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A Professional Pricing Society Publication
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Fully Exploit Price Potential with an Integrated Economic Value Approach

Many medtech companies are in the challenging position of offering innovative products to customers facing strong budget constraints. Establishing a more comprehensive value perception by addressing both the clinical and economic value of the innovation is a promising approach to transfer product benefits into additional willingness to pay. In this article, the authors provide an overview of how to successfully demonstrate economic value and incorporate a more comprehensive value perception into pricing practices. This article was contributed by Dr. Gerald Schnell, Partner and Head of the EU Medical Technology Competence Team, and Patrick C. Raab, Senior Consultant and Project Manager in the Medical Technology Industry with Simon-Kucher & Partners, Strategy and Marketing Consultants (www.simon-kucher.com). The authors can be reached at gerald.schnell@simon-kucher.com and patrick.raab@simon-kucher.com.

Many medical technology companies invest a significant part of their revenue in R&D to continually develop and launch innovative products, new therapies and improved procedures. In order to finance R&D expenses and comprehensive customer services, these companies rely on a reasonable compensation for innovations and significant rate of adoption.

Having been a fairly peaceful industry, competitive pressure has dramatically increased during the last decade.

Trying to limit rocketing health care expenses, many governments, sick funds and health insurance companies have set up reimbursement systems resulting in certain budgets for hospitals, physicians or therapies. Hospitals have reacted by constituting purchasing groups as well as by purchasing through tenders. Therefore customers have higher price transparency, more negotiation power and established strict process guidelines and have improved their negotiation skills. This has led to a competition with a high – sometimes pure – focus on price.

Additionally, the number of competitors has increased: Established market players are more often threatened by low-price (but average quality) copycats with entirely different cost structures. Other reasons for an increasing level of aggression among market players are short-term financial or excessive market share targets.

In this market environment, in which many demonstrate a tendency of eroding prices for their regular business, manufacturers have to struggle considerably harder for adoption of and sufficient compensation for their innovations.

In Europe, the adoption rate of medical technology innovations has dramatically declined in the last years. The uptake of innovative products and procedures such as advanced CT systems is disappointing from the manufacturers' perspective. Two major reasons exist:

- **Clinical reason:** Hospital physicians are reluctant to start using a device without sound evidence.
- **Economic reason:** The introduction of a per case payment system (DRG: diagnosis related groups) — i.e. classification of hospital cases requiring comparable resources and therefore being funded similarly — induced a new level of cost transparency to hospitals. It facilitates calculation of the impact of using a new product or procedure on the margin situation. Innovative procedures or products are often not sufficiently covered by existing DRGs, requiring extra funding (which takes a great deal of time) or internal subsidies (which limits uptake).

Medtech manufacturers are becoming increasingly more aware of both barriers. On the clinical value side, many manufacturers heavily invest in trial programs to meet their customers' increased expectations.

However, manufacturers usually miss the opportunity to build a convincing economic case. Some major reasons for

Case: Gaining ICU Capacity Through Improved Patient Monitoring

An equipment company developed a software system for a patient lung ventilator used on ICU. The software is able to control the pressure support and also offers a new weaning technique. It could be demonstrated that this results in a reduced ventilation time and in a shortened ICU stay for ventilated patients. The latter also presents the economic value of the new software: capacities on the ICU could be freed up. Thus the need for the emergency unit to transfer patients to the neighbor hospital could be reduced, rescheduling of planned operations could be avoided and revenue could be increased due to an increasing number of operations.

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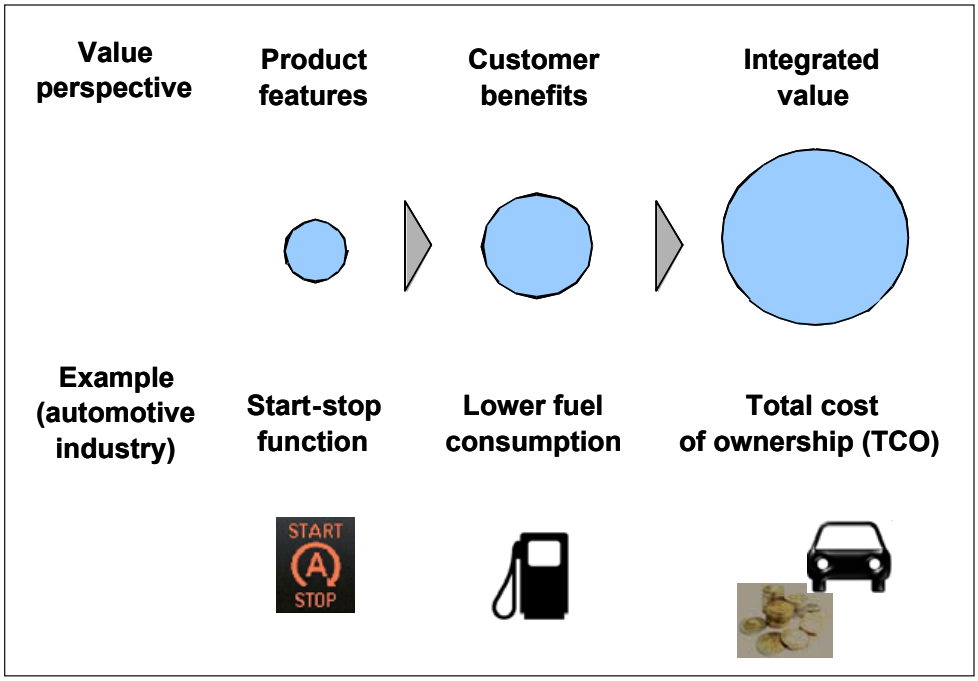
this include:

- "Obviously, our product does not provide any economic value": Manufacturers underestimate that clinical improvements in efficacy and safety usually result in cost savings due to shorter hospital stays or fewer resources that are required to treat complications.
- "Building a health economic model is complex and expensive": It is true that health economic models addressing the societal perspective require specific profound know-how. However, since many new products are used by the hospital, a simple and straightforward economic analysis of cost savings addressing the hospital perspective will be sufficient, requiring a less complex approach to building a convincing case.

Figure 1: Broaden the value perspective



For innovations, trying to distract customers from focusing only on price is challenging but unavoidable!

As an example, this article focuses on innovative products to be used by hospitals under existing DRGs, so the primary goal is to convince the hospital to use the product at existing funding levels. Thus, the value argumentation as well as the economic model has to reflect the hospital's perspective, making price setting and execution critical considerations for Medtech manufacturers.

Have your prices cover all economic value aspects

Across industries, most innovative products or procedures provide a clear additional value to customers. The challenge is to flesh out value arguments that are most convincing and relevant for customers' purchasing decisions.

So far, many manufacturers still consider special product features or an increased

Developing an Economic Value Model

Modeling the impact of a new product or procedure on hospitals' financial situation does not require the "full arsenal" of health economics:

- Focus on cost data – effectiveness measures are not required
- Focus on direct cost – consideration of indirect cost such as productivity loss is not required
- Focus on one hospital stay or therapy – modeling of several years is not required

The development of an economic value model covers 3 phases:

Phase 1: Develop economic model and perform feasibility check

In the first phase, the structure of the economic model has to be built based on the economic value arguments developed. In addition, a "feasibility assessment" has to be performed, providing an initial validation on the economic value of the product.

Phase 2: Collect data

The primary objective of Phase 2 is to build a robust data base. The model requires data on pathway probabilities and resource consumption. In addition, the data are used to validate the model structure.

Data can come from primary sources, e.g. from a hospital or workshops with physicians/KOLs. Alternatively or additionally, a large scale study can also be selected for data collection.

Phase 3: Model economic value and finalize tool

The data collected in the previous phase have to be analyzed and checked for validity and completeness. Depending on the number of cases included, statistical tests should be performed.

Different functionalities should allow for a user friendly operation supported by an instruction guideline.

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product performance of an innovation as key benefits — from an internal point of view.

In a competitive environment, this perception has to be enhanced by first adding the customer perspective. Research on this external view provides valuable information on the importance of certain features and customers' willingness to pay.

Since in many industries' prices and costs have become increasingly important, a second step of enhancement is to expand the perspective even further towards an integrated economic value perception.

Other industries already apply a more comprehensive approach to demonstrate value, known as total cost of ownership (TCO). As an example from the construction industry, a manufacturer of an alternative product to classic red bricks — aerated concrete bricks — has developed a value calculator. Despite this alternative product's significantly higher price, builders can save costs, e.g. on labor, mortar and insulation. So on a square-meter-built-wall-basis, the alternative brick is cheaper and even provides superior product features.

In the automotive industry, fleet managers could care less about engine specs, such as the number of valves, type of fuel injection etc. Certainly, engine technology influences fuel consumption, performance and durability, but arguments that really count are annual total costs or costs per km. Leading manufacturers have developed calculation tools targeted to fleet managers in order to prove the positive economic impact of their products — total cost of ownership.

Now, coming back to the medtech example for economic value arguments:

From a manufacturer's perspective, the goal is to maximize the share of a DRG. Not surprisingly, this diametrically opposes a hospital's target, which is to maximize its DRG margin.

Keeping this initial position and a fixed DRG in mind, there are only two favorable options for revealing integrated economic value to a hospital maximizing its DRG margin:

- **Reduce variable costs**
- **Cut fixed costs**

At a first glance, the latter might seem to be related to complex restructuring — e.g. laying off staff. Actually, a decrease in fixed costs can result from smoother processes or higher capacity utilization.

Examples of economic value arguments are reduced length of stay, reduced procedure duration, less staff required, lower care levels or even less space for stocking and sterilization. So fixed cost savings often come from **capacity releases**, i.e. operation rooms (OR), the intensive care unit (ICU), the normal care unit or the diagnostic unit. In the case of waiting lists, releasing resources will be relevant, but also if critical care capacities are addressed, e.g. OR, ICU.

The other option, decreasing variable costs, can also be incorporated by proving that, for example, fewer blood products and disposables will be required and fewer medications will be needed to treat potential complications.

Additionally, **opportunity cost savings** (without considering revenue) should be considered as an economic value argument: it is certainly not as strong and tangible, but occasionally it might be the only one to be applied. Some innovative products save costs but at the same time reduce the revenue per patient since a different DRG is applicable. In this case, a more sophisticated analysis is needed

Figure 2: Various possibilities to benchmark economical value

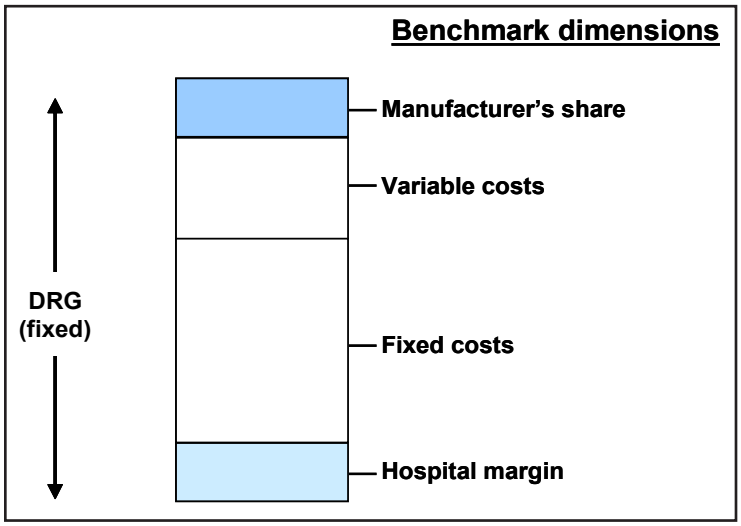
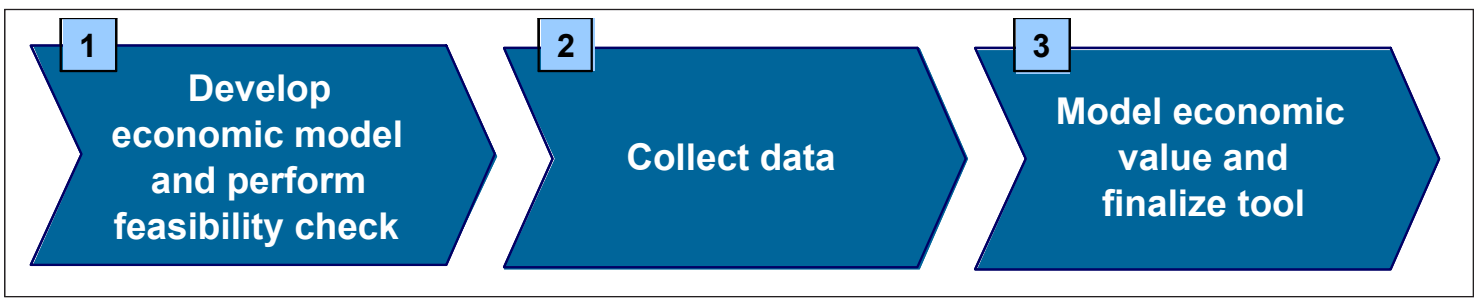


Figure 3: Approach to develop an economic value model



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to compare margins. If due to a capacity release more profitable patients can be diagnosed/treated, this will reduce the opportunity costs of less profitable patients. The investigation of these potential savings becomes especially important if a profit calculation/assessment is too complex or if no accurate internal controlling information (e.g. exact cost assumptions) is available.

Several such projects have shown that integrated economic value modeling is a valuable tool to pinpoint the economic benefits of innovations to various stakeholders — hospitals, relevant payers, and physicians.

For example, output data are:

- Average cost per patient for the current and new treatment pathway
- Average resource consumption for cost drivers (length of stay, OR minutes, etc.)

The economic value model is the starting point to calculate the business case for the hospital. Based on the annual number of patients and the capacity available, the total impact of the new treatment on the hospital budget and the capacity can be calculated.

Since the integrated economic value will likely be related to a certain therapy or evaluated from an annual perspective, price models might have to be adapted. Alternative price metrics to selling only product units could be a price per therapy or a monthly rental quote. Risk- sharing agreements could also be concluded when a customer is convinced of clinical value but has doubts about economic value.

Integrated economic value modeling is an alternative, highly sophisticated price-setting approach for innovations from medical technology manufacturers.

Incorporate the economic value model in your sales approach

Applying an integrated economic value model has several implications for price execution. Although selected sales reps might have been involved in the development of an economic value model, the entire sales organization should be sensitized to and convinced of the more comprehensive sales approach for innovations, addressing both clinical and economic benefits.

In place of pure price negotiations, sales reps need to understand the rationale behind an integrated value perception. Dedicated training lessons should be given. Sales reps also need to be trained how to approach and convince additional, different stakeholders. It will be crucial to:

- Establish a comprehensive value perception for innovations supported by the economic value model. This requires a mindset change for most stakeholders — arguments should address stakeholders' perspectives and needs. In addition, economic models should be easy to apply and focus on key cost drivers and pathways.
- Provide physicians with economic arguments they can use to internally convince the hospital administration.
- Approach hospital administration proactively to present business cases from economic value modeling.

Consider all relevant value dimensions with a comprehensive pricing approach

Establishing a more comprehensive value perception is essential in order to clearly reveal benefits and additional **economic value of many innovative products or procedures.**

In terms of price setting, the goal is to develop a pricing strategy that is built on the full product value, i.e. not only the clinical but also the economic value. Economic value models enable companies to identify prices which are justified from an economic perspective.

Regarding price execution, the sales approach might have to be adapted to:

- Effectively communicate benefits, e.g. using economic value models, and to
- Sustainably establish a mindset change at customers towards a comprehensive value perception

Success Factors for Building an Economic Value Model:

1. The foundation of the entire economic value argumentation is the assumption that the innovation is convincing from a clinical perspective, i.e. it has to be a medically interesting innovation that arouses interest in hospitals, physicians, etc.
2. The argumentation has to be economically interesting, i.e. the results should not be obvious without any extensive investigations
3. To convince hospitals to participate in the model development and data collection there are two main reasons: either emphasize their need for an innovative medical device or offer a financial incentive for the participation.
4. From the beginning it is important to integrate different perspectives (e.g. manufacturer, physicians, administrators…) and to jointly identify the main economic arguments, e.g. in a workshop.
5. A simple appealing model and a few clear messages should be the final result. This will enhance and the overall value of the innovation. You're missing a verb after "and." This will enhance and… the overall value…