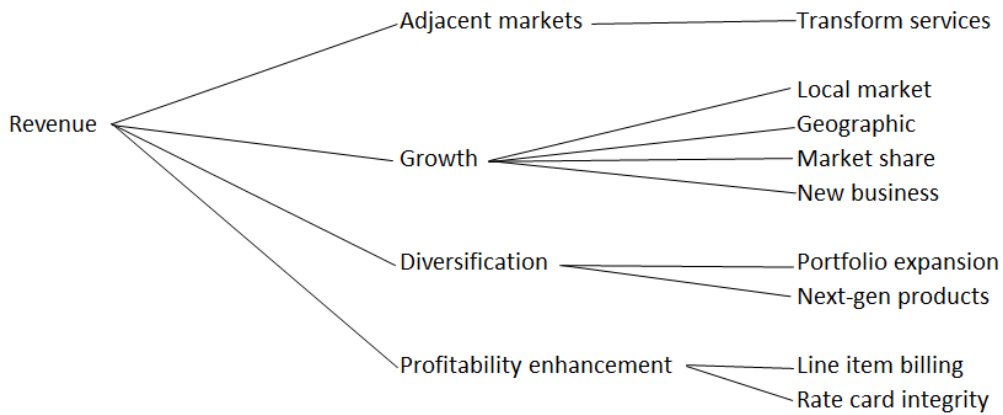

Figure 7. **Revenue theme map. This figure breaks out revenue as a theme category into descriptive sub-groupings and contributing components.**

In summary, the data suggests that an MNE will need to transform their services and mindsets to capture revenue in other sectors. Addressable markets need to be understood, especially with regard to profitability opportunity. The product portfolio may need to be expanded to include products that will be needed by clients. Getting in on the beginning of the product or service life-cycle provides the opportunity for enhanced profits. This, however, needs to be balanced against

development costs. During a billable life-cycle a billing strategy must be optimized to harvest as much profit from the associated LOB as is possible.

The following propositions summarize the key findings of this section:

1. Proposition 12 (adjacent revenue): When existing workflows and infrastructure can be used to deliver new products and services to an adjacent, new, or similar market in a different geography, there may be an opportunity for synergistic profitability.
2. Proposition 13 (structured pricing): Pricing structures applied after the jump-off point in the life-cycle of a product or service may need to be reviewed to include line items that previously were discounted or given away as loss leaders.

Operational Performance

The data suggests that the MDD leader must understand operational performance to be an effective contributor to company growth.

> *"[I] work closely with facility leaders worldwide, to improve business metrics and operational data (lowering costs, increasing throughput, higher quality, etc.) on … [LOB] by transforming the way we perform various … services."*
> *(RH1)*

> *"[I] provide global operations support to local office leaders for the expansion of … services, with a focus on scalability and reliability." (RH22)*

According to the MDD leaders, the desirable attributes of operational performance are (a) security, (b) transparency, (c) problem solving, (d) financial aspects, (e) best practices, and (f) asset management. Additional data for (a) suggests that security is directly related to compliance with controls already in place. Even so, the business unit is continually taking advantage of the opportunity to enhance controls proactively in light of the dynamic threat-scape. Additional data for (b) suggests that transparency is bi-directional; the role of listener and speaker may alternate. This information exchange includes requirements or specifications, a performance scorecard that reflects quality and reliability, and the deployment and exposure of effective productivity metrics. Additional data for (c) suggests that problem solving is critical to revenue growth and includes resolving new workflow deployment issues, corrective actions when errors are made, the ability to discover opportunities, the ability to innovate, and the introduction of value-added products that solve customer problems. This is important to clients' perception of the case company's abilities, as reflected in a client survey response.

> *"…the gap has now been plugged and was dealt with swiftly and professionally." (CS34)*

Additional data for (d) includes financial aspects of business unit performance, including fair and acceptable revenue allocations, billing velocity that does not tie up cash, and standard financial reporting through a worldwide P&L that is timely and meaningful. Additional data for (e) suggests that best practices are important to capture, create, model, and propagate horizontally across locations. MDD leaders help unify operations around excellence, produce skills, and lead continuous process improvement. The data specifically suggests an appropriate methodology, lean sigma, as an example. Additional data for (f) suggests that assets are important to clients and must be tracked while they are in the custody of the case company. Additionally they have to be purged or immediately returned once they have been used. Otherwise, they are a security risk and a

burden to the vault. Best practices apply to a variety of operational functions, all of which are the responsibility of horizontal leaders who push policy across locations to improve operational performance as illustrated in the figure below.

"[I] partner with local leaders to drive unification, standardization, centralization and operational efficiencies across key WW … locations."
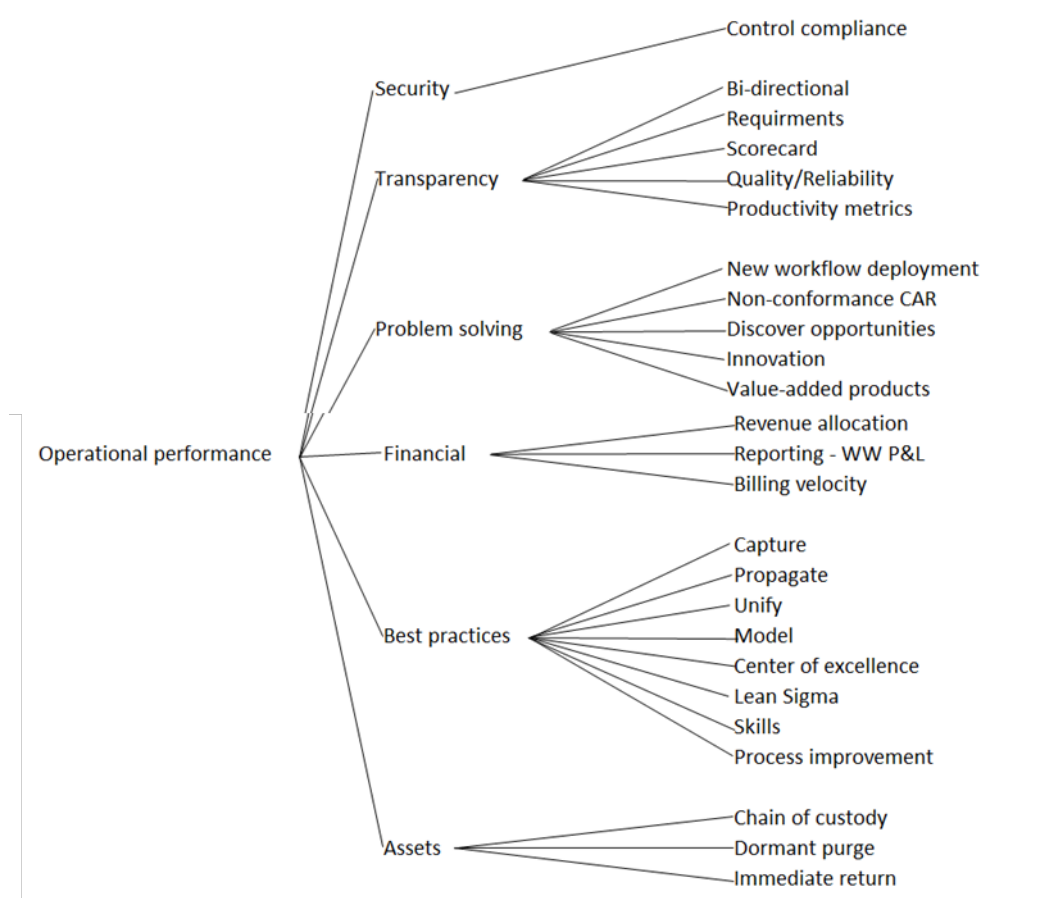*(RH7)*

Figure 8. **Operational performance theme map. This figure breaks out operational performance as a theme category into descriptive sub-groupings and components.**

In summary, the data suggests that operational performance is associated with practice compliance, transparency, and the ability to solve problems. The ability for an MDD leader to be aware is enhanced by transparency of information that is relevant. Compliance allows for control and entropy mitigation. Controls and practices need to be optimized, effective, thoroughly deployed, and continuously evolving. Awareness and compliance provide a platform from which the organization can evolve. Organizations should be seen as organic or complex adaptive systems (Burns & Stalker, 1992). Similarly, Eisenhardt and Bhatia (2002) through complex adaptive systems theory, describe a naturalistic approach to organizing through the actions of a change agent. The gap between a competitive advantage and the current state is found through transparency and gap closure by the change agent. The ability of an organization to learn from issues and close these gaps promotes performance that stimulates profits and growth. As Freeman

(2000) suggests, organizations propagate intentional action at the rate that the organization can absorb it.

The following propositions summarize the key findings of this section:
1. Proposition 14 (liability prevention): Compliance with liability prevention controls must be at least as dynamic as the evolving threat-scape.
2. Proposition 15 (resolution transparency): Transparency that leads to client and business problem resolution and innovation is multi-directional and speed sensitive.
3. Proposition 16 (process grading): Financial and asset management processes should be graded on their accuracy and speed.
4. Proposition 17 (propagation capacity): An appropriate methodology is needed to propagate best practices at the rate of absorptive capacity.

Summary of Horizontal Themes
This section exposed data collected from horizontal leaders about attributes needed to be successful in a MDD. It is clear from the data that horizontal leaders are primarily concerned with the consistent usage of a business system for transparency, effective capacity utilization, cost mapping and management, standardization, an effective communication strategy, a revenue growth strategy, and leadership that results in effective operational performance. The evidence from this study suggests that horizontal leaders who effectively influence the horizontal dimension in an MDD are critical to growth synergies in a multi-unit global enterprise in a moderately dynamic market. Horizontalization through effective, focused strategy also leads to improved profitability.

Contributions to Theory
The primary contribution of this article is new empirical insights about the effects of horizontalization on growth realization in an MNE organized as an MDD. These results are, therefore, relevant to the achievement of sustained profitability and competitive advantage by focusing a multi-unit firm on business unit relatedness and strategic complementarity. Nineteen propositions were extracted from the participants instigated by a precipitated event that contribute to theory on the horizontalization of an MDD. These outcomes that influence change efficacy are described and useful for sustained corporate advantage.

The author anticipates that these propositions will stimulate further research as organizational behavior is significantly complex and situational. These observations are also meant to stimulate further thinking. By studying the distinctive features of horizontalization in an MDD, the author hopes that interest has been sparked on researching the design and application of further more effective and efficient horizontalization techniques.

This research attempts to contribute to organizational theory by exploring an innovative multidimensional organizational design with the advantage of collaborative opportunity exploitation in a dynamic market. In the company case, the design includes dimensions that relate to products and services, geographic locations, support functions, and clients. Each dimension is not *flat*, as a layer might imply, but rather is intrinsically variable. For example, products within this dimension are different in complexity, volume, capacity consumption, quality rigor, seasonality, and sensitivity to penalty or liability. Within the support functions there is variability

in team expertise and the nature of the support, as examples. Support could be present in the form of ERP enhancements or module creation, or storage, and the availability of workflow assets. There is variability in the client dimension with regard to size, rate structure, administrative load, *hunter vs. harvest* activity, and the quality of relationships. Geographic locations vary in culture, size, and mix of products used in local markets, further strengthening the idea of a dimension rather than a layer (Armstrong & Cole, 2002). This multidimensional organizational design is applied to a multi-unit business that includes a global value chain. The MNE must be competitively agile in its dynamic market while managing through an otherwise complex organizational construct. The author proposes a minimalist role of the corporate center with the addition of secondary work structures, or collaboration platforms, that exploit capabilities across business units (Wiessmeier, Axel, & Christoph, 2012). These lateral integrative mechanisms reduce costs that would otherwise be overhead in a traditional M-form structure.

The M-form has come into question with regard to its relevancy in modern MNEs (Bartlett & Ghoshal, 1993; Berggren, 1996; Ruigok, Achtenhagen, Wagner, & Ruegg-Sturm, 2000). Even Alfred Chandler (1962), the economic historian from Harvard who documented the emergence of multidimensional organizations in the first half of the 20th century, suggests that structure must follow strategy to avoid inefficient results. In the 1970s there was interest in organizing MNEs along several dimensions in a number of publications that were concerned with the dynamic markets in which multi-national corporations operated (Ackoff, 1977; Bartlett, 1982; Coggin, 1974; Prahalad, 1980; Prahalad & Doz, 1979). The M-form design drives high employee costs, internal battles over resources, the lack of standardization, the lack of collaboration, and the loss of market opportunities contributing to tension about synergy exploitation (Strikwerda & Stoelhorst, 2009). This tension needs to be resolved, at least partially, through an organization design that involves multiple dimensions without exacerbating issues around resources and market opportunities. Furthermore, the structure needs to drive clarity and accountability which is an inherent weakness in matrix structures due to the disparate interests of multiple bosses (Galbraith, 2009). Further organizational design evolution is needed for moving MNEs from a resource-centric industrial economy, focused on exploiting tangible physical resources, to a customer-centric, service-oriented economy that is focused on exploiting intangible knowledge-based resources (Davis & Thomas, 1993; Grant, 1996; Markides & Williamson, 1994).

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