



MedDev
Company

Developing an Ecommerce Platform

Consultant Project: Final Report

DISCLAIMER

This material is based upon work by Hamilton Consulting Group (HCG) for its client Med Dev Company. Any opinions, findings, conclusions, or recommendations are those of the authors and do not reflect the views of Med Dev Company, its employees, or its administration.

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I. Executive Summary

Hamilton Consulting Group has been engaged by Med Dev Company to assess the viability of an ecommerce portal to aid in the sales process. Currently, the medical device industry at large operates in a fairly efficient manner, with sophisticated supply chain management (SCM) systems running the show for large hospital chains and group purchasing organizations (GPOs). However, not all healthcare institutions are a member of a larger organization, have the capital to invest in sophisticated SCM systems, or simply do not need this level of sales automation in the day-to-day operation of their businesses. These healthcare institutions tend to be smaller clinics, doctor offices, or outpatient facilities that interact with medical device sales teams with phone calls, emails, and fax machines. Med Dev Company deals with customers on both ends of the spectrum, and, although these smaller practices make up a much smaller percentage of overall revenue, the time spent catering to their order requests in a manual fashion can be disproportionate.

To counter this issue, HCG has researched the feasibility of the creation of an ecommerce site dedicated to selling some of Med Dev Company's products. Several competitors in the medical device industry are already using online ordering portals for their companies' products to great success. Theoretically, there is no reason that Med Dev Company cannot create its own ecommerce solution to cater to the sales needs of its smaller, but no less important, customers.

The report will focus on examining the benefits and risks of an ecommerce site within the medical device space, an analysis of current competitors' ecommerce portals, and a breakdown of Med Dev Company's own products based on their viability to be sold online.

II. Client Profile

Med Dev Company is a mid-size medical device manufacturer that has been in the industry for about thirty years. The company found its niche selling angiographic catheters, or catheters that are used in vascular procedures. Since then, the company has gone on to expand into other sectors of the medical device industry, including developing products for the treatment of varicose veins, kidney disease, blood clots, and cancer. Still paling in comparison to many of the larger companies such as Bard, Cook Medical, and Boston Scientific, Med Dev Company is determined nonetheless to use its proprietary technology and long-standing tradition of product excellence to become a disruptor in the marketplace and take the next step in growth.

Compared to some of its competitors, it is a fairly young company, but has seen rapid growth in recent years due primarily to acquisitions. One of these acquisitions occurred within the

last seven years and saw the company double in size overnight in nearly every. With this doubling in size came growing pains, however, as the company has struggled in recent years to transform itself from a smaller player in the medical device industry to a mid-size player. Much of these woes are centered around the internal and external processes that were not adequately addressed at the time of the merger, including IT systems, financial systems, sales strategies, and marketing objectives.

While the company has made strides in addressing some of these concerns, there still remains one modern business component absent from the marketing, financial, sales, and IT toolbox that has the potential to streamline certain aspects of these processes. This component is ecommerce. With an increasingly tech savvy public who are used to shopping online, and the comparative inconvenience of manual online ordering via email, phone calls, and faxes, it is increasingly important that Med Dev Company fill this need.

Although the majority of Med Dev Company's revenue comes from large hospital systems that utilize their own version of ecommerce through highly advanced supply chain management systems, there still exists a significant portion (about 10%) that comes from small customers. Med Dev Company's ability to cater to these customers' needs with an online ecommerce option will go a long way in making the customer experience more enjoyable, as well as propel the company's sales process into the twenty first century to remain competitive against larger players in the marketplace.

III. Introduction

Scope of Work

Hamilton Consulting Group was commissioned by Med Dev Company to explore the potential of implementing an ecommerce portal. This portal should focus on serving the needs of Med Dev Company's smaller customers who do not have access to high-end SCM systems. With this in mind, HCG is adhering to the following scope of work to deliver a final conclusion on whether or not such a platform is viable:

- Assess the benefits and risks of ecommerce within the medical device industry by reviewing concerns from internal stakeholders as well as examining marketplace data
- Identify the current sales process for large and small customers, and note the areas that can be simplified or removed entirely with the addition of ecommerce
- Analyze current competitors' ecommerce platforms for ease of conversion, breadth of product offerings, company support of the platform, and utility to sales

- Review Med Dev Company's core product offerings to suggest which products may be best suited for online sale

It is important to note that actual ecommerce platform creation, or the suggestion of a specific platform to use for such a project, is beyond the scope of this report. Should Med Dev Company choose to pursue an ecommerce portal, further research into the platform itself as well as financial impact on the company will be assessed.

Project Limitations

Some limitations were encountered by HCG as we began scoping out our report. The main limitation is that it would be ill-advised to create a functioning ecommerce platform with Med Dev Company's products, lest this project not carry through to completion. Med Dev Company's legal and regulatory teams expressed concern about having a non-functional, but professional-looking, ecommerce site existing somewhere in the ether of the internet, even if it was maximally secured. These concerns are valid, as we would not want to jeopardize the good-standing of our client should the unofficial test version of the site be hacked or somehow accessed by a third party.

Another considerable limitation to the project, especially in the competitor assessment section, is that Med Dev Company's competitors' ecommerce sites are not readily accessible to the general public. Only customers can see the ordering portal, which limits HCG's ability to fully assess the layout and operation of those sites. There is, however, information on each company's website that offers hints and examples of what potential customers can expect if they sign up for their ecommerce platform, and so this will serve as the primary basis for analyzing these sites.

Opportunities

Despite the few limitations present for this project, HCG has identified several key opportunities that can be seized upon with the introduction of an ecommerce platform. These are:

- Increased efficiency in customer orders
- Less human error inherent in the passing of information by manual methods
- More free time for sales reps to foster other relationships and with newer clients
- Potentially eliminate time consuming price negotiations
- Increased customer satisfaction

These opportunities represent *potential* for a Med Dev Company ecommerce platform, and are certainly no guarantee. However, HCG feels that with the right implementation strategy and personnel at the helm, the company stands to create even more opportunities for increased efficiency and customer satisfaction, among other things, down the road.

IV. Findings

Risks

Research performed by HCG suggests one of the main risk factors, or potential issues, with the creation of an ecommerce site is the potential for a negative user experience through poor design. HCG recommends that ample thought and resources be expended by Med Dev Company to explore an ecommerce layout that suits its customers' needs to the highest degree. With poor site design comes the increased likelihood that customers will stop using the site and revert to the old ways of ordering, thus making the ecommerce platform all for naught. Med Dev Company needs to ensure that the site it creates for the purchasing of its products is simple to use, responsive (i.e. available on mobile and desktop), secure, and only delivers the information that its customers care about most.

Because Med Dev Company's product offerings are rather small in number compared to competitors, it should be simple to keep the site well-organized and clean. Some similar websites that offer medical supplies have an easy to navigate product structure on their ecommerce platforms. One such supplier, called Vitality Medical, has a well-designed site for the sale of a broad range of medical supplies. Although the products offered by this company differ from those of Med Dev Company, the fundamental structure is sound and offers excellent insight into organization.

SHOP CATEGORIES

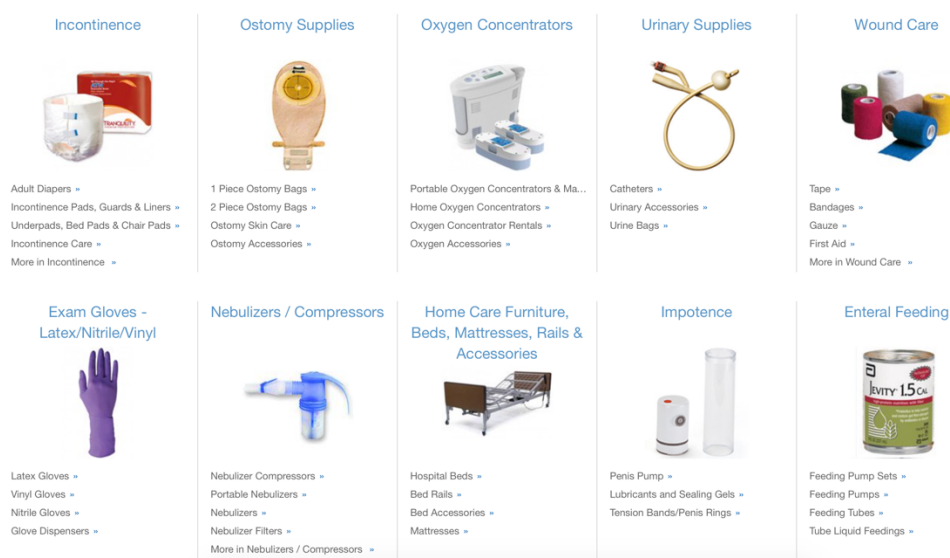


Figure 1.1 The homepage for VitalityMedical.com gets straight to the point. Intuitive design and product categorization for each product family.

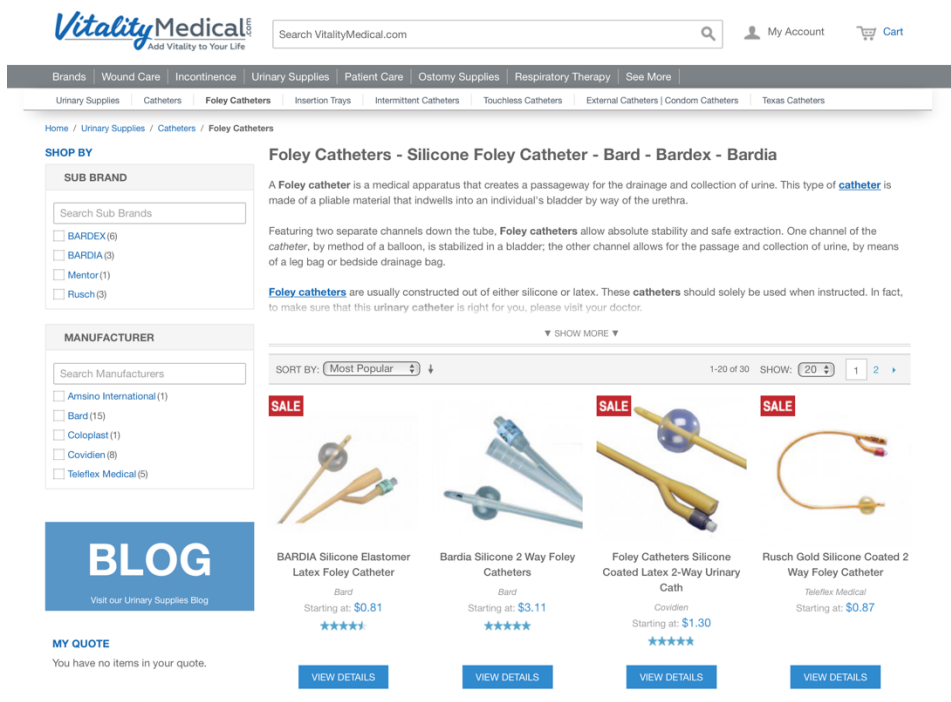


Figure 1.2 The second-tier page breaks down the products in a familiar, user-friendly fashion.

Another factor at play in the development of an ecommerce platform for Med Dev Company is the care and maintenance of the site. This is certainly a risk for the company because, as our interviews with internal stakeholders have revealed, the company has a history of not carrying through and maintaining web properties after initial launch. Although this has been an issue in the past, and represents a risk in the present, we believe this can be remedied for any future development of an ecommerce site by dedicating a team to servicing the platform. HCG does not recommend that current IT or marketing managers simply add the maintenance of an ecommerce site to their “to-do lists”. Rather, an internal department is formed to be the project lead in development and maintenance of the site. This would likely work best as a function of the overall marketing department, with support from IT as needed. However, it is imperative that a dedicated team of professionals actively manage the ecommerce site full time.

HCG proposes that the Ecommerce Marketing Team (EMT) consist of the following personnel:

- Director of Ecommerce Strategy** – Leader of the EMT and expert in ecommerce strategies and development. This person should have a minimum of ten years of experience managing ecommerce platforms, preferably within the healthcare industry.

- **Senior Web Developer, Ecommerce** – This role should have five to seven years of experience with web development platforms, especially within the realm of ecommerce. This EMT member will be responsible for making changes to the ecommerce site’s backend, both in functionality and content, and should be well-versed in HTML, CSS, and other web coding languages and software.
- **Data Specialist, Ecommerce** – The Data Specialist is a junior member of the team. The role requires 2-4 years of experience in marketing and/or sales, and will be responsible for analyzing the data retrieved by the ecommerce platform such as customer usage, preferences, most and least commonly purchased products, etc. This role will work closely with the larger marketing team to determine changes to the site and make sense of data trends.
- **Content Specialist, Ecommerce** – The Content Specialist is another junior member of the team with 2-4 years of experience, responsible for updating and managing the frontend content of the ecommerce site on a day-to-day basis. Marketing teams will work directly with him or her to coordinate content updates and new product listings on a rolling basis. The role will also work closely with the Senior Web Developer to ensure proper functionality of the site and content implementation.

Finally, HCG suggests that a third and final major concern that Med Dev Company should investigate further before committing to an ecommerce platform is the negative impact it may have on its sales team. While we believe that the ecommerce platform will ultimately benefit the sales team, there is concern among some members of your sales team that the introduction of such a system will be an unwelcomed change in the sales process. One belief is that an ecommerce site will decrease regular interactions between them and customers, thus damaging relationships. Additionally, the sales team is concerned that the introduction of an ecommerce platform will eliminate their ability to negotiate for higher prices, ultimately hurting their bottom lines. These are all valid concerns, and the answers to these issues lie beyond the scope of this project, and may include adjustment in sales team compensation methods. However, it is HCG’s opinion, and experience with past projects, that a more streamlined sales process that avoids price negotiations tends to benefit both parties. We strongly urge you to discuss this matter in greater depth with your sales leadership should you decide to pursue an ecommerce site.

Benefits

While Med Dev Company will certainly experience risks during the development and implementation of its first ecommerce site, it will also stand to gain some significant advantages in the marketplace. Firstly, ecommerce is no longer an up and coming trend in the marketplace. It is here to stay, and is in fact becoming a preferred method of product purchasing. It is increasingly expected of companies to offer some sort of easy, ecommerce solution for their products, according to a recent article from CIO.com, a leading publication that serves the interests of tech leaders and decision maker around the globe. Adopting an ecommerce strategy will allow Med Dev Company to join its peers in the 21st century marketplace, which is where consumers want them to be.

Besides simply being expected of a company, ecommerce truly does increase efficiency in product ordering on nearly all fronts:

- Orders are processed faster
- Fewer mistakes from manual data entry
- Customers can do their own research about your products
- Sales reps can access data of their customers, gaining further insights into their purchase habits, which may inform the sale of future products
- More free time for sales reps to develop relationships with new customers

According to research by the Acquity Group, 71% of B2B buyers prefer to conduct their own online research before contacting a sales rep anyways. An ecommerce site allows the customer to research the product right on Med Dev Company's site and then, if they desire, purchase it on the spot.

A third benefit that HCG has identified for Med Dev Company is somewhat of a controversial topic. However, our research suggests that price transparency is in fact beneficial to both the customer and the sales rep. As mentioned earlier in the report, the sales team may be concerned about openly displaying prices for products on an ecommerce site since it will effectively eliminate their ability to negotiate for a higher price. Inventory prices are the most highly variable cost of any healthcare organization, large or small, and it is becoming increasingly important for these purchasers to know the fair price for the products they are buying. Aggressive price negotiation is part of everyday life for hospital and clinical administrators as well as sales reps, which can be exhausting and simply a waste of time for both the seller and buyer. HCG suggests that eliminating this step of the sales process will foster goodwill between the customer and Med Dev Company and will be viewed positively by the sales team once they are alleviated of this stressful portion of the sale.

Current Sales Process

The sales process shown in Figure 2.1 illustrates the common approach to medical device sales to large hospital customers. These customers often possess sophisticated SCM systems on which their entire ordering process is based. These customers tend to purchase in bulk wherever possible in order to achieve price breaks – something that a smaller customer would not be able to do. While an ecommerce site is something that these hospital systems may take advantage of in unique situations, the platform is by and large not geared towards them. Med Dev Company needs to focus on serving a specific clientele, i.e. its small customers. It is helpful to understand the other sales tactics and processes at work within the industry, and so we have outlined them in the following chart.

Sales Process for Large Hospital Customer

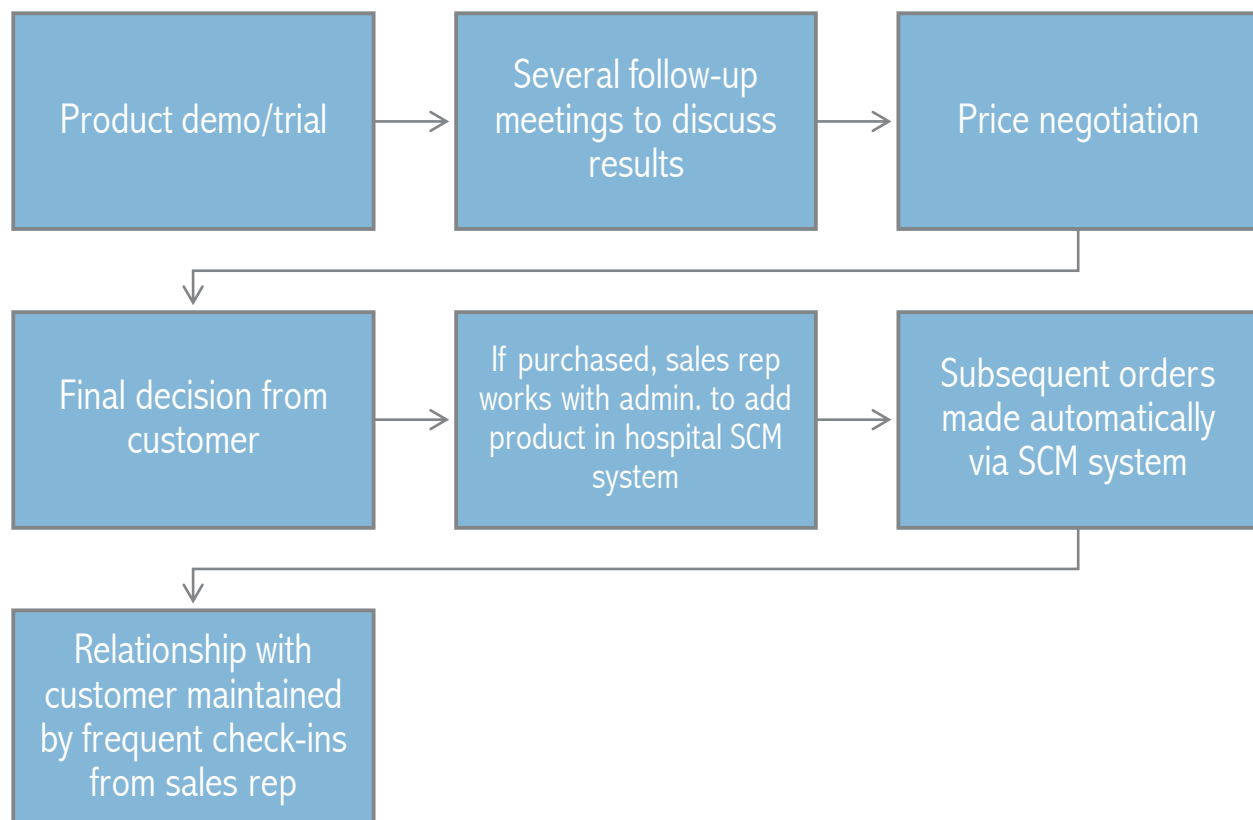


Figure 2.1 This sales process is common within the medical device industry and would not be affected by the introduction of ecommerce by Med Dev Company.

In Figure 2.2, HCG has outlined the sales process in question. Although smaller customers account for less revenue than the large hospital systems that make up roughly 90% of Med Dev Company's revenue, they still represent an important opportunity for the company. By catering specifically to these customers' needs, we believe Med Dev Company will not only streamline its own order process, but increase customer satisfaction and create more goodwill within the marketplace. Customers would be more likely to recommend Med Dev Company as a business partner to other physicians, and may very well become steadfast users of their products throughout their careers, including if the physician were to move from a small clinic setting to a larger hospital system.

Additionally, HCG has found that after interviewing field personnel, a great deal of time is spent taking care of smaller customers order needs – occasionally as much time as their larger, higher-revenue-generating customers. Freeing up this time would be a welcomed change for the team in the field. Figure 2.2 highlights the current sales process for small customers and suggests steps that can be removed with the implementation of ecommerce.

Sales Process for Small Customer

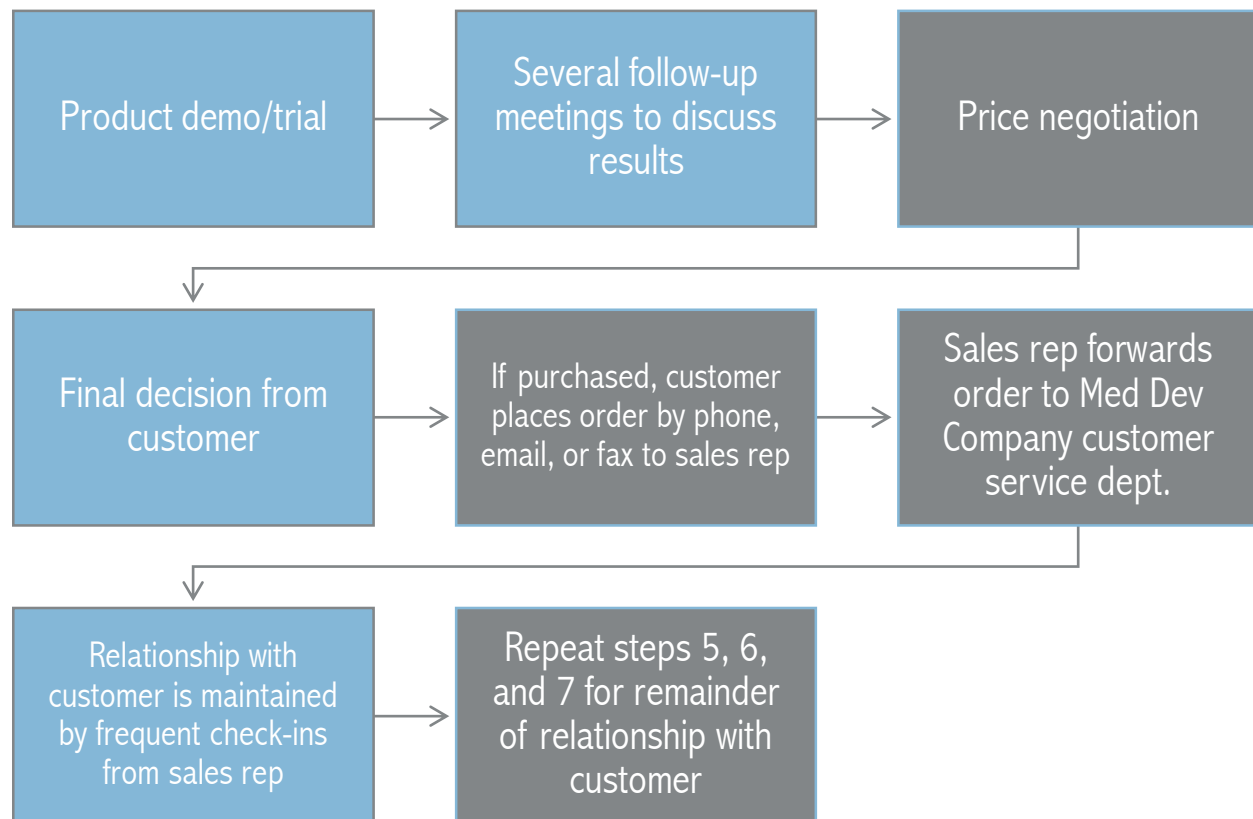


Figure 2.2 Steps in gray are steps that can be eliminated with the introduction of an ecommerce site

Figure 2.3 shows the potentially shortened sales process made possible by the inclusion of an ecommerce site. The sales reps are not entirely cut out of the process, as that is not the idea of this project. What it does do, however, is decrease the amount of time the Med Dev Company sales team has to manually process order requests from the customer. The same level of personal interaction is still required to demo/trial the product and discuss the sale at follow-up meetings, but the key here is the elimination of price negotiation, the forwarding of manual requests to customer service, and the repetition involved each time an order needs to be placed. This allows for greater independence on the customers' end, which market data show is much preferred than reliance on a sales rep for each and every order.

Sales Process for Small Customer with Ecommerce

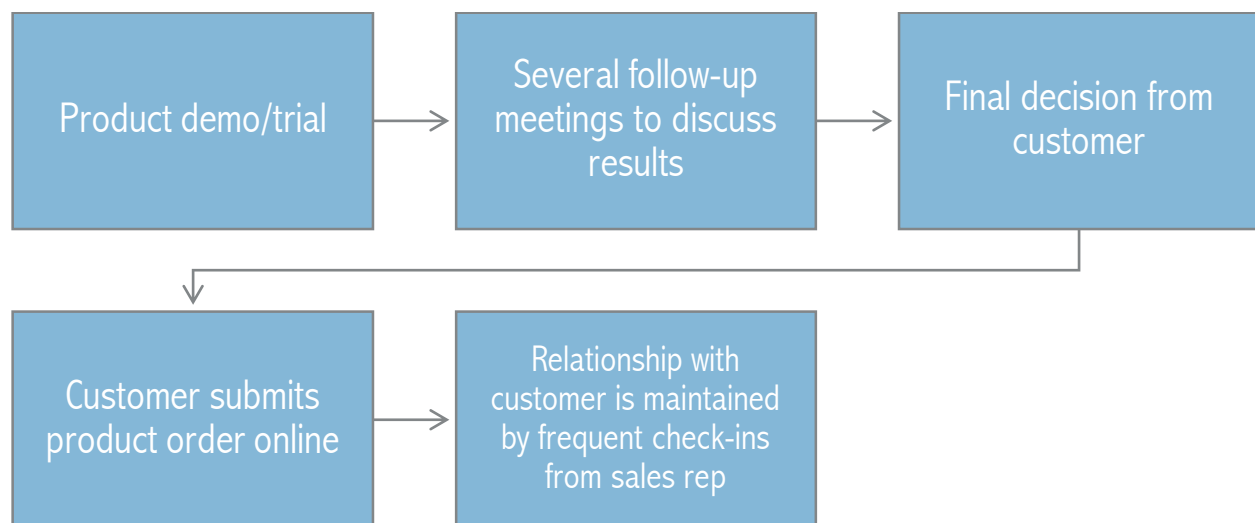


Figure 2.3 The sales process is shortened and the customer becomes more independent when placing orders

Competitor Analysis

Now that we have outlined the current and potential sales process for Med Dev Company, let's take a look at the company's current competitors and see how they are managing ecommerce in the medical device industry. The competitors that HCG chose to focus on are Cook Medical, Bard, and Boston Scientific. All three of these companies offer products similar to Med Dev Company in some capacity, and all three are much larger companies with the resources to execute a successful ecommerce operation. HCG would like to note, however, that the information in this section was gleaned from what was readily available to the public. This does not represent a 100% objective or

necessarily accurate assessment of each company. Rather, these are conclusions drawn by the team at HCG based on the information publically available to our research team.

Figure 3.1 shows Cook Medical's online product portfolio page. While this is not the actual ecommerce ordering page, it is arranged so that customers can locate specific products and product reference numbers to then input into the actual ecommerce portal. The page is sortable by product name, type, specialty, and division, making it very easy for customers to find what they need.

Products

Product Name	Product Type	Clinical Specialty	Cook Medical Division
14 Fr Colon Decompression Set	Sets	Colorectal Surgery, Gastroenterology	Endoscopy
6 Shooter® Saeed® Multi-Band Ligator	Hemostasis, Ligators	Gastroenterology	Endoscopy
6 Shooter® Universal Saeed® Multi-Band Ligator	Hemostasis, Ligators	Gastroenterology	Endoscopy
Achalasia Balloon	Dilation Balloons	Gastroenterology	Endoscopy
Acrobat® 2 Calibrated Tip Wire Guide	Wire Guides	Gastroenterology	Endoscopy

Figure 3.1 Cook Medical's online product portfolio page

Similarly, Bard's online U.S. Product Catalog arranges products in an easy to find fashion. Customers can browse this database and find the exact product they need and reference the product code, or GTIN (Global Trade Item Number), to input into their ecommerce order.

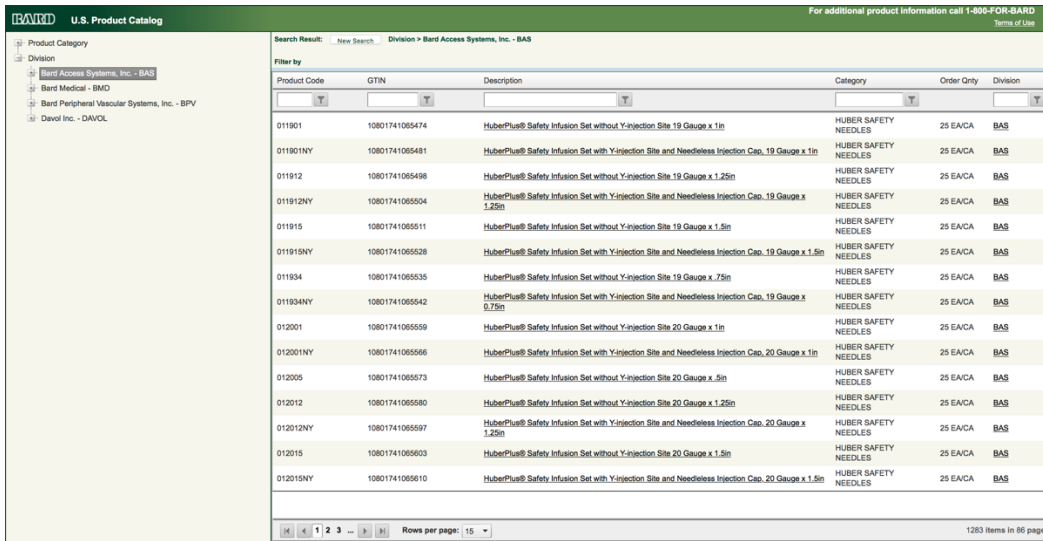


Figure 3.2 Bard’s US Product Catalog is arranged in a searchable database format

Med Dev Company’s Competitors’ Ecommerce Portals

	Ease of Conversion	Breadth of Product Offerings	Company Support	Utility to Sales
Bard	6	10	6	9
Cook	10	8	9	7
Boston Scientific	8	7	7	7

Figure 3.3

Bard’s Ease of Conversion received a 5 because the process to connect a customer to the Global Healthcare Exchange (GHX) can be complex. Their e-Quest online ordering system is fairly simple, but is not as robust as the Global Healthcare Exchange option. Bard offers nearly all of its products through the Global Healthcare Exchange and e-Quest, and offers a moderate amount of company support for the platforms (although GHX is not a Bard-owned company, which decreases the score in this category). Finally, the ability for a company to connect to GHX has the potential to completely automate the ordering system for a customer, which gives a high score in “Utility to Sales”.

Cook Medical’s Online Ordering is the easiest of all three to join, as the customer simply fills out a form and, after verification for the ecommerce team, is approved for purchases. Cook seems to offer wide variety of products (though not all products), and has a special internal team dedicated to the ecommerce customer experience, just as HCG suggests for Med Dev Company. The utility to sales here is fairly high since customers have the ability to order and pay via invoice or credit card, which avoids any coordination between the customer and the sales rep.

Finally, Boston Scientific's eOrder falls somewhere in between Bard and Cook in terms of ease of conversion. Their website does not offer great detail on the signup process, but it seems simple enough. Boston Scientific is a large company with a wide array of products, and it is unlikely that all are available through their ecommerce portal. Additionally, if a customer wants to order Latitude NXT equipment from them, they need to create a completely different account that runs through a separate ecommerce system. Although Med Dev Company has had several mergers in recent years, we highly suggest staying away from parallel ecommerce systems such as this at the risk of confusing customers and possibly even your own employees. Boston Scientific seems to be invested in the success of their online sales tool, and so they have received a moderately high score for Company Support, as well as Utility to Sales.

Product Ecommerce Viability

Med Dev Company's Products: Ranked for Online Sale

	Type of Device	Lifecycle Status	Legal Concern	Consumer Demand	Conclusion
Microwave Generators	capital	new	high	high	no
RFA Generators	capital	mid life	high	low	no
Probes	disposable	mid life	low	high	yes
PICCs	implantable	mid life	high	high	no
Ports	implantable	mid life	high	high	no
Dialysis Catheters	disposable	mid life	medium	medium	no
Angiographic Catheters	disposable	legacy	medium	high	yes
Laser Generators	capital	mid life	high	high	no
Laser Fibers	disposable	mid life	medium	high	yes
Guidewires	disposable	legacy	low	medium	yes
Infusion Catheters	disposable	legacy	medium	low	yes
Proprietary Infusion Catheters	capital/disposable	new	high	medium	no
Supplies (Syringes, needles, suture buttons, scalpels)	disposable	legacy	low	high	yes

Figure 4.1

In Figure 4.1, we broke listed Med Dev Company's most important, mainstream products, along with four categories for evaluation:

- **Type of Device** - three categories: capital, disposable, and implantable. Devices labeled as "capital" are large, expensive, and require specific technical training to operate. "Disposable" refers to products that are used once during a procedure and are immediately disposed of after use. "Implantable" devices are devices that go into the human body for an extended period of time with the objective of treating a chronic or extended illness.
- **Product Lifecycle** – HCG has assessed the product lifecycle stage for each product. Newer products would likely not be good candidates for ecommerce since they need to attain a certain level of excellence in the market place before Med Dev Company would be comfortable making them so easily available. Also, legacy products, or products that have been around for decades and are no longer consider innovative or cutting-edge, are more likely to be sold online since they are tried and true products which reasonably high consumer demand.
- **Legal Concern** - A major factor for ecommerce medical device sales. The Legal and Regulatory departments at Med Dev Company are certainly not willing to put the company at risk if they feel a product should not be sold online for any reason. Any product with a high level of legal concern would likely be excluded from an ecommerce site, despite factors such as consumer demand or lifecycle status. Products with low risks are very likely to be available online, while medium risk items will take into account other factors, which will pull the company's decision in one direction or another. For example, a disposable item like a dialysis catheter may not be suitable for online sale, even with only a medium level of risk, because the catheters are newer and have less demand. However, items like angiographic catheters, which are a staple product of Med Dev Company, have been around for decades and have a very high consumer demand. Angiographic catheters are not cutting-edge and are rather simple products, so they are more likely to be sold via an online portal.
- **Consumer Demand** - Relates which products are being asked for by customers most frequently. Some newer products often have an artificially high consumer demand, while mid-life and legacy products receive a wide range of demand. HCG has assessed the current market demand based on feedback from the marketing and sales team.

V. Conclusion

Taking into account the demand for ecommerce in the modern marketplace, the methods currently in use by some of Med Dev Company's larger competitors, as well as a robust product portfolio that has plenty to offer in terms of viable online products, HCG believes that an ecommerce portal would be very beneficial to Med Dev Company's sales process. Although the medical device industry in general tends to remain more traditional in its sales practices, resisting modern conveniences found in other business sectors, we feel that the trial period for the viability of ecommerce is over. It is obvious that the ability for Med Dev Company's smaller customers to order their products in a self-sufficient manner would benefit both the customer and the company, leading to the increased efficiencies we have outlined in this report.

As a word of caution to the sales and marketing teams who will make the final decision on whether or not to use an ecommerce tool, HCG highly recommends that the company "goes all in". By this, we mean that any development of an ecommerce portal for the company should be rolled out as *the* new tool for ordering products. It may be tempting to run the ecommerce site in parallel with the old way of doing things (i.e. manual entry), but this will only lead to troubles down the road, manifesting itself as mixed up orders, confused customers, and even confused customer service employees. A complete and thorough move to ecommerce is the best approach to ensure the success of the platform and ultimately, the success of the company.

HCG would like to thank the team at Med Dev Company for their support and cooperation throughout the research and fact-finding process. We hope you will take our recommendations into consideration, and we look forward to the potential to work with you on future stages of this project.