

# Value Network Case Study

## *PharmCo Customer Knowledge*

**Verna Allee**

### **Proprietary Material**

The examples and case studies in this document are fictitious or are composites of different company situations.

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## CASE STUDY NAME

PharmCo Customer Knowledge

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## CASE STUDY DESCRIPTORS

|                                     |  |
|-------------------------------------|--|
| Name of company/organization        | PharmCo Pharmaceutical   |
| Name of project                     | Patient and Provider Knowledge Management                              |
| Name of contributor                 | Verna Allee  |
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## PURPOSE STATEMENT

PharmCo's Sales and Marketing Group was analyzing their communication processes and their relationships with providers and patients, in order to better leverage customer knowledge within PharmCo and identify value-creating opportunities.

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## GOALS/OBJECTIVES OF THE PROJECT

- Improve relationships with patients and providers.
  - Advance usage of customer knowledge and feedback to improve product development and customer service.
  - Add greater value through improved communication channels.
  - Provide better knowledge support to providers, patients, and other participants in the PharmCo value network.
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## BACKGROUND

It was generally felt that while overall communication was good within PharmCo, there were inefficiencies in gaining customer feedback, obtaining input from patients and providers, and in feeding this information back to Research and the Development group. While company databases held customer contact information and provided a lot of information around purchasing histories, there was no systematic way to gather comments about how customers were actually using PharmCo treatments or if there were specific features they would like to see improved. Before investing heavily in knowledge management technologies it was decided to analyze the current situation and identify opportunities to improve knowledge sharing and enhance value for providers and patients.

Internally at PharmCo there are four primary groups that interact around developing and launching new products and services. The first group, **Sales and Marketing**, is the group that had oversight for this project because they interact with **Patients** and **Providers**, and thus have ready access to customer knowledge. However, the primary responsibility for identifying product candidates lies with **PharmCo Research**, which makes recommendations for development to the **PharmCo Development Group**. When a new product is perfected they, in turn work with **PharmCo Manufacturing** and industry **Regulators** to get the product ready to launch.

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Key external Participants in the PharmCo Value Network are **Health Care Providers** who provide treatments using PharmCo products to the ultimate end user – the patients. Also important are **Payers** such as insurance companies who actually approve the treatments for coverage and assure payment for the product. Diagram A shows the Participants in the PharmCo value network.

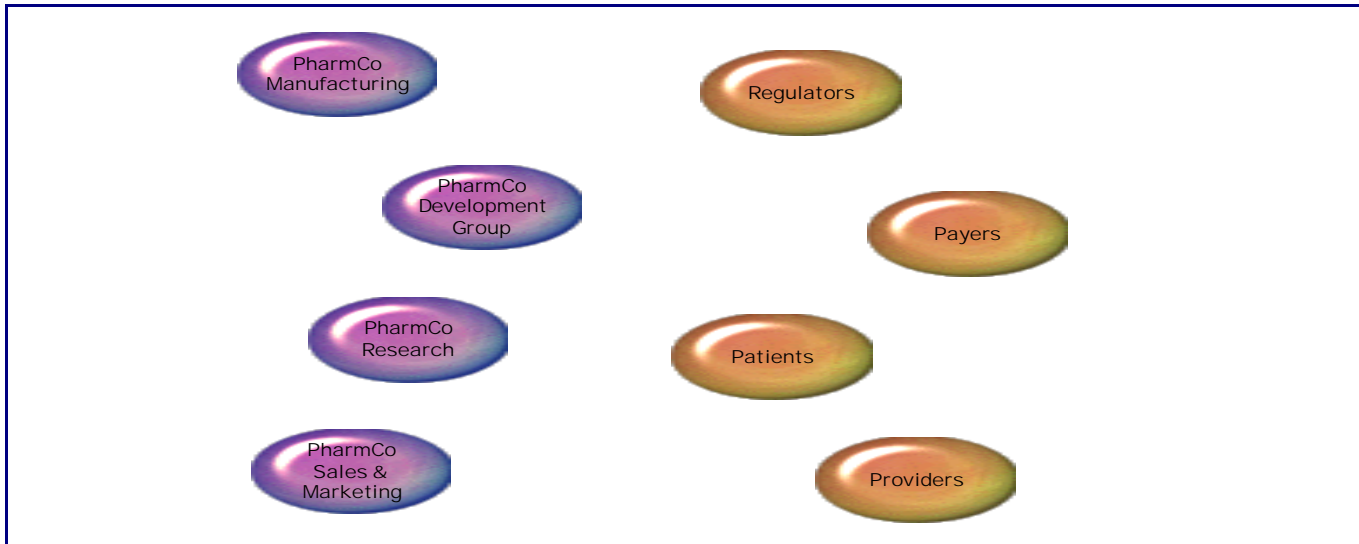


Diagram A.  
Participants in the PharmCo Value Network.

## ASSUMPTIONS, VALUES, AND CONDITIONS

While most companies recognize the need for improvements in leveraging knowledge and know-how, it is sometimes difficult to prove a return for knowledge investments. The assumptions going into the project were:

- Knowledge-intensive companies must manage knowledge as a strategic resource, and exchanges of knowledge and other intangible benefits build better working relationships.
- Value must be defined in both tangible and intangible terms, both for gains realized within PharmCo and value that is provided to other participants in the PharmCo value network.
- A systematic analysis of tangible and intangible exchanges will surface value opportunities and clarify the highest leverage knowledge initiatives.
- If a strong business case could be built for investing in improved knowledge management and knowledge interactions, PharmCo would be willing to invest time and resources in those activities.

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## METHODOLOGIES USED

PharmCo decided to use Value Network Analysis (VNA) - a whole-systems mapping and network analysis approach to understanding tangible and intangible value creation among participants in any business unit, organization business web, or purposeful network.

Specifically they decided to devote a core team of four employees to undertake a comprehensive *ValueNet Works™* Analysis (VNW™), a method of value network analysis developed by Verna Allee. The analysis was supported by the online *ValueNet Works™ Analysis Fieldbook*, *GenIsis™* application that supports *ValueNet Works™ Analysis*, and a facilitated community space.

The initial consultation and mapping activity was undertaken in a two-day intensive with follow up over a three-month period with telephone and online support. The core team consisted of four PharmCo employees and Verna Allee as the primary facilitator. Also on the core team was Oliver Schwabe of Eurofocus International Consultants Ltd, (Eurofocus), who provided online support and facilitation for the online fieldbook, the application, and the project community space.<sup>1</sup>

## Process

The primary milestones of the project were:

- ✓ Set context for the project by focusing on problems, strengths, opportunities, and weaknesses around the question of using customer knowledge and feedback for improved products and services. This was a classic SWOT analysis (Strengths, Weaknesses, Opportunities, Threats), which is a common tool within PharmCo.
- ✓ Develop a clear purpose statement and define objectives and goals.
- ✓ Identify initial project indicators and assign team members to develop baseline measures.
- ✓ Demonstrate the methodology and business results with examples and cases.
- ✓ Introduce and demonstrate the web-based *ValueNet Works™* application and the on-line community space for the project.
- ✓ Provide an overview of the planned online support, its deliverables, and how it will support the ongoing sense making process of the project team.
- ✓ Engage Participants in a *ValueNet Works™* Analysis.
- ✓ Prioritize strategic interventions and define performance measures.
- ✓ Develop an action plan or roadmap for value realization.
- ✓ Conduct weekly summaries of activities as well as on-line or telephone check-ins until completion of the project.

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<sup>1</sup> In this document, capitalized terms are important aspects of the methodology. Refer to the online Glosary.

## EXCHANGE ANALYSIS

Before beginning the Exchange Analysis, we led a discussion around questions of purpose and strategy.

What is the real purpose of the value network that we are exploring?

What is the larger system that value network is involved in?

Are the two purposes in harmony?

It was agreed that the purpose of the PharmCo value network, from PharmCo's perspective, should closely correlate to the company purpose and vision.

To determine the health of the network, we conducted an Exchange Analysis. (See the detailed fieldbook module.) The Sequencing was done at the same time. (See fieldbook module.)

The Exchange Analysis should be conducted after completion of the visual Value Network Map. The analysis requires that:

- All Participants and Roles have been identified. (Diagram A)
- All Transactions and Deliverables are indicated. (Diagrams B,C,D)
- Sequencing or other validation is complete. (Diagrams B,C,D)

Since the presenting issue is around better utilization of customer knowledge, some of the most useful questions in the exchange analysis centered on trying to understand broken value pathways and knowledge "gaps" focusing on where an information flow seems to break down. Given that most knowledge flows are intangible, they are seldom managed as well as more formal processes. So in this case, the questions for the Exchange Analysis were shaped in such a way that people turned to the question of which intangible interactions needed to be better managed or supported in a systematic way.

Since the primary role of Sales and Marketing is externally focused, we also decided to spend some time exploring other key roles that Sales and Marketing plays within PharmCo itself. Our sense was that the value network analysis would help Sales and Marketing better appreciate that they actually play a critical role in analyzing patient and provider feedback and in assuring that information flows reach other groups such as PharmCo Research and the PharmCo Development Group. This also proved to be a very good area of discussion.

**Tangible Transactions and Exchanges**

Diagram B and the Sequence Table depict the *Tangible* or contractual Transactions in the PharmCo Value Network.

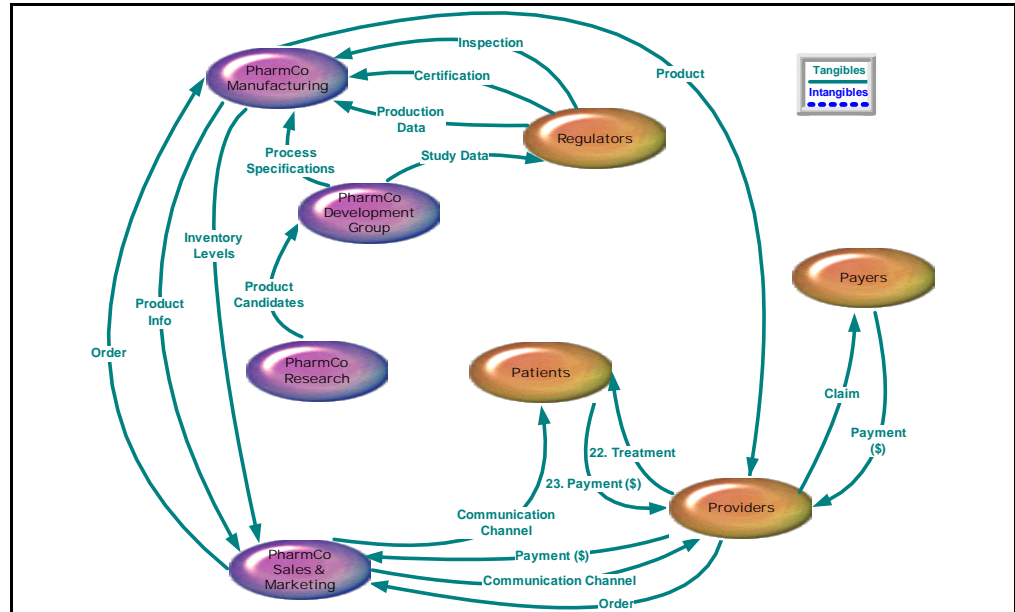


Diagram B and the Sequence Table depict the *Tangible* or contractual Transactions in the PharmCo Value Network.

Diagram B. PharmCo Tangible Transactions.

Sequence Table for Diagram B  
**PharmCo Tangible Transactions**

| Tangibles Sequence Table |                        |                     |                     |        |
|--------------------------|------------------------|---------------------|---------------------|--------|
| Step                     | Deliverable            | Comes From          | Goes To             | Metric |
| 1.                       | Product Candidates     | PharmCo Research    | PharmCo Development |        |
| 2.                       | Process Specifications | PharmCo Development | PharmCo Mfg.        |        |
| 3.                       | Study Data             | PharmCo Development | Regulators          |        |
| 4.                       | Tangible               | Certification       | Regulators          |        |
| 5.                       | Tangible               | Inventory Levels    | PharmCo Mfg         |        |
| 6.                       | Tangible               | Product Information | PharmCo Mfg         |        |
| 7.                       | Tangible               | Communication       | PharmCo Sales & Mkg |        |
| 8.                       | Tangible               | Communication       | PharmCo Sales & Mkg |        |
| 9.                       | Order                  | Providers           | PharmCo Sales & Mkg |        |
| 10.                      | Order                  | PharmCo Sales & Mkg | PharmCo Mfg         |        |
| 11.                      | Product                | PharmCo Mfg.        | Providers           |        |
| 12.                      | Treatment              | Providers           | Patients            |        |
| 13.                      | Payment                | Patients            | Providers           |        |
| 14.                      | Claim                  | Providers           | Payers              |        |
| 15.                      | Payment                | Payers              | Providers           |        |
| 16.                      | Payment                | Providers           | PharmCo Sales & Mkg |        |
| 17.                      | Adverse Reactions      | Providers           | PharmCo Dev         |        |
| 18.                      | Adverse Reactions      | Providers           | Regulators          |        |

Table 1. Sequence table for diagram B – PharmCo Tangible Transactions.

**Intangible Transactions and Exchanges**

Diagram C and Sequence Table look only at the flow of *Intangible* Transactions.

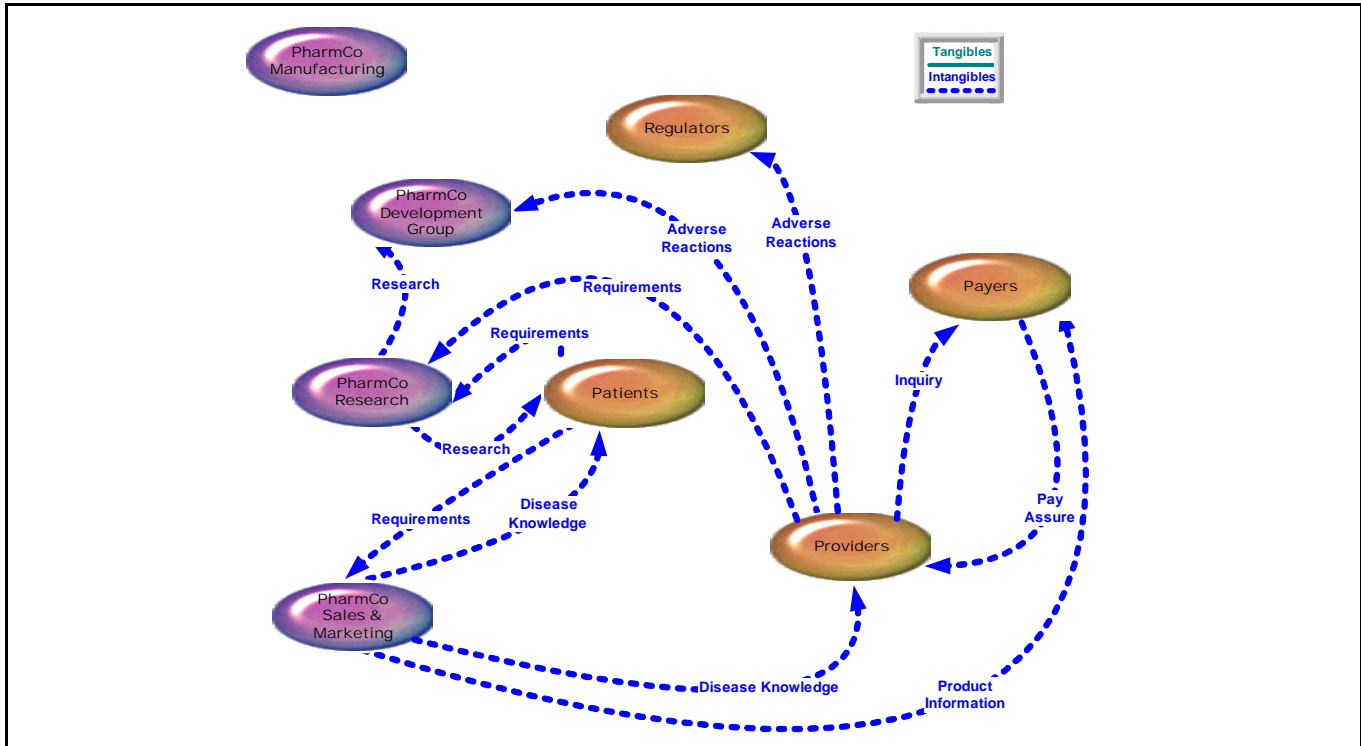


Diagram C.  
PharmCo Intangible Transactions.

Sequence Table for Diagram C  
**PharmCo Intangible Transactions**

| Intangibles Sequence Table |                     |                     |                     |        |
|----------------------------|---------------------|---------------------|---------------------|--------|
| Step                       | Deliverable         | Comes From          | Goes To             | Metric |
| 1.                         | Requirements        | Providers           | PharmCo Research    |        |
| 2.                         | Research            | PharmCo Research    | Patients            |        |
| 3.                         | Requirements        | Patients            | PharmCo Research    |        |
| 4.                         | Requirements        | Patients            | PharmCo Sales & Mkg |        |
| 5.                         | Research            | PharmCo Research    | PharmCo Dev         |        |
| 6.                         | Product Information | PharmCo Sales & Mkg | Payers              |        |
| 7.                         | Inquiry             | Providers           | Payers              |        |
| 8.                         | Payment Assurance   | Payers              | Providers           |        |
| 9.                         | Disease Knowledge   | PharmCo Sales & Mkg | Providers           |        |
| 10.                        | Disease Knowledge   | PharmCo Sales & Mkg | Patients            |        |
| 11.                        | Adverse Reactions   | Providers           | PharmCo Dev         |        |
| 12.                        | Adverse Reactions   | Providers           | Regulators          |        |

Table 2.  
Sequence table for diagram C – PharmCo Intangible Transactions.

**Combined view of Tangibles and Intangibles**

Diagram D and Sequence Table show a combined view, showing when the Tangible and Intangible Transactions happen in time relationship to each other.

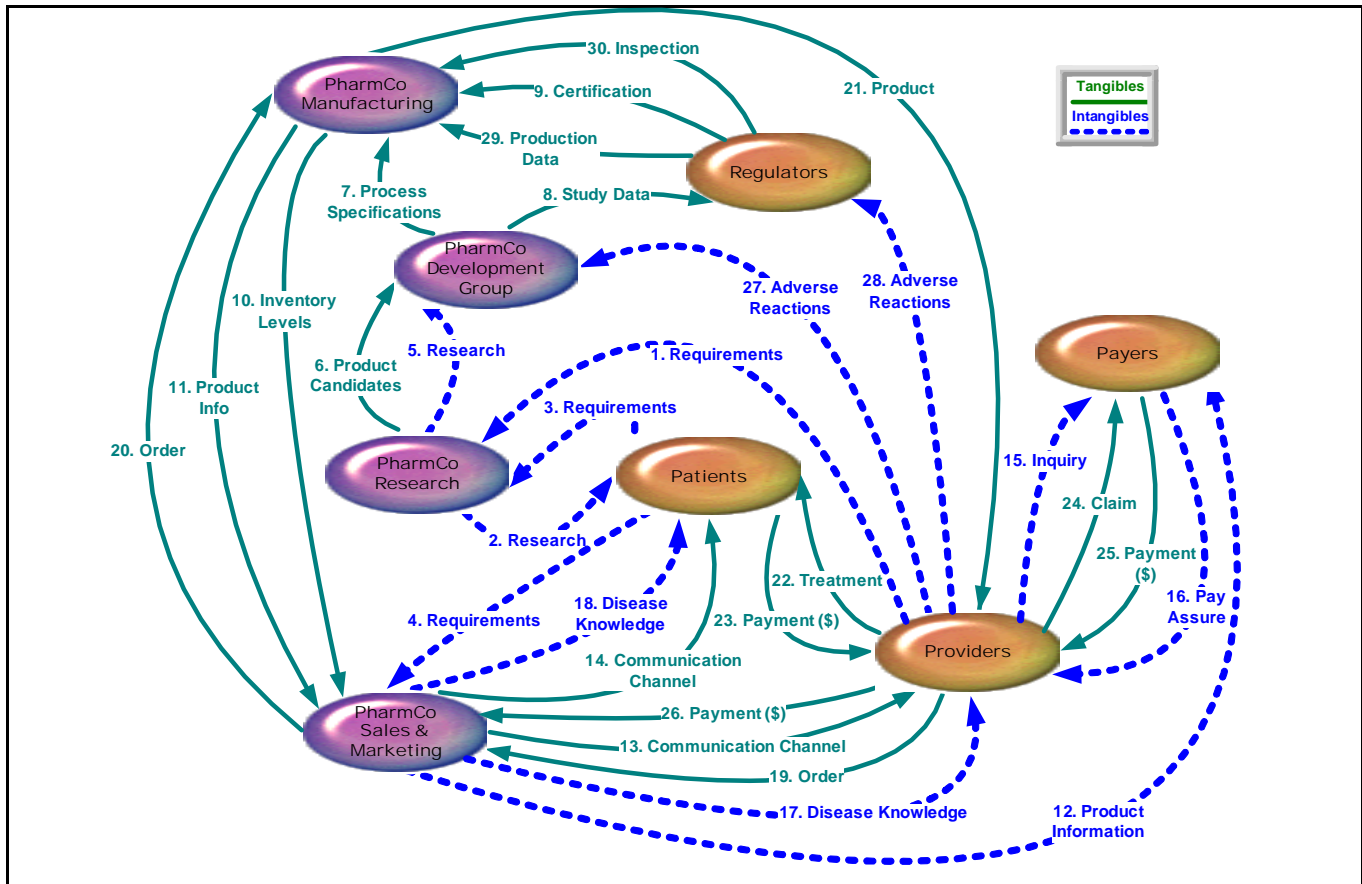


Diagram D.  
PharmCo – all Tangible and Intangible Transactions numbered as one sequence.

Sequence Table for Diagram D  
PharmCo – all Transactions combined and numbered as one sequence

| Simplified Combined Sequence Table |            |                        |                  |                     |
|------------------------------------|------------|------------------------|------------------|---------------------|
| Step                               | Type       | Deliverable            | Comes From       | Goes To             |
| 1.                                 | Intangible | Requirements           | Providers        | PharmCo Research    |
| 2.                                 | Intangible | Research               | PharmCo Research | Patients            |
| 3.                                 | Intangible | Requirements           | Patients         | PharmCo Research    |
| 4.                                 | Intangible | Requirements           | Patients         | PharmCo Sales & Mkg |
| 5.                                 | Intangible | Research               | PharmCo Research | PharmCo Dev.        |
| 6.                                 | Tangible   | Product Candidates     | PharmCo Research | PharmCo Dev         |
| 7.                                 | Tangible   | Process Specifications | PharmCo Dev      | PharmCo Mfg         |
| 8.                                 | Tangible   | Study Data             | PharmCo Dev      | Regulators          |
| 9.                                 | Tangible   | Certification          | Regulators       | PharmCo Mfg         |
| 10.                                | Tangible   | Inventory Levels       | PharmCo Mfg      | PharmCo Sales & Mkg |
| 11.                                | Tangible   | Product Information    | PharmCo Mfg      | PharmCo Sales & Mkg |

|     |            |                     |                     |                     |
|-----|------------|---------------------|---------------------|---------------------|
| 12. | Intangible | Product Information | PharmCo Sales & Mkg | Payers              |
| 13. | Tangible   | Communication       | PharmCo Sales & Mkg | Providers           |
| 14. | Tangible   | Communication       | PharmCo Sales & Mkg | Patients            |
| 15. | Intangible | Inquiry             | Providers           | Payers              |
| 16. | Intangible | Payment Assurance   | Payers              | Providers           |
| 17. | Intangible | Disease Knowledge   | PharmCo Sales & Mkg | Providers           |
| 18. | Intangible | Disease Knowledge   | PharmCo Sales & Mkg | Patients            |
| 19. | Tangible   | Order               | Providers           | PharmCo Sales & Mkg |
| 20. | Tangible   | Order               | PharmCo Sales & Mkg | PharmCo Mfg         |
| 21. | Tangible   | Product             | PharmCo Mfg         | Providers           |
| 22. | Tangible   | Treatment           | Providers           | Patients            |
| 23. | Tangible   | Payment             | Patients            | Providers           |
| 24. | Tangible   | Claim               | Providers           | Payers              |
| 25. | Tangible   | Payment             | Payers              | Providers           |
| 26. | Tangible   | Payment             | Providers           | PharmCo Sales & Mkg |
| 27. | Intangible | Adverse Reactions   | Providers           | PharmCo Dev         |
| 28. | Intangible | Adverse Reactions   | Providers           | Regulators          |
| 29. | Tangible   | Production Data     | PharmCo Mfg         | Regulators          |
| 30. | Tangible   | Inspection          | Regulators          | PharmCo Mfg         |

Table 3.

Sequenced table for diagram D – PharmCo all Transactions – combined and simplified into one sequence.

### ***Insights and breakthroughs from Exchange Analysis for PharmCo***

Although PharmCo's official company purpose is to provide health care solutions to patients, it became clear that they provide both products and knowledge about diseases. This would suggest that PharmCo defines a solution as either a product or knowledge, and in some cases – both. Also, it was noted by one Participant that PharmCo uses the phrase “disease knowledge” instead of knowledge of health issues. This led to a good discussion of whether they were delivering solutions for disease or supporting health. It was generally agreed that the purpose of the larger system they were engaged in was that of the health care system, focused on both sustaining health and healing disease. This helped them rethink some critical marketing strategies and messages.

Another fruitful discussion centered around PharmCo's espoused strategy of rapid response to changing health care needs. We asked what specifically in the exchange pattern was helping them to develop the capacity for rapid response. The group immediately began to appreciate that the flow of knowledge and intangibles, especially feedback from patients and providers, is absolutely critical to support that strategy. Yet the feedback channels from patients and providers looked weak and were admittedly not being very well managed.

There were a number of other interesting gaps and issues around knowledge flows. Diagram E highlights some of the problem areas.

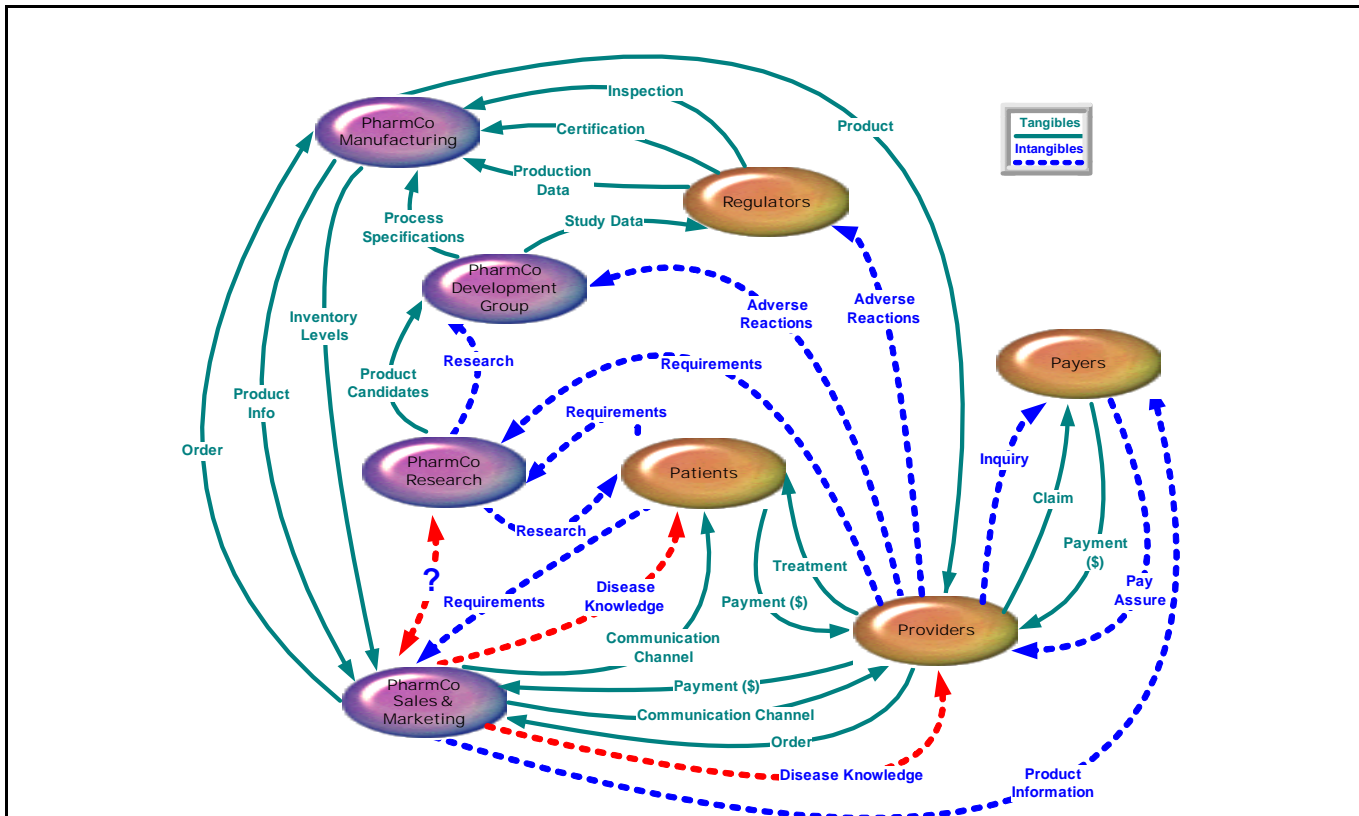


Diagram E.  
PharmCo – Highlighted Exchange Analysis.

The PharmCo Exchange Analysis showed that while PharmCo Sales and Marketing gained a little bit of knowledge about requirements from Patients, that knowledge “dead-ended” with them and was never passed on to the Development Group or Research. In fact there was *no* knowledge exchange whatever between Sales and Marketing and the Development Group or Research.

Another pattern that is apparent is that knowledge about a disease only flowed one way. The Sales and Marketing Group put out information about certain diseases, but they did not have any channel for a two-way communication about disease with their Patients, Providers, or Payers. Even though PharmCo had created a nice informational website to support a communication channel with Patients and Providers, it was only being used in a traditional marketing sense to broadcast information from the company about its products and to track purchases. Once this pattern became apparent, the company developed a new communication channel strategy that would create web-based disease “communities.” There they could enter a real two-way knowledge exchange with Patients and Providers about important research, user feedback, and patient concerns.

The analysis team also realized that the link for feedback about adverse reactions to PharmCo Research was actually quite weak, making it more likely that Providers would report adverse reactions to Regulators instead. Further, since Sales and Marketing had no communication about products research, they were left “out of the loop” in accessing this valuable feedback about how products were being received in the market.

Another critical insight came around the intangible knowledge exchange that occurred between Providers and Payers. This very important exchange centers around a usually informal inquiry from Providers asking the Payer, “If we prescribe this new treatment is it going to be covered by your payment plans?” Depending on the response it would make the doctors more or less likely to prescribe the treatments.

Therefore the perception of payment kicks off a reinforcing loop where expectation of payment leads to more treatments, which makes it more likely that Payers will cover it as it becomes a popular mainstream treatment. It can also be a negative reinforcing loop because if doctors don’t believe it will be covered, they are less likely to use it, which marginalizes the treatment and makes it less likely that Payers will cover it. PharmCo realized that even though they had no direct control over that knowledge exchange, it is absolutely critical that they understand it and find ways to influence it.

This demonstrates that the value of the whole-system analysis arises from understanding important exchanges that are happening elsewhere in the value network that can have a direct impact on your success. Often in business, analyses of such exchanges are simply overlooked because there is no one who is charged with responsibility for monitoring or influencing them.

## PERFORMANCE MEASURES

The core team spent a little time looking at overall Performance Measures that are relevant to the value network analysis. The following table shows a few of those that were explored by the group. It quickly became apparent that there was an ample supply of data around other indicators that could be referenced by the team, without necessarily having to develop them independently. It was decided to not spend a lot of time on this exercise until the full analysis was completed. After priorities had been determined the team would then go back and pin down the specific indicators, utilizing existing data gathering processes wherever possible. (See fieldbook module.)

Sequence Table for Diagram E

**Exchange Analysis Performance Measures (partial table)**

|   |                        |                  |             | Metrics for Individual Transactions  | Metrics for Groups of Transactions       |
|---|------------------------|------------------|-------------|--|--|
| Step  | Deliverable            | Comes From       | Goes To     | Performance Metric   | Groupings (Optional)                     |
| 6.  | Product Candidates     | PharmCo Research | PharmCo Dev | - Percent candidates that reach product<br>- Ratios of candidates across product lines           |  |
| 7.  | Process Specifications | PharmCo Dev      | PharmCo Mfg | - Percent specifications needing rework<br>- Startup costs<br>- Production costs per new product |  |
| 8.  | Study Data             | PharmCo Dev      | Regulators  | - Percent resubmissions<br>- Percent deadlines met   | Percent requested certifications granted |
| 9.  | Certification          | Regulator        | PharmCo Mfg | Time to certification<br>Percent product approvals   | Percent requested certifications granted |
| <b>OVERALL PERFORMANCE METRICS (Optional)</b> |                        |                  |             | Time to market   | Market share                             |
|   |                        |                  |             | Metric for performance of key processes  | Metrics for core value creation process  |

Table 4.  
Exchange Analysis performance metrics (partial table).

### **Decisions resulting from the Exchange Analysis**

- The Sales and Marketing Group needed to rethink marketing messages that focus on illness and treatments instead of promoting health.
- It was necessary that PharmCo engage Patients and Providers in two-way communication around diseases and their experience with treatments as well as the PharmCo customer experience.
- PharmCo needed to more systematically collect, manage, and distribute knowledge from Patients and Providers – and make this available throughout PharmCo, especially for the Development group and Research.

### **IMPACT ANALYSIS**

Since the Sales and Marketing Group were leading the project it was decided that the Impact Analysis should focus on their own group and all the tangible and intangible *inputs* that they receive. Diagram F depicts these for PharmCo Sales and Marketing.

Diagram F and Tables 5(a) and 5(b) show an Impact Analysis for PharmCo Sales and Marketing . Even though the Cost/Risk and Benefit assessment was primarily for Sales and Marketing , there was some consideration of PharmCo as a whole. Also, this initial exploration was to understand the value impact PharmCo was achieving in their “as is” situation. In other words, no activities or behaviors are specified that did not actually happen.

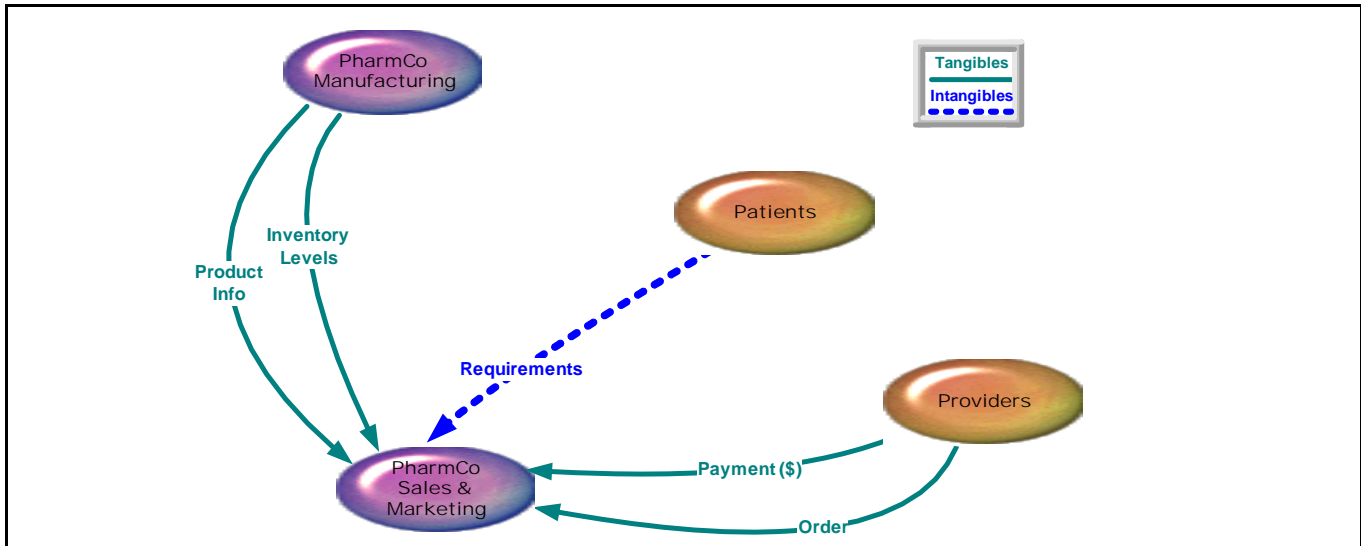


Diagram F. PharmCo Sales and Marketing Group Impact Analysis.

PharmCo Sales and Marketing Group Impact Analysis – “As Is”

| Transactions        |             |                     | Impact Analysis  |   |  |    |    |        |  |   |   |
|---------------------|-------------|---------------------|--|---|--|----|----|--------|--|---|---|
| Deliverables        | From        | To                  | What activities does the input generate for the recipient? | What is the impact on the recipient's costs and tangible resources? | What is the impact on recipient's intangible assets? (Human Competence Internal Structures Business Relationships) | HC | IS | B<br>R | What is their overall cost / risk for managing this input? | What is their overall benefit for this input? | Transaction Perceived Value Recipient highly values this deliverable. Strongly agree (+2) Agree (+1) Neutral (N) Disagree (-1) Strongly disagree (-2) |
| Requirements        | Patients    | PharmCo Sales & Mkg | - Informal e-mails   | - Requires handling costs   | +customer knowledge  |    |    |        | L  | L   | +1  |
| Inventory levels    | PharmCo Mfg | PharmCo Sales & Mkg | - Meetings<br>- Discussions                                | - Requires staff time   | +business knowledge  |    |    |        | H  | M   | N   |
| Product Information | PharmCo Mfg | PharmCo Sales & Mkg | - Sales calls  | - Increases marketing costs   | - Expands our product knowledge  |    |    |        | M  | M   | +1  |
| Orders              | Providers   | PharmCo Sales & Mkg | - Order entry  | - Requires handling costs<br>- Improves balance sheet               | - Market validation of product   |    |    |        | M  | M   | +2  |
| Payment             | Providers   | PharmCo Sales & Mkg | - Posting deposits<br>- collections                        | - Increases operating capital<br>- Timing impacts interest expense  | - Enhances image (financial success)   |    |    |        | M  | H   | +2  |

Table 5(a). PharmCo Sales and Marketing Group Impact Analysis – “As Is.”

A close look at the costs and benefits showed that value gained was roughly equal to the costs. The only exception was item 26, the payment, which traditionally is regarded as having a high positive value. So, while costs were moderate to low for handling all their value inputs, they also were not leveraging them well. It would be better to see a positive gap between costs and benefits.

So what could Sales and Marketing do to realize greater value? We then used the table above to conduct a strategic analysis, identifying value realization targets, putting some specific numeric targets to the gains, and brainstorming possible new or improved activities to maximize value.

The goal was to try to identify ways that each input would result in the lowest cost or risk, and the highest possible benefit.

PharmCo Sales and Marketing Group  
Impact Analysis for Strategic Possibilities

| Transactions        |             |                     | Impact Analysis  |  |   |  |   |   |   |    |
|---------------------|-------------|---------------------|--|--|---|--|---|---|---|----|
|                     |             |                     | What activities does the input generate for the recipient? | What is the impact on the recipient's costs and tangible resources?  | What is the impact on recipient's intangible assets?<br>(Human Competence<br>Internal Structures<br>Business Relationships) |  | What is their overall cost / risk for this input?   | What is their overall benefit for this input? | Transaction Perceived Value<br>Recipient highly values this deliverable.<br>Strongly agree (+2)<br>Agree (+1)<br>Neutral (N)<br>Disagree (-1)<br>Strongly disagree (-2) |    |
| Deliverables        | From        | To                  |  |  | HC  | IS   | BR  |   |   |    |
| Requirements        | Patients    | PharmCo Sales & Mkg | - Informal e-mails   | - Entry into shared, organized knowledge bank  | - Customer knowledge (increase relevance by 100%, increase access 500%)   |  |   | M   | H   | +2 |
| Inventory levels    | PharmCo Mfg | PharmCo Sales & Mkg | - Meetings<br>- Discussions                                | - Apply decision formulas to reduce staff time<br>- Link inventory to order entry to reduce cost of inventory  |   | - Business knowledge (increase percent decision codification, reduce knowledge time gap from 30 days to real time) |   | M   | H   | +1 |
| Product Information | PharmCo Mfg | PharmCo Sales & Mkg | - Sales calls  | - Utilize a more intensive e-commerce website to reduce written material costs and improve two-way interaction | - Improve business knowledge with faster market response info   |  | - Enhance image (publicize innovation and product line)<br>- Improve level of customer intimacy | M   | H   | +1 |
| Orders              | Providers   | PharmCo Sales & Mkg | - Order entry  | - Order entry (already automated)<br>- no change   | - Image (market validation)<br>- no change  |  |   | M   | M   | +2 |
| Payment             | Providers   | PharmCo Sales & Mkg | - Posting deposits<br>- collections                        | - Posting to accounts (already automated)<br>- collections   | - Enhance image (financial success) – no change   |  |   | M   | H   | +2 |

Table 5(b). PharmCo Sales and Marketing Group Impact Analysis for strategic possibilities.

### ***Insights and breakthroughs from Impact Analysis for the Sales and Marketing Group***

The first of these value inputs was knowledge about patient requirements. In their “as is” situation, there was no formal process in place to impart that knowledge to other groups within PharmCo. If it happened at all, it was through informal e-mails that may or may not be targeted to the right people, since their destination depends upon people’s personal tacit knowledge about who might find that particular bit of feedback relevant to their work. So while costs were extremely low, so was the value impact for the company. By putting a more structured process into place for handling patient feedback, it could become part of a shared knowledge bank – that could be accessed by anyone in PharmCo who might be interested in patient comments, on virtually any disease or topic. Putting such a system in place would indeed drive up the costs for PharmCo, but once in use the handling costs would be no greater or perhaps even less.

Thus for that particular strategy it was assessed that the costs and risks would be moderate due to the short-term negative impact on costs. However, the value impact on the intangible side would increase dramatically as the quality and amount of patient comments increased. Also, more people could now access them, both within the Sales and Marketing Group and in PharmCo as a whole. So the benefit was assessed as high – especially since the group had earlier realized that more deliberate use of patient feedback would support their strategy of rapid response. *Note that if decisions are driven solely by financial or tangible considerations, there is no business logic to support taking this suggested action.* In this case there was essentially no change in the tangibles picture and even a short-term negative impact.

Now let’s look at the second target, the tangible input of information about inventory levels. It is critical to manage inventory levels well because of the cost of keeping and tracking inventory. Most companies try to keep only enough inventory on hand to meet their immediate needs. In the case of PharmCo, the sales reps would get a monthly report on inventory levels for various products. The staff would then meet to go over the numbers to make decisions about marketing programs, and in some cases create special incentives for sales people to move product that was accumulating in inventory. So the impact of that simple inventory report was actually quite high because people spent a lot of time in meetings. Also, inventory levels were generally high, due to a knowledge “time gap” between orders and the inventory report, of as much as 30 days. By tying inventory to order entry, they could reduce the time gap to real time, thus achieving a high return for the intangible of business knowledge. If in addition they input codified decision rules into the inventory reporting process, they could reduce their time spent in meetings – as only “action” situations would come to their attention. Even though there would again be a negative short-term impact on intangibles to absorb the costs of implementing the software and technology needed to do this, the long-term costs would actually be lower. So these two actions would reduce cost and increase benefits.

Their third target, product information, did not change on the cost side. Costs for turning product information into marketing materials were about the same. However, by utilizing a more intensive e-commerce website they could reduce written materials costs and improve two-way interaction. This would actually increase their marketing costs; however that additional cost would be offset by lower publishing and mailing costs. On the benefit side, they determined that would in turn realize an increase in market penetration and calculated that they could increase orders by roughly 10% through online ordering. They would be able to increase their business knowledge with the customer data they would gain and be able to increase the quality and timeliness of their market response. Even though the overall cost stayed about the same, moving into e-commerce brought a higher return on the benefits side and was worth the investment of time and resources to make the change.

The last two items remained virtually unchanged as ordering and payment processes had already been finely tuned through a number of iterations in the company and were therefore not considered a strategic priority for the Sales and Marketing Group.

**VALUE CREATION ANALYSIS FOR THE SALES AND MARKETING GROUP**

Now we will see how Sales and Marketing worked through the Value Creation Analysis. This analysis again focuses on one single Participant, only this time we look at all the value *outputs*. Again using the Sales and Marketing for our example, Diagram G depicts all their value outputs. The table that follows focuses specifically on the three ways to create value:

1. through enhancements to the core offering,
2. through extending a value output to a broader audience,
3. through conversion of one type of value to another. (An example would be taking a previously intangible value output of knowledge and converting it to a tangible value output by packaging it as a product or service that brings in revenue.)

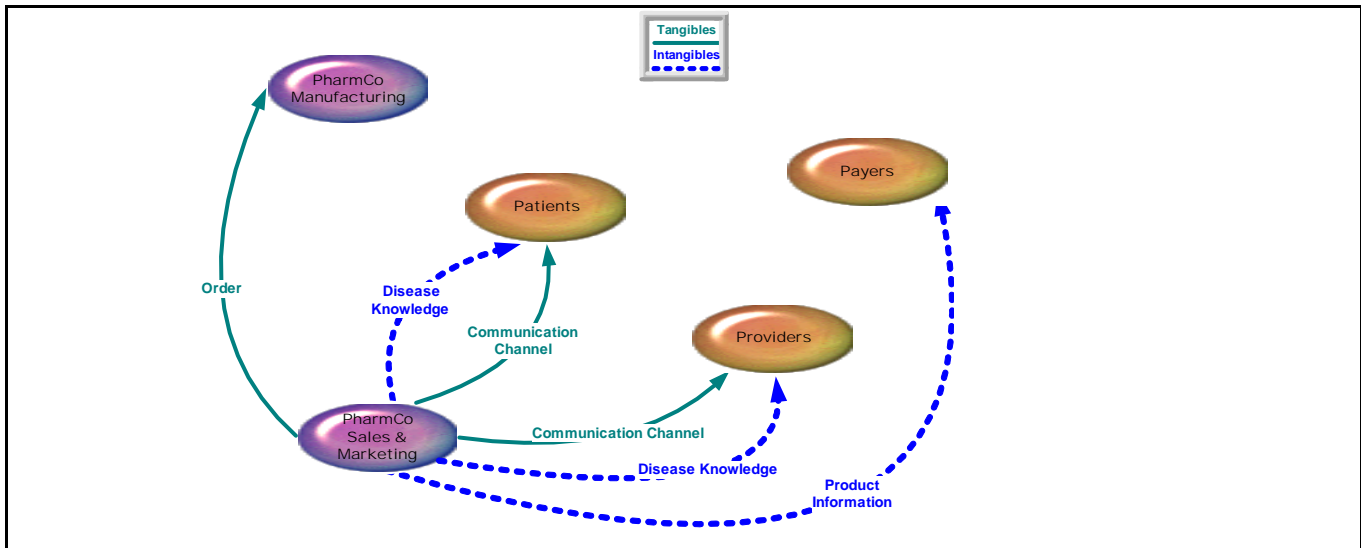


Diagram G. PharmCo Sales and Marketing Group value outputs.

**PharmCo Sales and Marketing Group Value Creation Analysis – “As Is”**

**Outline Table**

| Transactions | Perceived Value | Value Creation Analysis |                |             |                  |                  |            |     |         |  |
|--------------|-----------------|-------------------------|----------------|-------------|------------------|------------------|------------|-----|---------|--|
|              |                 | Tangible asset          | Tangible costs | Risk factor | Intangible asset | Intangible costs | What we do | C/R | Benefit |  |
|              |                 |                         |                |             |                  |                  |            |     |         |  |
|              |                 |                         |                |             |                  |                  |            |     |         |  |

Table 6(a). PharmCo Sales and Marketing Group Value Creation Analysis for strategic possibilities – “As Is.”

Detail Table "As Is"

| Transactions        |                     |             | Perceived Value  | Value Creation Analysis                                       |   |  |
|---------------------|---------------------|-------------|--|---|---|--|
| Deliverables        | From                | To          | Recipient highly values this deliverable.<br>Strongly agree (+2)<br>Agree (+1)<br>Neutral (0)<br>Disagree (-1)<br>Strongly disagree (-2) | Tangible asset utilization is:<br>H=High<br>M=Medium<br>L=Low | What are the tangible costs?<br>(financial and physical resources)  | How high is the risk factor in providing this output?<br>H=High<br>M=Medium<br>L=Low |
| Product Information | PharmCo Sales & Mkg | Payers      | +1   | M   | - Materials production costs<br>- Mailing costs                     | M  |
| Communication       | PharmCo Sales & Mkg | Providers   | +1   | L   | - Contact center costs  | M  |
| Communication       | PharmCo Sales & Mkg | Patients    | +1   | M   | - Contact center costs  | M  |
| Disease Knowledge   | PharmCo Sales & Mkg | Providers   | +1   | L   | - Research compilation costs<br>- Materials production<br>- Mailing | M  |
| Disease Knowledge   | PharmCo Sales & Mkg | Patients    | +1   | L   | - Materials production<br>- Distribution costs                      | M  |
| Order               | PharmCo Sales & Mkg | PharmCo Mfg | +2   | L   | - Order entry system  | L  |

Detail Table "As Is"

| Value Creation Analysis |  |    |    |  |     |           |   |  |   |
|-------------------------|--|----|----|--|-----|-----------|---|--|---|
| Deliverables            | Intangible Asset utilization is:<br>H=high<br>M=Medium<br>L=Low<br>(Human Competence<br>Internal Structures<br>Business Relationships) |    |    | What are other intangible costs or benefits?<br>(Industry, Society, Environment) |     |           | What do we do to add, enhance, or extend value?   | What is the overall combined cost / risk for this input? | What is the overall benefit for us in providing this input? |
|                         | HC   | IS | BR | Ind  | Soc | Envr      |   |  |   |
| Product Information     | H  | L  | M  |  |     | materials | - Packaging<br>- Personal contact   | M  | M   |
| Communication           | M  | L  | M  |  |     |           | - Email<br>- Provide a personal representative  | M  | M   |
| Communication           | L  | L  | L  |  |     |           | - Public web site<br>- Hot-line   | M  | M   |
| Disease Knowledge       | M  | L  | M  |  |     | materials | - Taking raw knowledge inputs from R&D and turning into knowledge products for medical professionals<br>- Targeted mailings   | H  | M   |
| Disease Knowledge       | L  | L  | M  |  |     | materials | - Taking raw knowledge inputs from development group and turning into knowledge product for patients<br>- Demographic mailers | H  | M   |
| Order                   | L  | L  | L  |  |     |           | - Order entry   | L  | L   |

When we look at the table 6(a) above, it is clear that the main value creation process for Sales and Marketing was to add value to raw inputs from the Development Group and Research by creating marketing materials for Patients, Providers, and Payers. Their role in order entry was very small, being of both low cost for them and also low benefit. They were also an active agent for extending value through targeted mailings and other efforts to reach their target population of Patients, Providers, and Payers. It was clear from the Impact Analysis that they are expending somewhat higher costs generally than they were realizing benefit, or were only providing medium value benefits. In other words their value enhancements were expensive to produce but were not creating high benefit for the recipient of that value output.

So, let's see what they came up with to increase value creation. The following table shows other activities they might engage in to increase value creation. Activities that they plan to continue are in bold type. The new strategic possibilities and changes in costs and benefits are depicted in normal or lighter type.

PharmCo Sales and Marketing Group  
**Value Creation Analysis – for Strategic Possibilities**  
**Outline Table**

| Transactions | Perceived Value | Value Creation Analysis |                |             |                  |                  |            |     |         |
|--------------|-----------------|-------------------------|----------------|-------------|------------------|------------------|------------|-----|---------|
|              |                 | Tangible asset          | Tangible costs | Risk factor | Intangible asset | Intangible costs | What we do | C/R | Benefit |
|              |                 |                         |                |             |                  |                  |            |     |         |
|              |                 |                         |                |             |                  |                  |            |     |         |

Table 6(b). PharmCo Sales and Marketing Group Impact Analysis for strategic possibilities.

**Detail Table**

| Transactions        |                     |             | Perceived Value  | Value Creation Analysis                                       |   |  |
|---------------------|---------------------|-------------|--|---|---|--|
| Deliverables        | From                | To          | Recipient highly values this deliverable.<br>Strongly agree (+2)<br>Agree (+1)<br>Neutral (0)<br>Disagree (-1)<br>Strongly disagree (-2) | Tangible asset utilization is:<br>H=High<br>M=Medium<br>L=Low | What are the tangible costs?<br>(financial and physical resources)              | How high is the risk factor in providing this output?<br>H=High<br>M=Medium<br>L=Low |
| Product Information | PharmCo Sales & Mkg | Payers      | +1   | M   | - Materials production costs<br>- Mailing costs<br>- Database dev & maintenance | M  |
| Communication       | PharmCo Sales & Mkg | Providers   | +2   | M   | - Contact center costs<br>- university outreach<br>- translation                | M  |
| Communication       | PharmCo Sales & Mkg | Patients    | +2   | M   | - Contact center costs  | M  |
| Disease Knowledge   | PharmCo Sales & Mkg | Providers   | +2   | M   | - Research compilation costs<br>- Materials production<br>- Mailing             | M  |
| Disease Knowledge   | PharmCo Sales & Mkg | Patients    | +2   | M   | - Materials production<br>- Distribution costs                                  | M  |
| Order               | PharmCo Sales & Mkg | PharmCo Mfg | +2   | L   | - Order entry system  | L  |

Detail Table

| Value Creation Analysis |   |    |    |  |                    |           |  |   |  |
|-------------------------|---|----|----|--|--------------------|-----------|--|---|--|
| Deliverables            | Intangible Asset utilization is:<br>H=high<br>M=Medium<br>L=Low<br>(Human Competence<br>Internal Structures<br>Business<br>Relationships) |    |    | What are other intangible costs or benefits?<br>(Industry, Society, Environment) |                    |           | What do we do to add, enhance, or extend value?  | What is the overall combined cost / risk for this output? | What is the overall benefit for us in providing this output? |
|                         | HC  | IS | BR | Ind  | Soc                | Envr      |  |   |  |
|                         | H   | M  | M  |  |                    | Materials | - <b>Packaging</b><br>- <b>Personal contact</b><br>- Access to product database  | M   | H  |
| Product Information     | H   | M  | H  | Access Innovation  |                    |           | - <b>Email</b><br>- <b>Provide a personal representative</b><br>- Web-enable<br>- Online discussion forums<br>- More translations<br>- Extend channel to development group<br>- Extend to university researchers<br>- Convert traditional one-way channel into a two-way channel for product feedback                    | H   | H  |
| Communication           | M   | M  | M  |  |                    |           | - <b>Public web site</b><br>- <b>Hot-line</b><br>- Online discussion forums<br>- Extend to development group<br>- Design to capture product feedback<br>- Convert traditional one-way channel into a two-way channel for product feedback  | H   | H  |
| Communication           | M   | L  | H  | Informing industry   |                    |           | - <b>Taking raw knowledge inputs from development and turning into K product for professionals</b><br>- <b>Targeted mailing</b><br>- Personalized sales calls<br>- Translation into more languages<br>- Support more presentations exhibits at public conferences<br>- Create special interactive web seminars for a fee | H   | H  |
| Disease Knowledge       | M   | L  | H  |  | Informing citizens |           | - <b>Taking raw knowledge inputs from research and development and turning into knowledge product for patients</b><br>- <b>Demographic mailers</b>   | M   | L  |

|                   |   |   |   |  |  |  |  |  |   |   |
|-------------------|---|---|---|--|--|--|--|--|---|---|
|                   |   |   |   |  |  |  |  | - Mass marketing advertising<br>- Create K product disease "newsletter" that can be sold through subscription<br>- Create K product of guidebook that can be sold as book or on Internet |   |   |
| Disease Knowledge | L | L | L |  |  |  |  | - Order entry  | L | H |
| Order             |   |   |   |  |  |  |  |  |   |   |

**Additional Value**

|        |   |   |   |  |  |  |  |  |   |   |
|--------|---|---|---|--|--|--|--|--|---|---|
|        |   |   |   |  |  |  |  | <b>Are there additional value deliverables that we could generate to increase our value outputs into the system?</b> |   |   |
| Survey | L | L | M |  |  |  |  | -Survey/questionnaire to providers to determine success with product, raise awareness of product benefits            | M | M |

**Insights and breakthroughs from the Value Creation Analysis for the Sales and Marketing Group**

In the case of the Sales and Marketing Group, they found that they were already engaged in a fairly costly value creation process. However, after looking at their "as is" value creation, the group focused on how they might increase the benefits from medium to high. They especially felt they could do a better job of leveraging their intangible value outputs (products about disease knowledge) into more advanced knowledge products that could be turned into a revenue stream. In the table 6(b) above you can see where the communication channels were mostly one way, conveying product knowledge from PharmCo to Providers and Patients. With a focus now on converting that expected communication channel to another type of value gain, they will web-enable communication and launch online discussion groups to gain immediate feedback for product development. Thus they have converted a tangible value to gain an intangible value of product feedback. This also supports their strategic intent of rapid response to changing Patient and Provider needs.

As another example, they looked at how they were packaging disease knowledge for Patients, Providers, and Payers. They had been doing only the expected documentation of their products and providing free informational pamphlets on different diseases. Since they were free, these were being provided as an intangible benefit. Still keeping those same knowledge products, they realized that if they were to move into more sophisticated multi-media products or seminars, they might be able to charge a fee based on the high quality and in-depth information. Thus by taking their disease knowledge products to the next level of value added, they could create a new revenue stream for PharmCo. They converted an intangible input of disease knowledge to a tangible value output.

They also found there was more that they could do to extend their value offerings to larger populations, to expand the customer base, and help the PharmCo Development Group build relationships with the university research community. While their value-creating costs still remain high and have even increased in two cases from moderate to high, the value benefit that they gained increased significantly in four of the six value-creating activities they are involved in. In addition they have identified another output that might be of value – that of the customer survey, which would gain a moderate value benefit and would also be moderate in cost.

## Actions taken

The Sales and Marketing Group undertook a number of improvements around their value creating linkages, based on the value network analysis. In summary they:

- Refocused their marketing messages on health instead of disease.
- Web enabled their communication channels with Patients and Providers.
- Engaged in a strategy of two-way communication rather than broadcasting information.
- Installed a systematic customer knowledge and feedback system to collect information and concerns from Patients and Providers and to make those more widely available across PharmCo.
- Initiated a number of new intangible knowledge products and services that would provide greater value for customers.

## Outcomes

Over the course of eighteen months the Sales and Marketing Group made significant progress in closing the knowledge gap between Patients, Providers, and the Development Group, and Research – and was able to shorten their response time to customer concerns because of the timely and well-organized feedback coming through the improved communication channels with Patients and Providers. The new interactive sites around management of certain diseases were improving customer satisfaction and also attracting participation by researchers and universities. Surveys indicated that the brand image was showing positive improvement in response to the new emphasis on health in their marketing campaigns. The increase in sales anticipated through web-based ordering was actually over target by 5%. Better communication channels were attributed by Providers as increasing the likelihood that Providers would choose PharmCo treatments. So the gains in revenue, response time, satisfaction, and brand image led the Sales and Marketing Group to conclude that their value network analysis had a very positive cost/benefit ratio!

## Conclusions

This PharmCo case study demonstrates how the *ValueNet Works*™ Analysis can illuminate both whole-system patterns of value and the impact of specific transactions. It provides a powerful visual tool to view the invisible dynamics of value. While it is impossible to “manage” an entire complex system like a value network, it is possible to see patterns and work with those patterns more deliberately. *Managing* then, in this sense does not mean trying to control the system, but managing our own behaviors to be more consistent with the overall purpose and intent of the value network. With this view of the enterprise, each participant can manage their own activities in a way that contributes to the health and vitality of the whole value network.

## Comments on the methodology

Since the *ValueNet Works*™ methodology is so rich in the level of detail that can be analyzed, it was important to manage the scope of it as an intellectual exercise. Many managers do not have the patience for a detailed business analysis. In this engagement we zeroed in on looking at the inputs and outputs only for the PharmCo Sales and Marketing Group. Obviously the analysis could have been extended to every participant. However, there were so many insights gained just from this analysis that PharmCo felt there was plenty to work with for the next eighteen months or so.