Optimizing Value Delivery for Stakeholders in the Data-Driven Healthcare World: Stakeholder Journey Mapping

January 2016
Medical OEMs Digital Reality

Let's cut to the chase. Gone are the days where OEMs could count on continued success by simply designing innovative medical devices and pitching these products directly to physicians. Today's procurement decisions are made by committees using systematic value analysis decision-making frameworks. As a result, OEMs must now deliver value propositions meeting the requirements of a broader array of stakeholders beyond the clinician, including the economic buyers, caregivers, insurers, investors and more.

Equipped with enhanced data-driven abilities to track actions and outcomes with great precision, OEMs will experience increased pressure in this digital world. As they are able to design and deliver the next generation of smart medical devices, they see these same devices generate enriched datasets enabling buyers to more closely monitor product performance, product use, user experiences, adherence rates, patient outcomes and more. This leads to the digital paradox where smart devices providing additional information to buyers drives them to demand new information not yet available.

Now we've just confounded the medical device field ten-fold. Procurement committees, facing increased economic pressures and armed with new datasets on product performance, look to maximize stakeholder value in their purchase decisions. The result is an increasingly powerful position over OEMs to dictate terms and demand changes in product designs, costs, consumables and more, underscored by the implicit threat that they can switch to another device supplier. This reality combined with market pressures requires OEMs more than ever to understand the value for all stakeholders throughout the life and use of the product.
The Digital Paradox:

*Your smart device provides buyers with new information at the same time they will begin to demand information that your device does not yet provide.*

Take advantage of the digital paradox by building it into your digital design processes and product launch plans.

Adopt a ‘*get ahead by working backward*’ strategy.

1. Track the trends in medical device buyer decision-making frameworks
2. Map the types of information that procurement committees will need in order to justify their purchase decisions within a context of increasing economic scrutiny and pressure to maximize value across a broad range of stakeholders

By following these steps, OEMs will know how to design for optimized value delivery along the entire product journey for the different stakeholders.
Key to success:

Expand the scope of your design thinking to consider positive and negative stakeholder impacts as an explicit, dedicated aspect of designing for success in the new data-driven environment.

Stakeholder Journey Map framework helps identify impacts in a systematic manner, setting an actionable stage for further design refinements focused on (a) maximizing positive value impacts while (b) minimizing negative impacts, across all stakeholders along the entire product life cycle.

1. Map the journey for your new medical device.
2. Map economic value impacts on stakeholders.
3. Map non-economic value impacts on stakeholders.
4. Chart patterns in value impacts for stakeholders.
5. Use the Digital Value Creation Matrix to design for optimized value delivery to stakeholders.
6. Lock and load your digital design for optimized stakeholder value.
Hannah has asthma.

Hannah’s mom: “We discovered Hannah had asthma when she was five years old. We have been in and out of doctors and on-and-off a nebulizer since then. Is there any way to be better informed and to know what action to take?”

Let’s see how a virtual stethoscope that followed the Stakeholder Journey Map through development can be used to improve Hannah’s quality of life.
1. Map the journey for your new medical device.

The first step begins by marking key waypoints in the journey of your smart, connected medical device. View the world through the ‘eyes’ of your new device as it enters, journeys through, and exits the health care environment, intersecting with and impacting the everyday lives of stakeholders along the way. In addition to helping you identify **points of value impact** for various stakeholders throughout the product life cycle, this step plays a crucial role in highlighting the broader set of stakeholders you’ll need to consider when later refining your design for optimized value delivery.

The output of Step #1 is a basic chronological progression of events as your device passes through the various phases in the product life cycle, impacting the lives of stakeholders for better, for same, or for worse, charted along the horizontal. Key events highlight positive and negative impacts, generating a concise storyboard for stakeholder value delivery.

Hannah’s parents buy the virtual stethoscope at their local pharmacy. Their purchase includes:

- Disposable set of sensor stickers
- Smart phone app downloadable with code/key
2. Map economic value impacts on stakeholders.

The next step is fleshing out the broader ecosystem of device value impacts on stakeholders. Here is where you identify impacts for each stakeholder group separately. Use the vertical dimension to break out distinct value impact tracks, generating a set of Stakeholder Journey Maps in the process.

Map positive, negative and neutral impacts for economic stakeholder value. Does the device help physicians to more efficiently diagnose and treat patients, creating economic value in the process? Does it lead to more effective patient outcomes, reducing costs along the way?

The economic value impacts the virtual stethoscope has on Hannah’s family:

- **Smart in-home monitoring and data interpretation reduces trips to the doctor**
- **More accurate and appropriate use of in-home treatments/remedies**
  - Nebulizer
  - Inhaler (etc.)
3. Map non-economic value impacts on stakeholders.

Apply the same mapping process for non-economic value, noting beneficial and adverse effects on the cognitive, behavioral and emotional aspects of stakeholders’ lives:

- **Cognitive Value Impacts**: Does the new medical device deliver positive cognitive value for stakeholders by reducing the complexity of their thinking and planning during the course of their everyday lives? Or does the device make their lives more complicated by requiring more planning and conscious monitoring and decision-making?

- **Behavioral Value Impacts**: Does the new device deliver positive behavioral value for stakeholders by reducing the complexity of their tasks and the amount of work they need to do throughout the day? Or does the device make their lives more difficult by requiring them to learn and perform more complex tasks and do more work?

- **Emotional Value Impacts**: Does the new device deliver positive emotional value for stakeholders by making them feel at ease, comfortable, satisfied, etc.? Or does the device make their emotional lives more difficult by increasing their levels of fear, stress, uncertainty, etc.?

Cognitive value impacts:
- Don’t have to worry about remembering to check breathing
- Don’t have to be an expert in interpreting breathing sounds (the app does this for you)

Behavioral value impacts:
- Don’t have to get up/wake up and go check breathing
- Place sensors on using a directional diagram and you’re good to go

Emotional value impacts:
- Automated notifications via the app alert you to breathing problems
- Peace of mind from tech-enabled continuous monitoring of loved one’s health issues
4. Chart patterns in value impacts for stakeholders.

Stakeholder Journey Maps provide critical insights for OEMs designing for optimum value delivery in the new health care environment, showing: (a) when your device will impact stakeholders, and (b) what the impacts will be on their lives— for better, same or worse— in economic and non-economic terms.

Positive impacts create value for stakeholders, tipping them to support adoption of your new medical device. Negative impacts destroy value, tipping stakeholders to resist adoption. Use a color-coded scheme to efficiently mark where your device yields positive, neutral and negative impacts for economic and non-economic stakeholder value. Green is positive, yellow is neutral and red is negative.

This ‘red-light, yellow-light, green-light’ schema is a widely used and readily understood format for charting impact patterns. An additional benefit is that color-coded Stakeholder Journey Maps are easily transformed into canvas- and matrix-based tools, supporting: (a) fast and simple digital design processes for OEMs and (b) value-based ‘go/no go’ device procurement decisions in health care contexts.

Cases where a new medical device elicits neutral responses— with no appreciable gain or loss for stakeholders— should be interpreted as probable sources of resistance. Here the net gain in value for stakeholders is simply not enough to ‘tip’ them from the status quo to supporting change through adopting your new device. New product launches met with lukewarm reactions and neutral value impacts are as deadly to one’s chances of future market entry and success as any other new device where Stakeholder Journey Maps show it will be a weapon of mass value destruction.

Value impact summaries for various stakeholders:

- **Hannah**: Green light - improved health, peace of mind, less stress
- **Hannah’s parents**: Green light - reduced healthcare costs, improved peace of mind
- **Hannah’s pharmacist**: Green light - new product on the shelf, improving customer health and wellbeing
- **Hannah’s health care insurer**: Green light - reduced costs and improved health and wellbeing
- **Hannah’s physician**: Yellow light - enhanced patient data availability, but new device and system to learn; these concerns should be addressed through onboarding strategies
5. Use the Digital Value Creation Matrix to design for optimized value delivery to stakeholders.

By teasing out the value impacts for a proposed new medical device, these Stakeholder Journey Maps set the foundation for success. A color-coded approach helps OEMs by charting patterns of positive, neutral and negative device impacts on economic and non-economic value received by stakeholders. **Closing the digital design loop:** The ultimate goal for digital age OEMs is feeding Stakeholder Journey Map insights right back into the design process.

You want to redesign your device in a way that: (a) maximizes positive economic and non-economic value for stakeholders, tipping them toward adoption, while (b) minimizing negative economic and non-economic value, reducing resistance from users and rejection from buyers.

The Digital Value Creation Matrix assists in designing for optimized stakeholder value delivery. The first part of this matrix covers the **Value Creation** side, noting positive device impacts on stakeholders. Additional value creation paths are opened by considering an expanded range of digital design options from the three value delivery and revenue streams included in the complete **Digital Business Model**: product sales, subscription services and sales of aggregated product performance and use data to third parties.

We do the same for the **Value Destruction** side, noting adverse stakeholder value impacts while using the Digital Business Model to explore ways of reducing negative impacts through our expanded set of digital design channels: product sales, subscription services and aggregated dataset sales. Close this loop by looking for design options helping you avoid, minimize or eliminate the adverse economic and non-economic value impacts of your new medical device.

---

**Use images to show options in your Digital Value Creation Matrix:**

- **Subscription Services:** Hannah’s family can opt to pay a small monthly fee for access to the stethoscopes’s data
- **Product:** Hannah’s family bought the kit at their local pharmacy
- **Data Sales:** Who would pay for aggregated data based on in-home monitoring of children with asthma?
6. Lock and load your digital design for optimized stakeholder value.

The final outcome for OEMs is a redesigned medical device tailored to optimizing economic and non-economic value for stakeholders. Stakeholder Journey Maps play a crucial role in designing for optimum value delivery in a new data-driven health care world. As we see more procurement committees leveraging decision-making tools aimed at maximizing value, OEMs will require a roadmap on how to understand their stakeholders and create a product that will be accepted and adopted.

Logic PD can help. By leveraging the power of information, we can help develop and bring to market your new medical device that delivers positive value for stakeholders along the way.

Locking and loading digital design for optimized stakeholder value means storyboarding multiple potential journey maps, comparing and contrasting results to determine:

- Best product design for optimum stakeholder value delivery
- Best target market, product launch plan and business model
Let us know if we can help you navigate this brave new digital world.

Contact Logic PD today to learn more.

solutions@logicpd.com  
www.logicpd.com  
Tel: 855.461.3802

Susan McGregor  
Senior Account Manager  
susan.mcgregor@logicpd.com

Eric Wilkowske  
Vice President Account Management  
eric.wilkowske@logicpd.com

Contributors

Jason Voiovich  
Chief Customer Officer  
Logic PD

Dr. Todd Hostager  
Director of Digital Strategy Curriculum  
Logic PD

About Logic PD: Logic PD collaborates with clients to help them throughout the complete product lifecycle to accelerate their growth and capture value. Logic PD provides services at any stage in the product lifecycle by helping customers understand their business, user and technology needs and specializing in helping them meet digital business requirements. With services in analytics and research; design, engineering and manufacturing; and product support services, Logic PD helps its clients identify opportunities, reduce risk, and control costs to deliver innovative products to market faster. The company is headquartered in Minneapolis, with offices in Boston and San Diego.