



## The Road to Value Based Innovation: Part 1

By Russ Ward

This is the first of a two-part article on our company's journey on the road to innovation in product development. The content of this article describes the evolution of our journey while the second explores the outcome of this effort.

Setting out on a new journey can create great excitement and expectations but often requires a significant amount of preparation for those involved. Logically, we need to decide upon the destination prior to our departure. Experience can determine that we need to be able to contend with environmental issues that we may encounter along the way. In order to understand these issues, we need to research subjects like routes, weather, accommodation and security needs.

In today's healthcare business environment, companies that set out on the road of product development, contend with a multitude of forces from inside their business, competition and the market. Prevailing forces can dramatically effect the products that companies develop. Some of these forces include the availability of development funds, the right mix and availability of engineering resources to develop the product, and time to market pressure based on the competitive environment. Industry standards or regulations and the overall return on the investment also can effect the products companies develop.

Naturally when we travel we usually do so within our means, expending our resources based on our budget and time available. In the same way, companies pursue new product development within their means to grow or sustain revenues and profits. Further there can be an objective to maintain their reputation and equity in a given market, therefore these companies must carefully weigh the return on investment that comes from the risk that is associated with such development efforts. As any company travels toward the decision to invest in and develop a new product, it is imperative that these companies firm up the potential success of the product through research within the market. Better still, it is desirable to find innovative product concepts that will be embraced by the community within the target market that will drive market share and profitability. Doing this in the risk adverse healthcare industry is a well documented hurdle few companies successfully overcome (Christensen, Bohmer, & Kenagy, 2000).

As a strategic intent of this journey, many companies today link product development to their own particular corporate vision, values, objectives, and core competencies. Generally these vision and value factors define the scope of the type of product development initiatives that companies undertake. In this article I'd like to provide a summary of how I used CPS, the CPS-B system and a portion

of the CPS-B Discovery process to link product development and market research to corporate vision and the strategy of value based innovation.

### **Datex-Ohmeda Inc.**

D-O (Datex-Ohmeda Inc.), headquartered in Helsinki, Finland, is a leading supplier of Anesthesia and Critical Care equipment for the health care industry throughout the world. The roots of the company go back 100 years and the company is still thriving as we enter the new millennium. Part of D-O's successful journey has been its 'devotion to caring for life'. D-O is committed to the development and supply of medical products based on corporate values that focus on the patient, the caregiver, the integration of products and services, the care process, and affordability. Traditionally, D-O's Anesthesia Systems has traveled a path leveraging incremental innovation and what would seem to the lay person as 'minor modifications' of an existing product that is marketed as a new product.

Today D-O still maintains its former values but now has embarked on a new destination in providing technology for people who care. D-O focuses its product development on these values, and that of VBI (Value Based Innovation). Any investment in product development must meet criteria that ensures the delivery of real value to the patient, customer and to D-O. Developing innovative products that deliver tangible customer and business value, in turn ensures that the investment of valuable funds and human resources returns a positive outcome for all. This means that our journey must be deliberate and well planned to ensure we arrive at our planned destination.

### **Defining the travel plan and how to get there!**

In order for a company to really know what will make products innovative and compelling to customers, it is imperative to intimately understand the problems with which customers are confronted. Further, as a distinction, it is important to understand the difference between what a customer needs versus what a customer wants! Customers may be able to elicit what they perceive as "wants", but are usually unable to articulate their "unmet or unidentified needs". As you probably know, the task of finding these needs is difficult enough but to then bring these insights and innovations back into an organization to be developed into marketable products or services is perhaps the biggest hurdle. Overcoming this hurdle and 'walking the talk' is a large part of recent developments in D-O and their efforts to make a dynamic contribution as a leader in global medical technology while keeping in mind the customers, 'the people who care'.

## Developing the Vehicle

Caring for the people and the climate within the organization has been a recent mission of the D-O Madison facility at which I am headquartered. Initiated in the late 1990's this initiative has had many critical components. Of particular interest for this article are three events. The first involved the organizations support of Christopher Goodrich's involvement in the Innovation University. Sponsored directly by the facilities General Manager Lori Cross, this dedicated and energetic Design Engineer was able to survey what other companies were doing to stimulate innovation and communicate this information back to the facility through an employee group known as 'the sky blue sparks'. An important insight derived from this was that the cornerstone of innovation was the development of a climate and culture that fosters and facilitates creativity. This leads to the second component which was our first contact with CPS-B, when Christopher was assigned the task of finding a means to assess and develop the climate of the facility.

Christopher examined a number of climate measures and chose the CPS-B assessment known as the SOQ (Situational Outlook Questionnaire) because of its theoretical, scientific grounding and the ability of individuals at CPS-B to help interpret the results and facilitate change. The SOQ was administered in June, 1999 and then debriefed to the upper management team of the facility by Scott Isaksen in July 1999. The results helped nail the Jell-O® to the wall by providing the management team with a clear view of the organization. This provided a base for the management team to determine where D-O needed to be and helped them develop plans to implement programs to facilitate change and creativity in the facility.

The third critical incident was the attendance of Christopher and myself at CPS-B's Igniting Creative Potential Course® held in the fall of 1999. This was a unique experience for me and although I learned a great deal about CPS and facilitation it was not until the last day of the course that something really clicked for me. On that day Brian Dorval led a discussion of CPS applications and the diverse types of work that CPS-B does well beyond training CPS. One of these stories was about the work done with P&G in the area of consumer inquiry and new product development and it was then that it all 'clicked' for me. I found the power of CPS, the CPS-B system and CPS-B's Discovery process as the route needed to arrive at the destination of VBI. Through understanding the customer's problems and unarticulated needs, by going to the domain where the customers use the product we could find VBI. This understanding in addition to our traditional R&D idea generation method, means that our company now has the widest choice of options from which we can develop new products.

## Understanding Customer Needs

From Brian's story I realized that CPS can empower organizations or individuals to truly understand customer problems and needs. In turn CPS can support the development of creative and innovative solutions. Combining this insight with the corporate value of pursuing developments based on "Value Based Innovation" I planned a four-month project to understand the true needs and problems of D-O customers. With the assistance of Christopher and many other members of the D-O staff we designed this Discovery project (see chart one). CPS played an especially important role in designing the project that allowed us to navigate to our destination.

Once we outlined the project, we developed a structure for the customer interviews. This encompassed a repeatable script that included a questioning strategy that utilized the CPS-B system and a couple of CPS tools, notably the 'Ladder of Abstraction'. Going into the interviews we defined the objectives and outcomes we wanted to obtain, one of which was the ability to transfer this work to other D-O research initiatives, and business areas (BA's). The structure that we developed also included a procedure for documenting and cataloging the interviewers notes, video tape, and still photographs that we obtained. This meant these materials would be easy for individuals to use now and in the future as a source of 'rich reference materials'.

We conducted 15 interviews that ranged from 1 to 2 hours in length. The team reviewed these with other members of the R&D and Marketing staff. In these review sessions we developed problem statements. At the end of this review process we had 463 problem statements which we then reviewed, grouped and voted on to find those that were most significant. We then listed the top 25 problems deemed to be significant, and through the application of criteria, Evaluation Matrix and PCA (Pair Comparison Analysis) CPS tools we were able to determine the company's priority of these problems.

To determine the accuracy of the priority of what we found, we cross-referenced our internal company results by conducting a session with clinicians from the anesthesia domain. The results were educational to say the least. We found that the criteria that we had used, compared to those that the customer group had used, were quite different and this had a significant impact on the outcome. Further, the problems chosen by the customer group, were similar yet diverse from the set the company staff had chosen. The diversity of this result indicated that, despite our extensive experience in this market with these products over generations, we should not assume that we know what our customers are thinking and we should not second guess their opinions and needs.

## Integration into the Product Creation process

Having this extensive list of problems available to our business area has enabled us to reconsider which solutions to what problems will have the greatest impact and benefit to our customers. In turn this knowledge has facilitated our product development teams to incorporate innovative solutions aimed at the real issues that our customers find most important to them. Ultimately, this knowledge and process will provide viable product sales, market share, and increased growth and profit for D-O.

It can be said that if understanding the customer's problem(s) is an imperative in this process, then it is also true that integration of the knowledge of problems themselves into the product creation process is vital. The next step was to share selected priority problems (text) along with the information rich reference media of photographs and video clips to our product development teams. The application of this information in combination with the CPS process (full range of CPS tools) is very powerful in enabling the participants to maximize their individual creativity in the search for the goal of innovative solutions.

The application of this process also supports internal company climate and culture change by allowing the participation of a broad range of staff as resource members.

During this participation individuals are:

- A. Exposed to real domain/customer problems thereby increasing their understanding of the customer environment
- B. Given the opportunity to develop greater ownership of the problems and the resulting solutions
- C. Exposed to forums where understanding, learning, the generation of ideas along with the support and development of the ideas of others can occur without being stifled or slaughtered by preconceptions

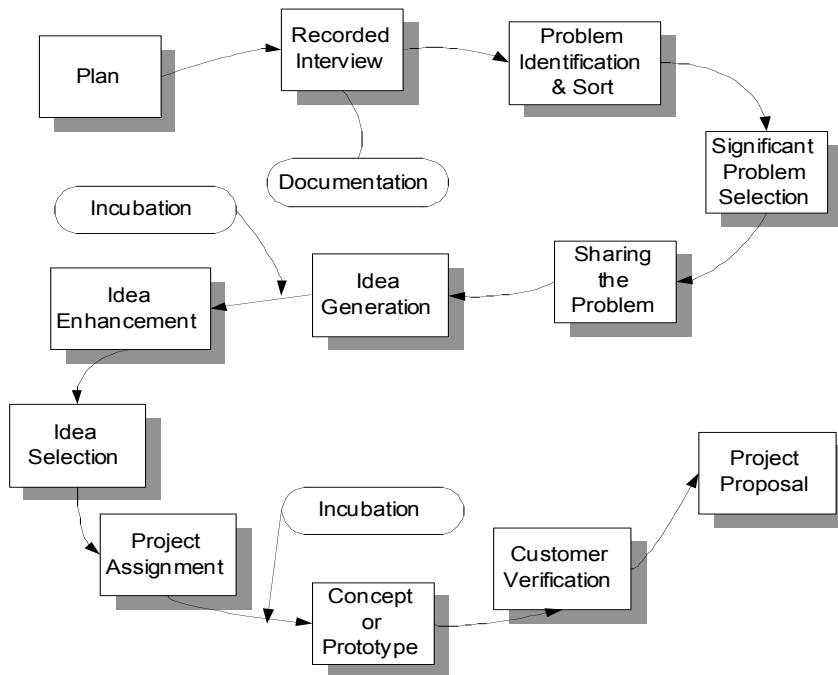
## Summary

**From this CPS work we found that our journey delivered the following benefits.....**

- **The focus on understanding real customer problems is pivotal to finding innovative solutions that add real value for the customer.**
- **Addressing these consumer problems reduces the corporate risk of return on investment in the new product development process.**
- **The CPS process and tools provide a repeatable structured approach to discovering and managing the complexity of large (and small) volumes of consumer data, individual and group creative energy, and provides broader education for company staff in the issues that affect the consumer.**
- **CPS provides an open stimulus for creativity within the organization.**
- **CPS supports the integration of cultural change across the organization.**

**We did choose to work on a number of specific problems and the results of some of this work will be explored in a future issue of the Communiqué. So the journey has begun using CPS and Discovery to manage the essential requirements of research and planning that will allow us to reach our destination on the road to “Value Based Innovation” in product development.**

Figure 1 – Discovery & CPS Process Summary



## Reference

Christensen, C. M., Bohmer, R., & Kenagy, J. (2000). Will disruptive innovations cure health care? Harvard Business Review. pp. 102-112.