Original Paper

A Tactical Framework for Market Penetration with a Multidimensional Organization

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Abstract

A critical element to the growth opportunities in existing markets and new markets in neighboring sectors is penetration strategies. An entrepreneurial business that is interested in leveraging synergies to grow profitability must understand the dynamic nature of the market so that a suitable strategic posture can be taken. This strategy could be driven by tactical and deliberate action, or another exogenous force. The opportunities are there in many sectors and customers of multinational enterprises (MNE's) exist almost everywhere. Cross border B2C e-commerce is expected to double by 2022 according to Forrester Research. So, how do MNE's efficiently penetrate within segments and across geographic markets? Scaling opportunities exist across a multidimensional design (MDD) and the synergy opportunities between sites. This article describes methods and capabilities of market penetration ideally suited for an MDD. These themes emerged in the data when MDD leaders were asked about the roles of each function. 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 ten propositions to guide client penetration strategy. Absent these measures, risk of revenue loss is enhanced significantly.

Keywords

global markets, product synergies, market penetration, systems, infrastructure, cost competitiveness

1. Introduction to 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 (MNE's) 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. Business development employees may report to one boss, but they are expected to network to be successful in the company. Consequently, when product managers, for example, are uncomfortable with the challenges associated with a matrix design, the situation is amplified and more complex in a multidimensional context.

Consideration needs to be given to the inadequacies of a matrix design so that similar risks of failure are not experienced in a multi-dimensional approach (Galbraith, 1977, 2009). The matrix design should be thought of as a two-dimensional construct that typically is separated functionally and geographically, for sales, and non-geographically, for support functions. Other construct variations exist. Some inadequacies with a two dimensional design include unclear responsibilities, a lack of accountability, political battles over resources, a risk-averse behavioral pattern, and loss of market share due to a lack of focus (Galbraith, 1971; Life in a matrix, 1980; Strikwerda & Stoelhorst, 2009). On the other hand, business units are not completely self-contained as they depend, to some extent, on external resources for achieving their objectives (Barney, 1991; Bower, 1986; Gupta & Govindarajan, 1986). While the M-form (hierarchical design) still dominates thought processes, the actual tendency is for firms to move away from the underlying logic of the M-form to realize growth synergies (Strikwerda & Stoelhorst, 2009). While mental anchoring on the M-form can render an MNE obsolete, or make a transition difficult, an effective multidimensional structure can enhance an MNE's growth synergy exploitation capability and preserve product managers' status, power, autonomy, and self-interest. With this in mind, and considering that most MNE's are actually multidimensional, how then can an MNE scale horizontally? This article will discuss this tactically using a case study.

People can say that they are *matrixed*. The transition in reality has occurred from *matrixed* to *networked*. Many large companies have abandoned the former for the latter. These scenarios are different. To succeed in a multidimensional business, company stakeholders (those who contribute to and benefit from an employer) need to know how to help their organization succeed. An employee's boss may be influenced by another leader in the organization with regard to performance reviews and promotions of employees that report to them. Similarly, taking into consideration that employees are the most important asset in a company, companies need to scale quickly to harvest revenue from dynamic markets. This dynamic makes resource sharing critical and is a challenge in a multidimensional design.

These organizational design changes have also been 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. Companies are also offering vertically integrated solutions (a full kitchen) or bundles of product from warehouse stores (pallets of tile for kitchen and bathrooms). Either way, complexity has increased as products are more *technical* and multiple items must integrate or be *regressively compatible* with other parts. Additionally, the customer experience has taken on a new meaning, further adding to the complexity of a purchase. Additional revenue streams and market

penetration opportunities come from warrantees and the ability to service the product sold.

Generational expectations have also changed. Younger workers expect that the boundaries in the organizational design and functional silos are easily penetrated. Consistent with the networking idea, new workers performance is linked to their ability to get feedback on their work and gain knowledge from colleagues in neighboring departments. If their work is dependent on multiple functions in a company, access is expected. While employees span functional silos, *shared services* do the same thing. 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. Examples may include inventory management, research and development, billing, facilities maintenance, human resources, finance, etc. Automation and connectivity are enablers of a multidimensional design.

A definition of a multidimensional organization is required for us to proceed. According to Strikwerda and Stoelhorst (2009) a multidimensional organization has several characteristics.

- Responsibility for the success of the firm is distributed across the functions of the organization.
- Performance information is shared across the organization.
- There is one source of financial information.
- Resources are shared across the functions.

The multidimensional design (MDD) has a number of opportunities for competitive advantage. With the sharing of results, new business can be introduced and funded by the success of others. This allows the MNE to adapt to changing market conditions. Brand value can be exploited across an expanding portfolio of products. Bricolage can be exploited to combine technologies into new products. And, customer information can be shared to increase revenue per customer and to enable vertical market penetration.

In the context of this article, an MDD is discussed that was deployed as an organizational design to meet scaling needs in an MNE. The difference between the matrix structure and a 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. Reporting structures may be in a conflicted dysfunctional relationship with each other. 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 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. Furthermore, this is reinforced through the organizational design and a reward system based on collaboration. Another difference between the two structures is in the

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planning and control processes. While the profitability of the client oriented Profit and Loss statement (P&L) is dominant, the P&L's 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&L's.

A final difference between the structures relates to the influence of Management Information Systems (MIS) in an MNE. The MIS reports performance in each of the dimensions at all levels of the organization. This eliminates information asymmetries and transfer pricing, as examples, thereby turning the MNE into a truly integrated dyadic relationship between a customer-centric focus and operational synergy realization. In many matrix organizations the emphasis is on authority and power (Galbraith, 1971, 1973; Goold & Campbell, 2003; Ruigok, Achtenhagen, Wagner, & Ruegg-Sturm, 2000). The management in multidimensional firms focus on the firm's joint customer-centric goals by leveraging MIS or Enterprise Resource Planning (ERP) supplied business intelligence which point to opportunity rather than the disparate and conflicted agendas of two bosses who may be misaligned and unequally capable (Strikwerda & Stoelhorst, 2009).

The critical result that will emerge from the empirical data in this study is theory about the realization of sustainable growth synergies in a multi-unit firm with a multidimensional organizational structure. Specifically, this study explores diagonal client scaling within the MDD. This entails scaling using product managers who span geographic locations and support functions needed to service clients 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).

Managers are responsible for profits, market position, and customer retention, but they control very few resources. Often, resources are controlled by facility managers who are responsible for the bottom line. This creates tension between sales, as they develop new market opportunities, and facility managers, who are accountable for the efficient utilization of resources (Galbraith, 2009; Goold & Campbell, 2003; Ruigok et al., 2000). Risk-averse behavior of resource managers must be confronted by market opportunities identified by account managers. Concurrently, market managers cannot be overly optimistic in their judgments about market opportunities (Galbraith, 2009; Goold & Campbell, 2003; Ruigok et al., 2000). It is therefore essential that an MDD simultaneously reports performance on two or more dimensions. Managers need to be held accountable for their dimension as it contributes to overall firm performance and the execution of growth synergies. Unique challenges for implementation are present in a globally integrated enterprise with globally integrated products and services such as in this case study.

The author believes that the organizational design of a firm is a critical factor with regard to the success or failure in achieving the realization of growth opportunities. The most successful form of an MNE is the M-form, named by Williamson (1975), in which activities are organized into separate business units

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(Roberts, 2004; Williamson, 1985). Resources are delegated to managers charged with creating economic value for the firm. These resources are controlled within business structures that are measured for financial performance. The boundaries of the units are reinforced by financial systems. To illustrate, organizational design has been influenced by corporate agendas driven by synergistic savings evident in the form of corporate account management, shared service centers, and matrix organizations. Consequently, most businesses now depend on some resources that are controlled by other units (Strikwerda & Stoelhorst, 2009).

The MDD is illustrated in the figure below. To explain how it works in the context of scaling, consider the following scenario. 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, exogenous to its existing domain, 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.
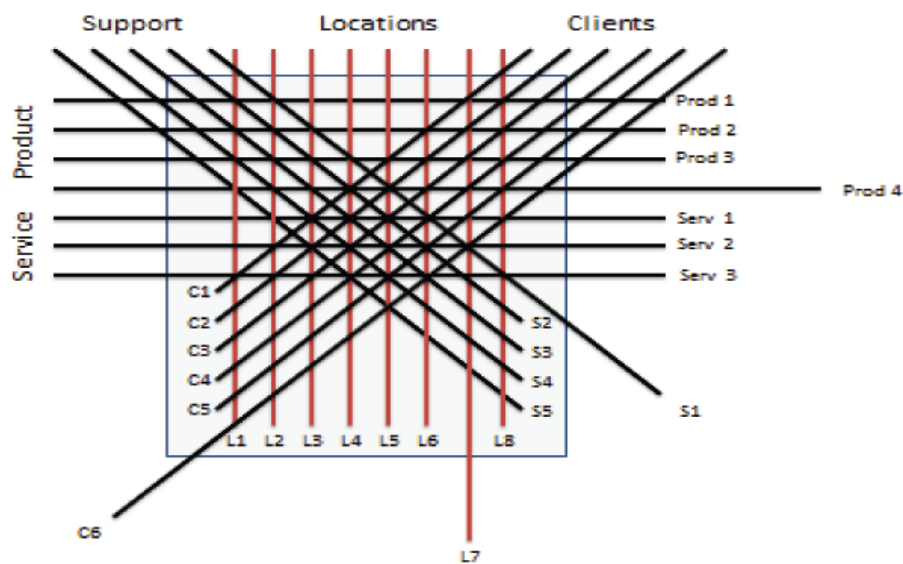

Figure 1. MDD Scalability. This Figure Shows How the MDD Lines Can Scale Depending on the Need and the Dimension

A business unit in an MNE is given both autonomy and self-interest when it is given the opportunity to identify growth synergy opportunities, when it can define their value-based attributes, when it can determine deployment timelines and the scope of coverage, and when it can determine the task rollout

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sequence as represented in an operational deployment plan. The author has found that business unit autonomy is augmented in at least three ways. The first is through a suitable culture, as defined in part by its organizational design and its reward system. The second is through administration and control, which includes financial review, secondary structures, and a centralized workflow management system that provides organization-wide data and analysis. The third augmentation area is related to strategy. The strategy must have structure in order for it to be focused and executed. The framework for the strategy provides this. It is also selective in that it is prioritized based on contribution to the desired outcome as measured by business modelling, such as through a pro forma P&L and a business plan where applicable. Strategy also includes the sequence of the execution of tasks, ordered due to environmental conditions and dependency. Outcomes of exploiting self-interest include profitability in the form of social impact, organizational efficacy, team efficacy, and personal leadership efficacy (Lovas & Ghoshal, 2000).

To be specific, an example of a critical success driver in an MDD is an integrated Management Information System (MIS) (Pankratz, 1991), assuming that it keeps current with firm adaptations to market dynamics and corporate advantage life-cycles (D'Aveni, Dagnino, & Smith, 2010). An MIS is a lateral integration mechanism (Persson, 2006) because it makes critical information and intelligence available to leaders in all of the dimensions of an MDD, thereby enabling action and mitigation. The MNE must evolve from unique local business systems geared to local needs to a networked social construct that drives transparency throughout the MNE across all dimensions (Hirschheim & Klein, 1994). A single set of common data definitions is necessary so that every transaction can be captured with suitable data density. This data can then be exploited along multiple dimensions, including reporting and analytics, across business units in a worldwide value chain. The information it contains is simultaneously available, providing for real-time sharing, change management, workflow adaptation, capacity manipulation, and production tracking. Additionally, for business intelligence it is also necessary that the MIS include Customer Relationship Management (CRM) capability so that account managers can mine the database for order information and leads. This enhances the MNE's ability to maximize market share by exploiting customer spend budgets within applicable product categories across customers. It also fosters cooperation between managers, as performance accountability is shared across dimensions.

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 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 ERP and CRM systems. The goal of all efforts is profits through the exploitation of growth synergies.

The dimensions in a multidimensional organizational design are important to the market. Business should be conducted with customers in the way that they prefer so that there is sustainable value in the relationship (Galbraith, 2005). The MDD deployed in this case study included a primary dimension that related to client management (C#). A P&L was provided to each account manager with regard to the client's overall global financial performance. This P&L was support function, location, and product agnostic. The structure allowed the managers to understand the profitability of working with all clients as well as each individual client. It also allowed for an understanding of profitability from the client, as it related to product type and the location where the work is done. The customer-centric nature of multidimensional firms is enhanced by treating clients as profit centers (Galbraith, 2005) and by listening to them for the purpose of discovering service opportunities (Wiessmeier, Axel, & Christoph, 2012). Economic gain is created by pursuing unique location-specific market strategies, by integrating product and service offerings for maximizing customer profitability (Amit & Livnat, 1988; Armour & Teece, 1978), and by making the relationship *sticky* through optimized complexity and interdependency.

The case MNE operates in an industry that is networked. Consequently the center of innovation has shifted from the company to the network in which it operates. The network flourishes when it exists in a state of deep collaboration, cross-pollination, and concurrent engineering. This network develops value-based solutions in parallel exceeding time to market requirements (Grossman, 2005). Additionally, growth synergies can be achieved through alumni relationships within the industry-wide network. The exploitation of available market knowledge then becomes more critical than creating personal knowledge. Knowledge can be easily obtained from the network if it is not locally available. Organizational constructs must align with this environmental constraint and facilitates the exploitation of network-based knowledge resources (Drucker, 1992; Goold & Campbell, 2003). Collaborative knowledge workers are increasingly valuable due to their collective influence on profitability opportunities in a multidimensional firm (Bartlett & Ghoshal, 1993; Prahalad & Hamel, 1990), and especially in a firm with a structure that requires collaborative arrangements (Contractor & Ra, 2002; Inkpen, 1997). The case company desires that knowledge workers are attracted to their firm, as they see that it is an opportunity to increase their personal market potential within the industry network (Drucker, 1992; Florida, 2004; Rosen, 2004). Managing the chaos found in these networks is the current opportunity for competitive advantage in an MNE.

2. Method

2.1 Quality of the Research

Creswell (2014) describes validity in qualitative research as being the determination of whether the findings are accurate from the standpoint of the author, the participant, and the readers of an account. In this case, language and meaning are the data. Creswell (2014), in parallel with Lincoln and Guba's (1985) approach, offers qualitative researchers eight possible strategies for checking the accuracy of

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findings; triangulation, member-checking, rich descriptions, clarification of bias, the use of negative or discrepant information, prolonged time in the field, peer debriefing, and the use of an external auditor. The author selectively used these strategies to ensure data validity with a focus on triangulation, peer debriefing, and member checking.

Endogenous validity refers to the validity of established causal relationships (Yin, 1994; Lamnek, 1995) or internal logic of the research (Punch, 1998). This was achieved by establishing a clear thematic focus that guided the case selection, abstracting and comparing, conducting peer reviews of causal relationships, and by having an open and comprehensive explanation building. A thematic focus was evident in a clear definition of an overarching research theme (cross-unit synergies), a narrowing research focus (operative synergies), and a specific research question (the sustainable realization of growth synergies) along with a compatible case selection in which the constructs of interest could be discovered. Continuous abstracting and comparing (Strauss & Corbin, 1990, 1996) occurred as the author continuously compared data sets to build higher order constructs, preliminary results to emerging data to confirm or refine results, and observed causal patterns within the existing literature. This improved the validity of causal relations (Yin, 1994). Peer reviews of causal relationships were discussed with research colleagues for the purpose of capturing and testing additional perspectives based on experience in the field. Additionally, it enabled the validation of internal consistency and theoretical relevance of the author's arguments. The final technique for internal validity was through open and comprehensible building of explanations and causal relationships. The results were documented in such a way that the reader could reconstruct the causal relationship (Mayring, 1996). Openly, the author indicated initial ideas, deducted assumptions, and challenged potential inconsistencies.

Exogenous validity refers to the generalizability of research results critical for robust theory development (Sutton & Straw, 1995; Weick, 1995) and depends on the research approach (Yin, 1994). Single case study empirical findings are difficult to generalize. Yin (1994) emphasizes that case studies do not allow for statistical generalization. More specifically, it is difficult to make inferences about a population based on empirical data collected in a sample. While issues of generalizability from case studies is severe (Denzin, 1989; Yin, 1994), single-case studies are recognized to be substantial from an evolutionary perspective (Stake, 1995). Single case studies can also provide new ideas and new thinking paradigms. They can help modify existing theories by exposing gaps and helping to fill them. There are several facts about this study that support the author's conclusions that the findings and propositions will be at least somewhat generalizable. Several of the constructs can be confirmed as being present in existing literature, indicating general theoretical relevance of the research (Eisenhardt, 1989). The findings were confirmed through consultation with participants, who are operationally capable with varied experience in the industry, suggesting the potential transferability of the claims. Finally, the findings were somewhat generalizable due to the continuous comparison of similarities and differences within case items across different levels of analysis.

Reliability refers to the possibility that researchers can replicate the research activity and produce the same findings (Eisenhardt, 1989; Yin, 1994). A challenge for this replication is the attribute of qualitative research, in that it is bound to the context in which it is conducted (Lamnek, 1995), including time. Reliability in qualitative studies is best served by presenting sufficient information so that the reader can draw his/her own conclusions (Yin, 1994). The author attempted to ensure reliability through the explicit disclosure of the research design, including a detailed description of the research process, case selection criteria, interview guide, and methods for collecting and analyzing empirical data.

2.2 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. Awareness is a transient experience (Freeman, 2000) that may involve exerting influence, letting go, and redirecting energy and attention (Depraz, Varela, & Vermersch, 2003). It also involves being present physically and mentally in daily life. Stakeholders have to anticipate events, make sense of existing environments, and exert influence over future trends. Weick (1995) suggests that sense-making is a retrospective cognitive process that explains unanticipated events. He also suggests that events in a socially-created world both support and constrain action. Weick, Sutcliffe, and Obstfeld (2005) later suggest that individuals form both assumptions and conscious anticipations of future events. 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.

The resultant data 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. The composite description is an intuitive and reflective integrative description of the meanings and essences of a phenomenon, of which the entire group of individuals is making sense. The participants create meaning through their awareness of the environment, reflection on their experiences, consultation with others, focused response to an enquiry, and iterative refinement to these enquiries.

2.3 Coding

Data collection was facilitated by an interview protocol with specific questions oriented in a sequenced schema. 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

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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. 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). 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.

The raw data was collected from each participant for each data domain and sub-domain in the sequence in which it is presented to promote a progression of thought. The data is separated into exogenous and endogenous domains as well with selected focus in both areas. In some cases, like roles, the participants offered information on themselves while commenting on data provided by their peers. 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. For example, a central theme, norm strategy, or trigger may have emerged from the data as a result of coding. This data could then be categorized or filtered through the constructs being discussed that may include the strategic frame, horizontal strategies, or a narrowed scope as examples. This was the beginning of the theme map, or the outermost layer. The layers could then be elaborated on by breaking the outermost layer into sub-layers until it was reasonable to stop. This theme map was created to better describe the themes in the data and to show relationships and sequences between unique data items.

3. Result

3.1 Client Diagonal

The diagonal client dimension interacts with customers from a sales and operations perspective as per the figure below. The role of those who our *outward* facing is outlined in three categories, each of which is profitability oriented. Synergy is also clear in the figures, as collaboration between the parties indicated is necessary for the realization of profitable growth. The role of each entity is listed below their name. The responsibilities are shared between them in a collaborative way, as indicated between the sales and operational entities. These themes emerged in the data when MDD leaders were asked about the roles of each diagonal support function. A total of 73 themes emerged from the data with regard to five roles. One role was the Line of Business (LOB) lead. This is the person who is in charge of a set of products. The second is the Account Director (AD), who manages the client from the operations side of the business. The third is the client service representative or project manager (CSR/PM). This person manages the work through the facility and connects with the supply chain up and downstream. The fourth is the Technical Project Manager (TPM). The person is technically skilled in the product and the workflow. The fifth person is the Account Manager (AM). This person manages the client on the sales side of the business. The last person is the Sales Manager (SM). This person is primarily in charge of bringing in new business or clients.

Sustaining the profitability of an existing client is reflected in the figure below. In this case the revenue stream and its associated profitability need to be sustained. The LOB lead is tasked with making sure that service issues are resolved for the client in such a way as to not compromise profitability. The AD is primarily responsible for communicating the general status of work to the client. The AD also monitors performance levels and communicates internally and externally as needed to course-correct. The CSR/PM is responsible for managing projects through the workflow. This may include dealing with issues and exceptions proactively, as well as reactively depending on their ability to discover potential problems. The CSR/PM is also typically responsible for updating the ERP system with status-related information. The TPM has the technical information at hand with regard to product, workflow, and infrastructure. The TPM optimizes the workflow prior to introducing new product and while product is running to ensure profitability. The TPM also introduces new technologies to improve processing efficiencies and reduce waste. The data suggested that AMs are best at seeing changes internal to the client. These changes may enhance revenue opportunities through proactive actions. It was also expected that AMs know decision makers in higher positions at the client. The synergistic tasks include activities regarding the budgeted portfolio, producing the weekly forecast, hosting the monthly review, acquiring a spend outlook from clients, escalating issues and opportunities as needed to those who can influence the situation for the better, updating clients regarding the company's changes and capabilities, gaining and disseminating valuable client feedback, optimizing the ability to charge for overages without retribution, resolving issues that produce negativity in the relationship, conducting informative periodic meetings with clients, taking the temperature of critical personalities,

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managing the rates and their structure, and discussing trend deviations from expectation so as to take a proactive position. These synergistic tasks are best executed with a high level of collaboration which is conducive to a MDD design.
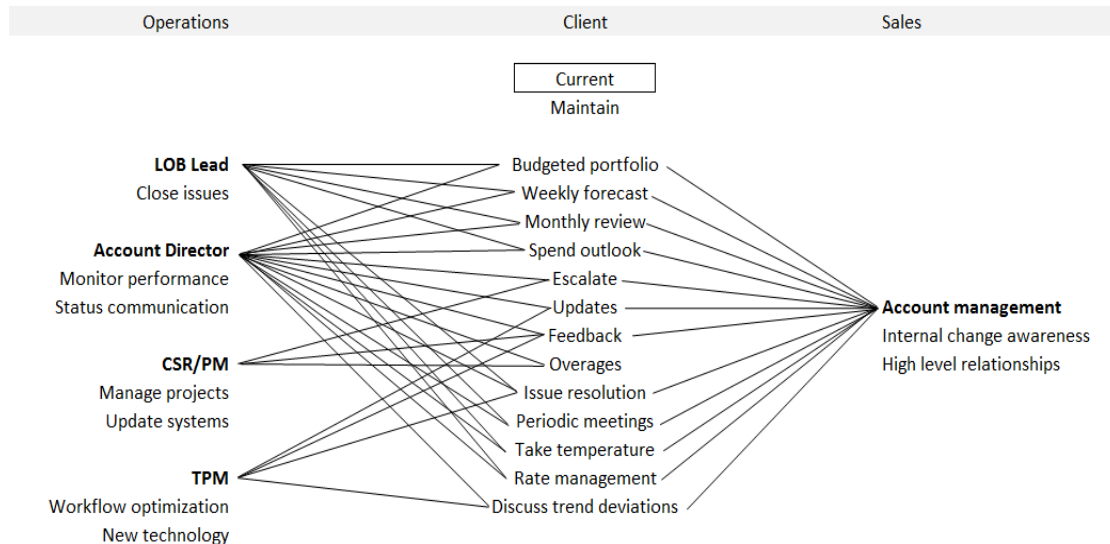

Figure 2. Maintaining Current Client. This Figure Maps Maintaining Current Clients As a Theme Category into Descriptive and Related Sub-Groupings

The second way that an MNE can increase profitability exogenously is to assist existing clients to experience growth. Leveraging existing knowledge and talent for additional revenue is highly synergistic and therefore, profitability enhancing. In this case the data suggested that the LOB lead is critical for closing the deal, validating the pricing, dealing with issues, and agreeing with the validity of the rate card structure. The AD needs to monitor performance for issues and provide status on the fulfillment of the new additional work. The CSR/PM can help to embed pricing structures in the ERP system so that they can be exploited with the new work. Getting this right from the first invoice is important for the brand. The CSR/PM staff may also see opportunities for growth that should be passed on. Exploiting these opportunities in existing supply chain BU's is highly synergistic. The TPM provides subject matter expertise to the workflow design enhancements needed to accommodate the new volume or product. The AM in this case needs to cross-sell as well to exploit existing workflows. As clients discuss upcoming opportunities, the AM should relay these to the right parties. The sales tools that are used to measure the revenue performance of the client are the responsibility of the AM. This should include a *funnel* that indicates the pending work type that is in the pipeline for their client. Knowing the performance and rates of competitors helps the AM know pricing positioning. The synergistic actions shared between these functions include the approval of the rate structure for the new work, the establishment of pricing strategy, education of the client and internal operations on requirements, obtaining feedback on expectations prior to and during expansion, discovering new

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opportunities to augment client income to the company, fulfilling requests for proposals (RFP's), updating the client as needed on status of the ramp-up, interpreting the impact of megatrends and life-cycles on the business, upselling other services to augment revenues, and discovering services that are not being exploited by the client, but that could be leveraged. Again the MDD design enhances the collaboration of these functional areas to encourage increased revenue and profitability from existing clients.
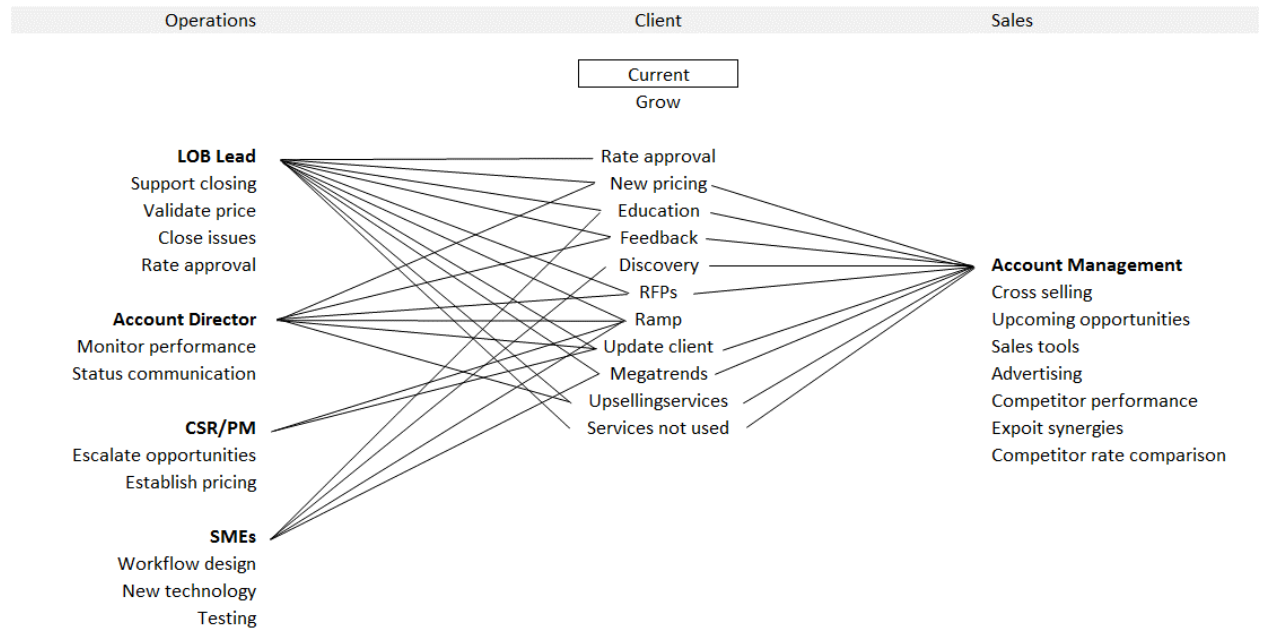

Figure 3. Growing Current Client. This Figure Maps Growing Current Clients As a Theme Category into Descriptive and Related Sub-Groupings

The last use case is related to enhancing profitability from new clients. This is illustrated in the figure below. In this case the LOB lead, according the data, needs to push for closure on the deal. If there are any unresolved issues they also need to be closed. The LOB lead is responsible for the LOB P&L and so must approve the rates. The AD is charged with making sure that the client has been integrated fully. The status of the on-boarding process needs to be communicated as applicable. The CSR/PM is also responsible for the integration of the client by making sure that orders begin to flow. When issues are discovered regarding pricing, they must be escalated. With any new business, workflows need to be determined as part of the pricing activity. The TPM is knowledgeable and can convey this along with the testing to validate that the workflow makes perfect product. This may require the introduction of new technology to increase workflow performance. The AM can assist with acquiring new clients by sharing leads with SMs. The AM can assist with cross-selling to other parts of the supply chain to close the deal by enhancing or bundling it. The existing contact list that the AM has may be helpful for referrals. The AMs should also be involved in the penetration strategy. The last function is that of the

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SMs. They search out new clients and help to cross-sell to optimize revenue acquisition from prospective targets that want a *one-stop-shop* for products and services. The sales tools should point to opportunities and be available to report on trends and the pipeline with the chance of occurrence. The sales team can exploit supply synergies by selling into existing capabilities. The client may be attracted to the company through strategically placed advertising. The SM is critical for obtaining competitor based information. This includes a variety of data points important for analysis, including rate cards. The SMs establish and maintain fruitful relationships with clients. They should be seen as opportunities for education as well. The list of synergistic opportunities in this case includes engineering opportunities to create new sales, initiating conversations with decision makers, realizing the support needed to acquire a new sale, closing opportunities before they disappear, rigorously pursuing contacts, approving any new rates and their structure, rolling out the pricing once it is agreed to, on-boarding the new client physically and financially, establishing new pricing line items and rates, listening for feedback during the transition, discovering new opportunities in the form of technology or client, embedding the new customer into the company's service culture, completing competitive RFP's that are profitable, and managing the volume ramp-up for the clients products. Collaboration in a MDD structure is conducive to attracting and capturing new revenue.
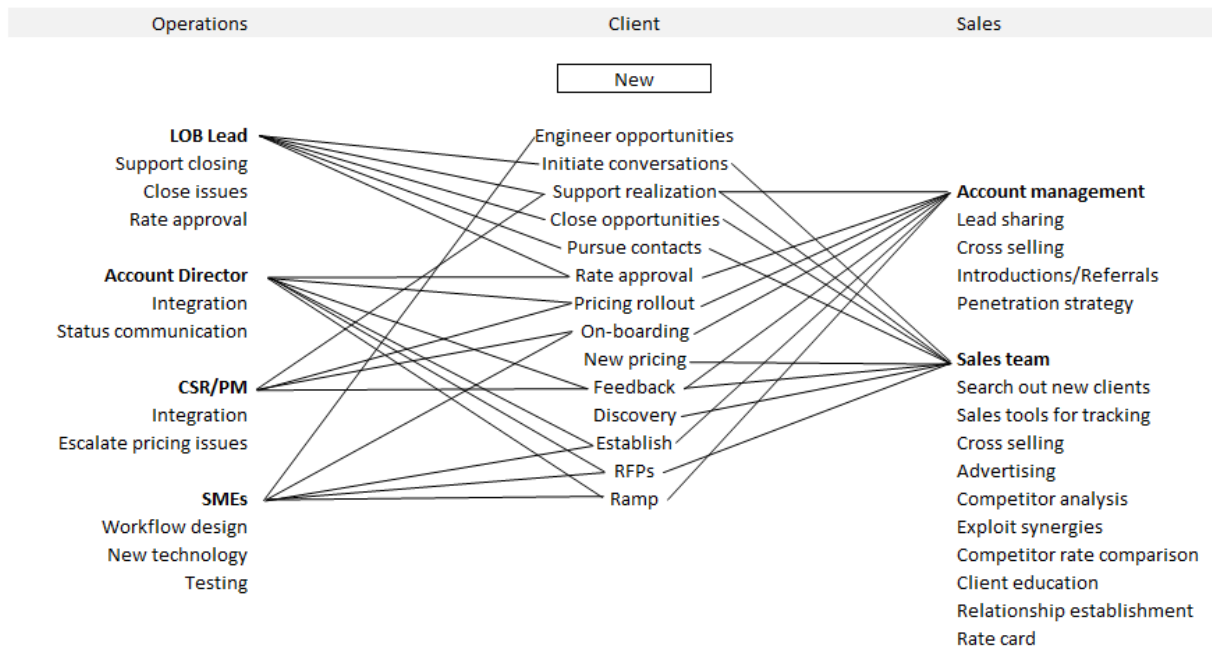

Figure 4. Growing New Client. This Figure Maps Growing New Clients As a Theme Category into Descriptive and Related Sub-Groupings

In summary, the data suggests that the MDD structure is conducive to maintaining existing clients, extracting new revenue from existing clients, and acquiring new clients. The requirement for collaboration in each of these three cases validates the need for a nimble and effective structure.

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Distinct positions have responsibilities and there is a segregation of duties; however, all members of the MDD can participate in sustaining and creating profitability. The following propositions summarize the key findings of this section:

Proposition 1 (duty segregation): Role definitions in a MDD are required to ensure accountability; however, synergistic tasks are shared optimally and selectively by all outward facing employees to maintain the profitability of existing revenue streams.

Proposition 2 (synergistic tasks): Synergistic tasks are shared by functions critical to the execution of these tasks and the associated rewards.

Proposition 3 (profitability super-additive): Enhancing the revenue from a client through additional income streams that are synergistic is a profitability super-additive.

Proposition 4 (collaborative strengths): Operations and sales achieve mutually beneficial profitability goals when they collaborate around their strengths, filling the company's pipeline with sustained corporate advantage.

Proposition 5 (ideation-ramping): Acquiring new business revenue requires collaborative action, starting with sales lead ideation and ending with the achievement of billable volume ramping-up at optimized margins.

3.2 Market Penetration

A critical element to the growth opportunities in existing markets and new markets in neighboring sectors was penetration strategies. An entrepreneurial business that is interested in leveraging synergies to grow profitability must understand the dynamic nature of the market so that a suitable strategic posture can be taken. This strategy could be driven by tactical and deliberate action, or another exogenous force. This section discusses these forces. Penetrators are illustrated in the figure below. For example, new products may be introduced as a result of technical innovation that can be applied to them. These products may be products in the client portfolio that, heretofore, have not been in the vendor's portfolio to service. The introduction of technology enables growth through synergy. Another example of a penetrator could be the bundling of services that include a series of products that are already in the client's portfolio. The bundle deal leverages the vendor's supply chain, speeds up order dwell time, and presents an opportunity for increased volume and profitability for the vendor, in this situation, the company being studied.
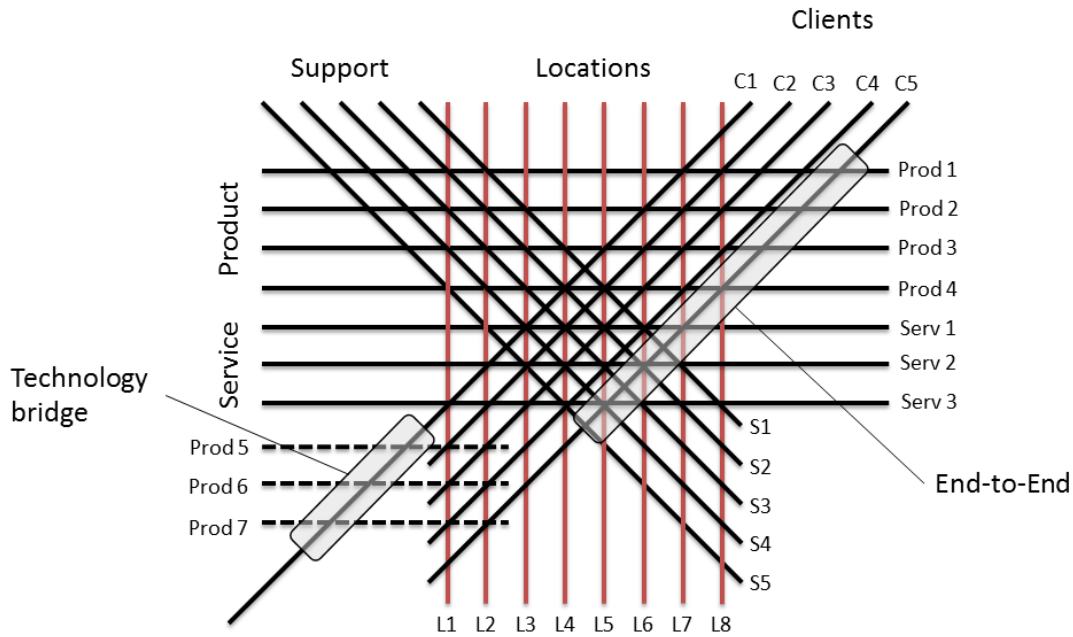
Figure 5. Market Silo Penetration in the MDD. This Figure Illustrates How Penetrators Can Map over the MDD Structure

The MDD leaders were able to collect a number of strategies to penetrate these markets. From the data, six patterns emerged as follows: (a) capability, (b) cost, (c) infrastructure, (d) products, (e) system, and (f) technical. Within these categories, 83 rich data descriptions emerged from the data. The researcher will discuss each one individually.

3.2.1 Capability

The first penetrator to stimulate growth through the exploitation of addressable market opportunities is capability as illustrated in the figure below. Capability was broken into seven categories, including (a) dwell, (b) process, (c) security, (d) strategy, (e) system, (f) technical, and (h) training. The dwell pattern related to how quickly the company is able to turn around orders. Order dwell time is a competitive advantage that can be sold. As other competitors cannot achieve this and as this is important to clients on a timeline, it is an opportunity to pursue *the spend* that is being consumed by other vendors. In addition, a suite of products can be delivered simultaneously rather than in a staggered fashion. The capacity needed to deliver a series of products simultaneously is significantly different than linear delivery schedules. The dwell time does not only relate to product, but also relates to invoicing. Another capability-based penetrator is process. A reliable process can be sold. In the event that a competitor is having reliability problems, this is a good opportunity to take the spend going to someone else. The reliability needs to be present in the network-based production system. An assignment could go to any location in the network and it is assumed that performance parity has been achieved. Furthermore, clients expect consistent performance without entropy. A process is competitive if it has installed controls to sustain excellent performance. Next, security is becoming more important and is a

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market penetrator. This capability includes integrity in the marketplace for the company's security. The security management system is guided by a standard that is robust. This standard must be consistently deployed and maintained in all locations and workflows. Another capability-based penetrator is strategy. Clients want to have strategic discussions about the future of the market. They desire to engage the company in developing projects that relate to new formats and tools. These endeavors need to have a development roadmap, a schedule, and deployment. Additionally, the ERP system itself creates capability and is a market penetrator. Clients are given access to the system to track their orders. This is desirable and the User Interface (UI) is influenced through client input and enhancement. Technical capabilities are also a market penetrator. The ability to solve client problems is appreciated.

"Technical and supply chain resources [are] available enabl[ing] problem solving". (MP93)

There is also the expectation that the company is a thought leader in the business generally. One way to provide technical capability as a penetrator is to make technology available to clients. The company attracted technical vendors on-site by providing office and workspace within existing facilities. When clients toured facilities, they were able to make the visits more valuable by exposing them to multiple vendors. The company also deployed a university that enabled clients and employees to leverage the facility. When a large client saw the company university (MU), the MDD leader said:

I demo-ed MU for him and he could also see all of our trainings in the system, as well as process training when we pair [the university] with the [knowledge base]… [the client] said specifically, this is a leader of all the vendors by far and is a differentiator when it comes to making decisions about which vendor to go to for any services. (MP44)

Clients also commented on the need to train employees at the company in client surveys.

"Please continue to support growth with staffing and training as you are trend setting for the future". (CS58)
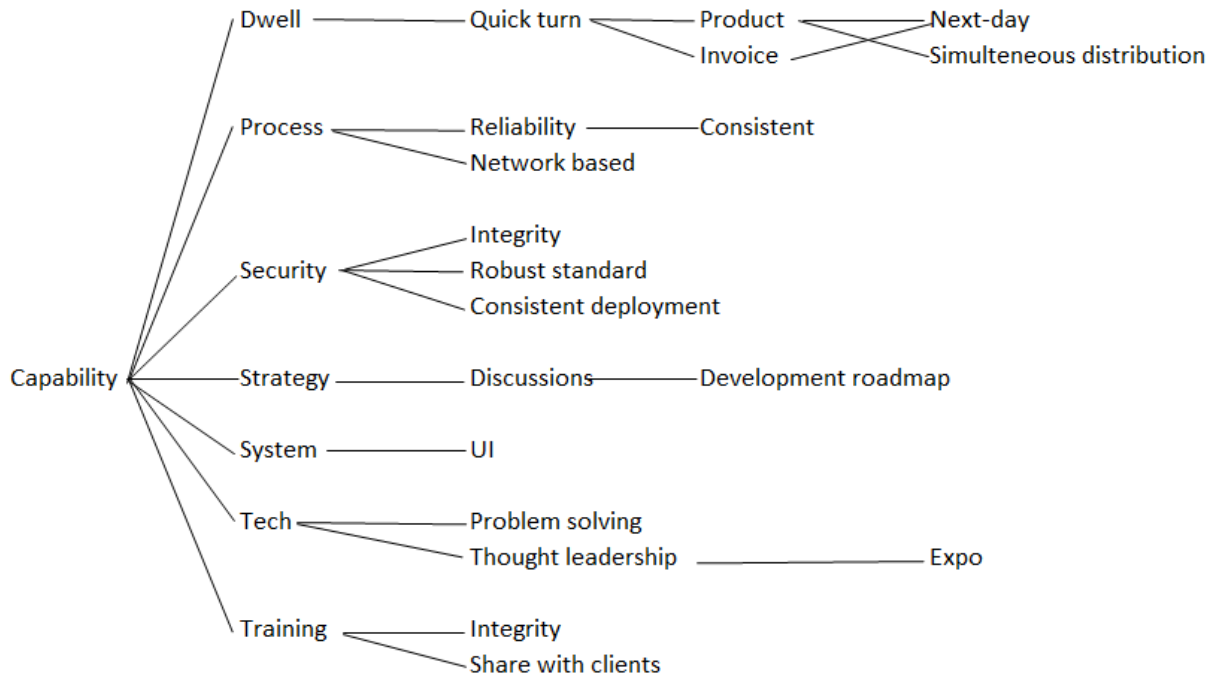
Figure 6. Market Penetrator: Capability. This Figure Maps Capability As a Theme Category Into Descriptive Sub-Groupings

3.2.2 Cost

The second penetrator theme that emerged in the data was cost. Three areas were identified as candidates for cost reduction. One of these was Quality Control (QC). The ability to carry out QC tasks with consistent reliability contributed to process robustness and strengthened the company's brand. When an issue was missed, there was significant opportunity for liability from downstream processes that would incur rework. In addition, an error would result in a time delay that could compromise the overall schedule. A time delay may result in the need for expedited fees from downstream vendors to recover the lost time in the schedule. A second capability was through the offshore capacity that was available. This capacity allowed for significant expansion and contraction of capacity at a much lower cost. The third penetrator was through the implant population at the client's location. These implants were helpful in directing work to the company. They are typically placed as part of an offer. This not only enabled the deal, but also redirected additional work to the corporation that would have otherwise been given to competitors.

3.2.3 Infrastructure

The third penetrator was infrastructure. The capacity and capability afforded by the infrastructure allowed for significant expansion and process reliability. Three theme categories emerged in the data: security, process, and system. The security capability related to the ability for clients to feel assured that their work was protected and available when they wanted it for any reason, even after delivery. Disaster Recovery Plans (DRP) are robust and business continuity is critical to client schedules.

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Cyber-attack contingency plan—Strategizing using [Disaster Recovery site] for client DR—Having a well-planned comprehensive contingency plan with clients in case of cyber-attacks could take our partnership with clients to the next level and can make them want to work with the company in order to lower their risk. Also, we can make a case that small vendors are vulnerable to cyber-attacks and DR. This can be used as a penetrator and the timing is good now because of [the threat] situation. (MP26)

The ability to recover within a suitable amount of time is documented in the DRPs. The ability to continue to ship was documented in the Business Continuity Plans (BCP). Process capacity is a penetrator that infrastructure enables. The availability of storage capacity at any location and the ability to share capacity, or reallocate it, created a flexibility that can only be obtained from a pooled capacity. The network-based production scheme included the transfer of work to locations where storage was available. Assets, whether physical or digital, must be received and stored. Without the availability of the components, the work cannot be executed. Lastly, the infrastructure includes tools. These tools allow for the control of crowdsource management and the automated verification that deliverables conform to specifications. In some cases these tools are proprietary to the company and so make it possible for a competitive posture.

3.2.4 Products

The fourth penetrator was products. MDD leaders were able to name 5 products, 13 services, and 4 new sectors that should be pursued. Products, as a penetrator, is illustrated in the figure below. These products leveraged existing capabilities, including workflows and infrastructure. They were pursued and enabled synergistic growth. The data on products revealed a pattern related to strategy. The context here was that a strategy could be used with clients to gain more market share. Each of these strategies was within the company's existing expertise. The first was to leverage the existing implant population at the clients' site by offering an increased amount of administration work for the client with the awarding of more work.

Offshore implant position—In short, the idea was to utilize [offshore location] for clients to take over some of the admin work on their side for the orders they send to us (so it will be cheaper on their side). We can identify the repetitive work that can be off-loaded to [offshore location] and help clients to cut cost without big cost addition on our side. We can review what our implants are doing for [client 1] and [client 2] and see what portion can go to [offshore location] and then create a strategy plan based on this... after a while it will be hard for [clients] to switch to another vendor. (MP23)

This increased revenues allowed for the exploitation of the existing population in the corporation's offshore location. Consequently, the incremental cost was minimal against the additional tasks that were taken on. This also allowed for a change with the implant model such that the existing count could either remain the same or be reduced with the augmentation of the offshore staff. Each task that was being done currently or being requested in return for work was analyzed such that any work that could be offshored was pursued in this way. The second strategy that emerged was the sale of bundles. This was a combination of services for one price. The revenue and profits were divided between the units

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that incurred cost to execute the relevant tasks. The third strategy was to offer products that enhance the security of products.

The company is the leader in … security. Our track record is unimpeachable and work is pulled from competitors because of this. It gets more significant every year. With our standard, ERP, culture, and training, we are the new standard in the industry and should sell this hard. (MP43)

As the products contained elements that were the property of the client, there was interest to protect them. This enhanced the value of the product and enabled pricing stabilization or incremental line items on invoices. The last strategy was related to ongoing access to content. This could be physical or digital. A service was offered that allowed access ongoing for a fee. Clients had previously assumed that this content would be available; however, with price erosion this could no longer be offered as a service for free.
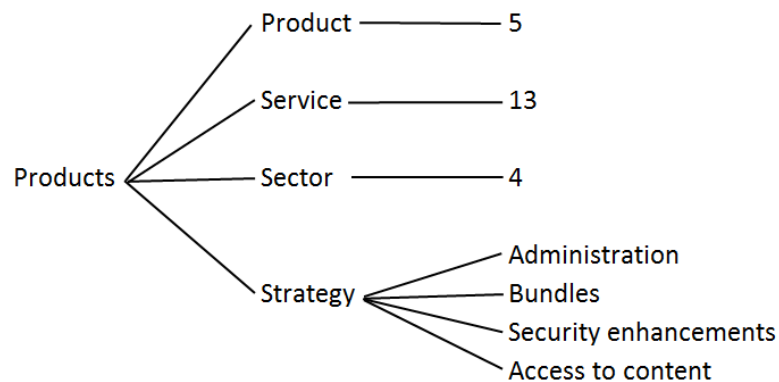

Figure 7. Market Penetrators: Products. This Figure Maps Products as a Theme Category into Descriptive Sub-Groupings

3.2.5 System

The fifth penetrator category that emerged from the data was the ERP system. This is illustrated in a theme map as in the figure below. The system was a competitive advantage due to its maturity, feature set, and applicability to the relevant workflows. The system included enhancements that corrected errors that have previously occurred, and so it promoted reliability. The data produced five themes: integration, intelligence, performance, process, and transaction. The intelligence aspect of the ERP system included integrating client divisions into the system from a tracking perspective. It also included additional systems that can be used internally, to collect all quality information as an example. In this situation, if the company has the best reliability performance, the quality database makes this visible.

For those customers that understand this service, we have a huge advantage in terms of quality and capability… we have the company innovative workflows to make clean, high quality [LOB] to invigorate the value in [client material] previously written off as too difficult to deal … only with a

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facility like [location] with its specific services under one roof can any of this be achieved cost effectively and in a reasonable time frame. (MP40)

Additionally, the full range of services can be offered to distributors. They can also track the status of their orders. This transparency also reduces cost as the number of emails and phone calls are significantly reduced. The second penetration aspect of the ERP system that emerged in the data is related to data and Business Intelligence (BI).

"[We are] using business intelligence from information in the ERP to help clients with decision making – something similar to what we have in [our] recommendation engine but leveraging large data in the ERP." (MP17)

With a high volume of data being collected on the work being done, analytical capabilities emerge. This information can then be used internally and externally for decision making. Clients can be offered information about the work that is being done for them to help them make decisions.

"As we are doing work with the [client], we are being relied on by the customer to help them make the best decisions about how to execute on their program production to ensure quality and efficient throughput for distribution." (MP470)

Internally, data from all clients can be used to provide information about trends, etc. This information can help with internal decision making. A fundamental aspect of this is the data. Making sure that the data is fulsome and acquired in an architecture that is meaningful is a primary function of the database. The energy needed to go back and fill in fields on historical data that are now desired is very wasteful. Entering the order and asset data in at the beginning is therefore, fundamental just as it is having a field architecture that is accommodating and fulsome. Having a system that is able to capture and track asset and configuration issues is needed to ensure that deliverables meet specifications. Exception management must be invoked to alter the disposition of configurations or assets that are quarantined once issues have been identified. The issues may require additional information. The ability to add notes is then helpful so that if someone goes back in the system to move the order they see the note. With the trackers embedded in the system, calls and e-mails are eliminated and data is available for reports. These reports are helpful for synchronizing quality performance perceptions with clients and for monitoring trends. Process-related aspects of the system provide an opportunity to penetrate markets. The system provides opportunities for automation. In the case where pricing pressures mean that market entry is not possible, automation pricing can be used. If assets are not fit for use, overage opportunities exist and can enhance profitability, assuming that the activities associated with them have a margin. The system provides tracking information internally and externally. Internally, this reduces cost due to the reduced need for altering the status or an asset or a configuration via e-mail or phone. Operators can see their cue and work it down. Externally, clients can see if there are issues with their assets and remedy the situation without having additional communication. Additionally, automatic updates and delivery notifications are sent to distribution lists. This creates value for a client that needs transparency. The system can also be used to retrieve assets as all assets are visible depending on

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permissions for the view. This ability is a market-leading feature, valuable to clients who want to see their properties. The last value-producing penetrator that was brought up was the efficiencies that the ERP provides relative to transactions. With the high volume, customization of each delivery, uniqueness of the assets, and specification requirements, the complexity is very high.

The product is so complex/complicated now, we need to be involved literally at the beginning … complexity is huge now and ever growing in our future. It will kill the little guys and show where the company really excels. (MP49)

The transactions can be purchase orders, invoices, sales transactions or deals, and asset receipt or the delivery of a final configuration.
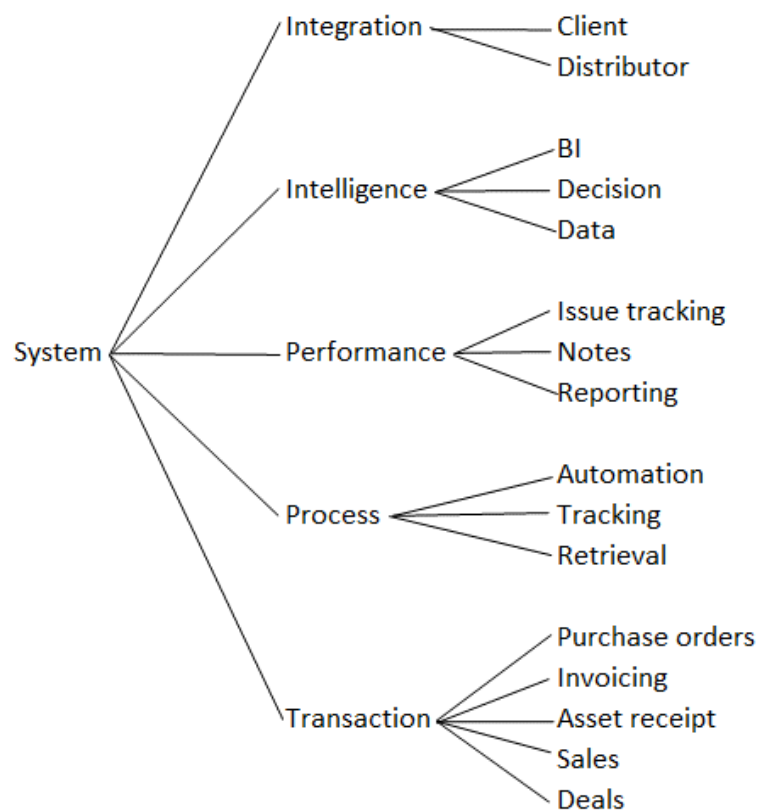

Figure 8. Market Penetrator: System. This Figure Maps Systems As a Penetrator Theme Category into Descriptive Sub-Groupings

3.2.6 Technical

The last penetrator category that emerged from the data was the technical penetrator. This included six themes. The first was related to technical projects with distributors. Often distributors were not sure about what they wanted or how to check that it was within specification when received. The company was capable of setting up a distributor with regard to understanding the specification that they would need, as well as providing confidence that what was received was correct through the use of automated verification tools. In the event that the distributor was using automated tools, the company was able to

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synchronize its tools to the distributors following consensus on the specification line items.

"We can push the technical envelope." (MP94)

MDD leaders also suggested that these verification tools provided a competitive advantage for the company and provided confidence in delivery capabilities. In some cases, workflows at the distributor needed to be influenced. The company was able to provide value by providing advice on production workflows. In addition to verification tools, the company was able to create packaging tools. These tools made sure that a package had everything in it, and that each item was in compliance with the relevant specification before it was delivered. This saved cost for rework and redelivery while creating confidence with clients. The company was also able to provide additional security-related features in the workflows that were of value to clients.

Furthermore, MDD leaders indicated that there were opportunities in other sectors that should be pursued. These opportunities could leverage penetrators to achieve increased market share using synergistic growth strategies. The figure below illustrates the strategy for sector penetration. The target sector may be existing or new. The market opportunity within the sector may be incremental, cross-sector, or discontinuous. An incremental opportunity is an opportunity for more revenue within an existing sector (exploitative space) or in a new sector (explorative space). In the existing sector, this revenue could include increased market share that has not previously been penetrated. In the new sector it could be more revenue in a new sector leveraging the experience in an existing sector. The existing sector could be a reference used to get the work in the new sector. This cross-business strategy could leverage the penetrators mentioned above. For example, a bundling strategy may be used to bridge the existing and new sectors.

The combining of contiguous supply-chain services is compelling to customers. We can create a package that efficiently leverages our account management and operations, removing redundant order entry and communication with the customer and allow us to coordinate and consolidate processes maximizing profits. (MP33)

Penetrators may also be used to plunge into explorative space even though no references may exist to lend credibility to the service to be offered. This would be a "cold call". Penetrators may also be used in explorative space within a sector by pushing upstream within a client's portfolio. In some cases this may be unfamiliar territory. Integrative cross-business market penetration strategy can occur when an existing product or service is leveraged to push upstream in the client's supply chain to pursue market opportunities in a discontinuous sector. This strategy may also be used to penetrate related new sectors while leveraging a track record in an existing sector.
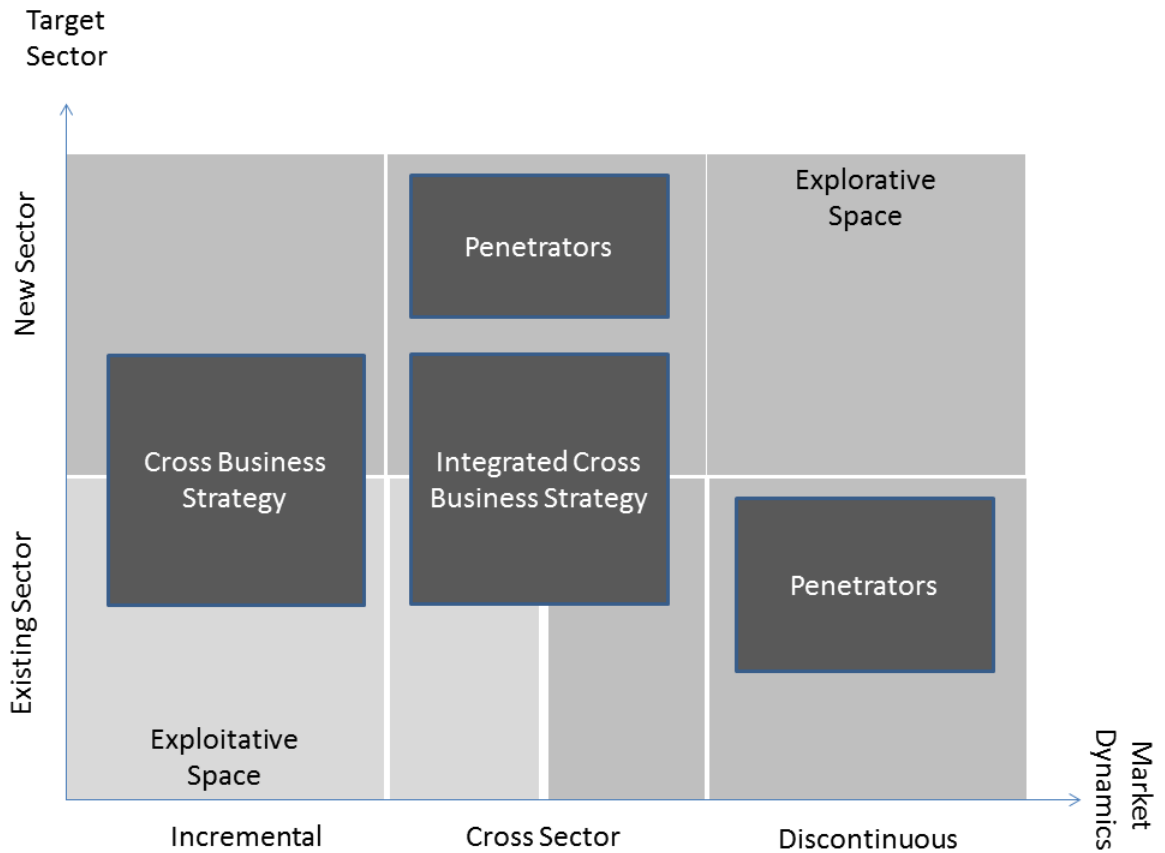
Figure 9. Sector Strategies. This Figure Illustrates How Penetration Strategies Can Be Mapped in a Dynamic Market

A sector mapping exercise enables the mapping of client needs to the LOB and location where the work could be done most efficiently as illustrated in the figure below. When a sector is targeted and an opportunity within the addressable market there is achieved, a better understanding of the customers' need can be documented in the form of a specification, service level agreement, volume commitment, and delivery schedule. With this in mind, the need can be mapped to an operational solution in the form of a workflow that takes input assets and transformational elements that manipulate these assets into the correct configurations. Each of these workflow steps is a billable line item in the invoice. These are then mapped to the functional area that is best suited to perform the task. By making this assignment existing systems can be leveraged in a synergistic way, optimizing profits.
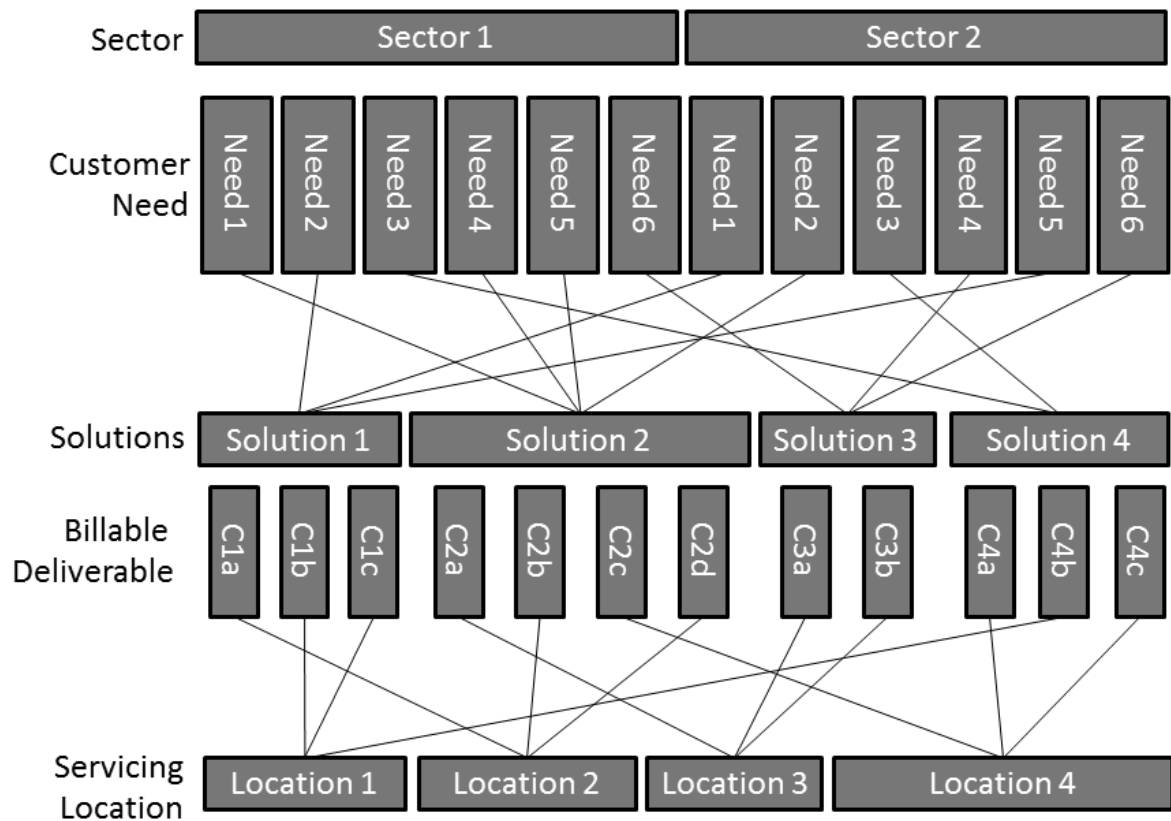
Figure 10. Sector Growth Synergy Mapping and Execution. This Figure Illustrates How Sector Client Needs Can Be Mapped to Synergistic Opportunity at Existing Locations

Another way to look at this is in the figure below. Each LOB that is sold is used in a number of business units as reflected by BU#. These need to be identified. These business units use workflows that are likely similar as reflected by WF#. For example, there could be a number of workflows for quality control that are used to check products in a LOB that is present in a number of business units. These QC workflows can then be consolidated and reassigned to optimize performance and cost through the exploiting of best practices, expertise, cost, and synergy. A consolidated approach can increase the focus on excellence while simultaneously achieving parity for the function in all business units. This can be accomplished assuming that synergies can be discovered and then consolidated.
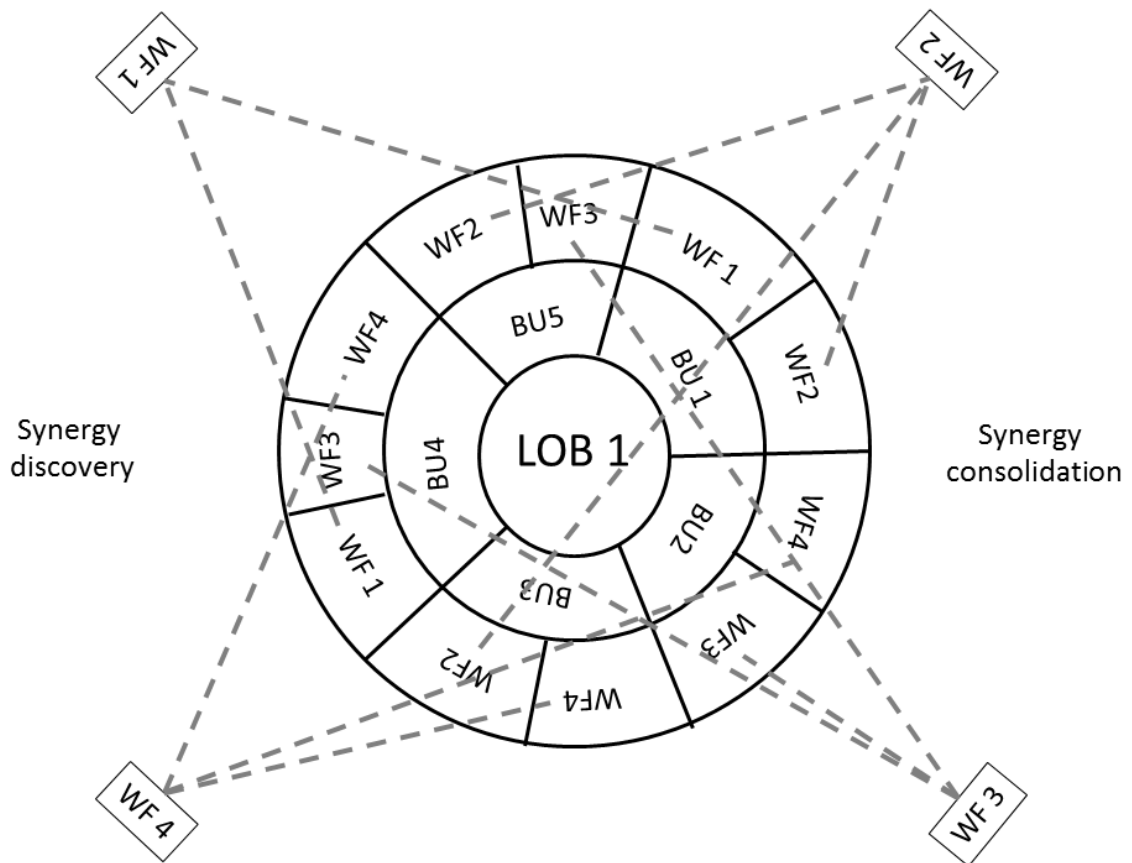
Figure 11. Synergy Optimization. This Figure Illustrates How Synergy Discovery Can Lead to Synergistic Consolidation Using an LOB Wheel Structure

In summary, the data suggests that achieving the profitability of addressable markets often requires market penetrators and timely strategy execution. MDD leaders identified penetrators that could be used situationally to capture new and increased market share. The researcher discussed types of penetrators used to realize profitability. These were synergistically exploited as they were already available or could be simply customized or applied situationally. Penetrators applied to the MDD design can leverage existing capabilities, infrastructure, products, systems, and technical expertise at competitive prices. Capability enabled a competitive stance. A cost advantage further made possible the penetration of markets by making "bundle deals" available with shared discounts to business units involved. An effective infrastructure can be leveraged for volume deals that competitors cannot accommodate. Products must also have consistent integrity against requirements and delivery expectations. Clients desire that their vendor has the technical ability to solve their problems. Vendors must therefore be able to create new products and services. Strategic capabilities allow the entrepreneur to be liberated and motivated. Synergistic penetrators are less costly to create and deploy and thus, enhance margin potential. Penetrators help MDD leaders realize synergistic growth. The following propositions summarize the key findings of this section:

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Proposition 6 (situational tactics): Strategic tactics must be viewed as situational to exploit penetration opportunities in a dynamic market.

Proposition 7 (MDD scaling): The MDD creates a competitive advantage that can scale through the addition of LOB's and locations while preserving talent, process, knowledge, and a penchant for excellence.

Proposition 8 (infrastructure reliability): Infrastructure reliability is a penetrator in an increasingly insecure and liability-oriented commercial environment.

Proposition 9 (enhanced value): The creative and timely application of enhanced value may enable new profit-producing opportunities to be exploited.

Proposition 10 (tailored UI): Customizing the ERP UI to clients' wishes makes it difficult for clients to divorce themselves from the familiar system interface and the valuable business intelligence that has accumulated.

Proposition 11 (technical prowess): Technical ability is a penetrator because it inspires confidence in the company's ability to solve problems the client does not understand or cannot solve.

3.3 Contributions to Theory

The primary contribution of this article is new empirical insights about the effects of diagonal client scaling 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. Ten 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 client scaling in an MDD, the author hopes that interest has been sparked on researching the design and application of further more effective and efficient scaling 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

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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 et al., 2012). These lateral integrative mechanisms reduce costs that would otherwise be overhead in a traditional M-form structure.

4. Discussion

The M-form has come into question with regard to its relevancy in modern MNE's (Bartlett & Ghoshal, 1993; Berggren, 1996; Ruigok et al., 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 MNE's 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 MNE's 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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