

Usability before technology

How to optimize medical device integration in hospitals: a case study

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Industry partner: A global medical device integration solution provider in the healthcare sector

1. Introduction and literature review

Introduction

Companies often grapple with creating custom-made offerings due to inadequate client knowledge. Integrated solutions usually involve multiple actors, further compounding the complexity.

Companies aspiring to embrace a service-dominant logic can encounter difficulties leveraging different actors for solution development. As a result, despite research advocating benefits of transforming into a solution provider, many organizations face subpar value delivery to the customer. Recognizing these challenges is crucial for companies considering this transition to prevent servitization failure and ensure successful transformation to comprehensive solutions.

Research question

“What are the barriers that prevent traditional IT providers from delivering solutions, rather than technology?”

Literature review

Suppliers often focus on customizing and integrating products for clients, missing other crucial aspects of solutions: defining customer objectives, deployment, and post-deployment support. This oversight results in a gap between supplier and client perspectives.

The significant barriers to servitization stem from customer-related challenges, organizational obstacles, and issues with knowledge and information management. Customers' diverse demands and unclear value criteria can impede the transition. Organizational challenges arise from entrenched cultures and structures, resistance to change, and internal conflicts, making the shift difficult. Knowledge and information management issues also pose significant challenges in the servitization process.

By employing dialog, access, risk-benefits and transparency a system of value co-creation (see Fig.1) can be developed between the relevant actors that will then achieve the customer's objectives. This leads to mutually beneficial and dyadic business relationships.

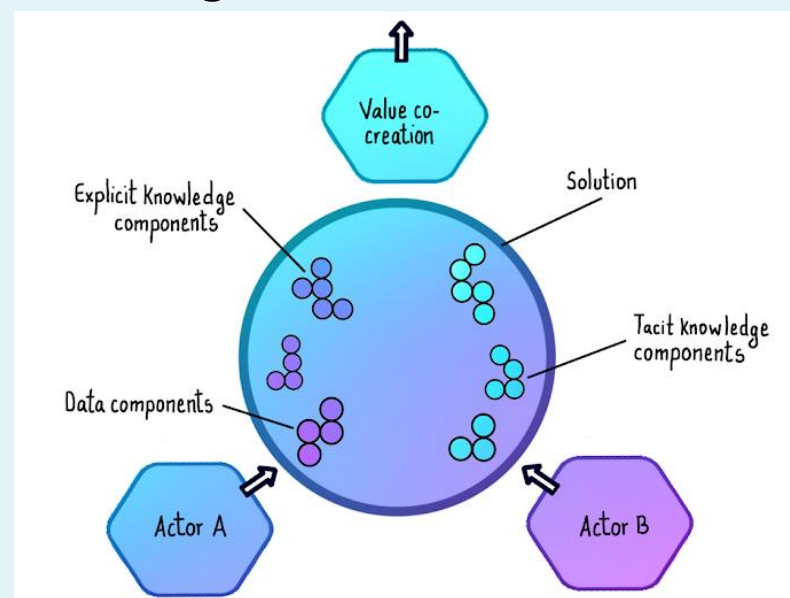


Fig.1

2. Methodology

Extensive interviews were conducted with a variety of hospital employees throughout Europe and individuals from the industrial partner's organization involved in medical device integration projects. The findings from these interviews allowed for the creation of a customer journey map, value propositions, and a root cause analysis, which collectively led to an improved and more effective service blueprint.



Qualitative research design

3. Results and discussion

Challenges during the customer journey

The analysis of the customer journey map (Fig.3) reveals three main issues affecting the effective adoption of the medical device integration solution.

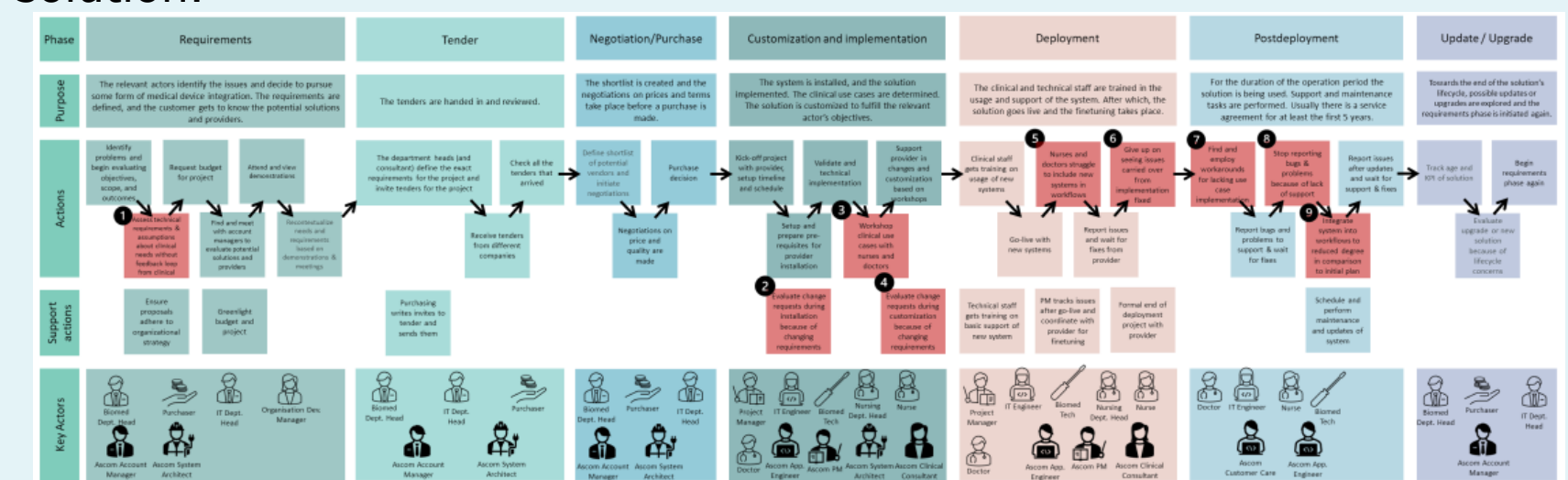


Fig.2

- A crucial discrepancy was found at the early stages of the process where the requirements for the solution were predominantly decided by the technical departments with little input from the clinical staff.
- During the implementation phase, the engagement of clinical staff was found to be delayed, leading to multiple change requests as the system needed extensive reconfigurations to meet their objectives.
- The analysis revealed a persistent issue concerning the resolution of technical problems and support. A lack of feedback loop and the diminishing support from the solution provider resulted in unresolved issues, workarounds, and frustration among both clinical and technical staff.

By focusing, as indicated in Fig.3, predominantly on the customization of the goods and services and neglecting the greater process-centric view the industrial partner is not able to facilitate a proper state of co-creation by combining their solution and tacit knowledge components with the data components and explicit knowledge components of the customer.

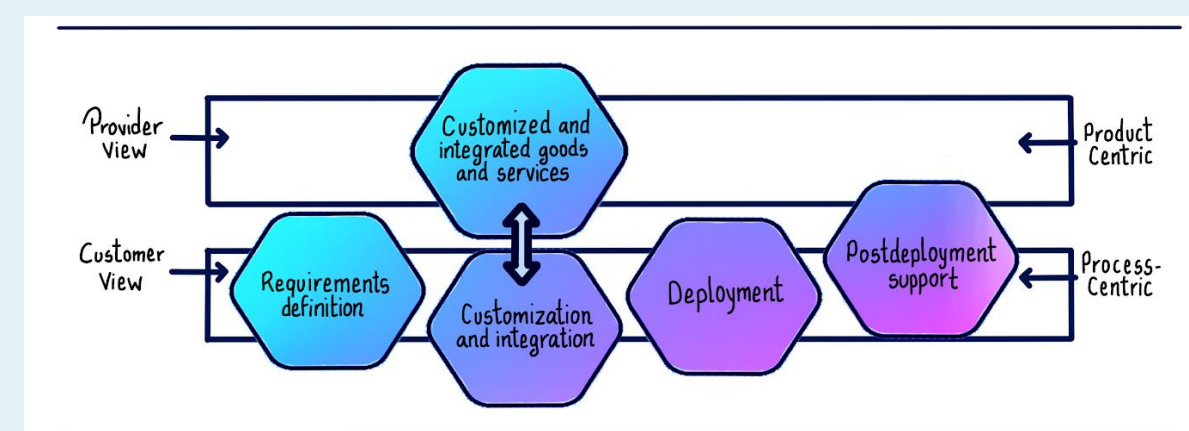


Fig.3

4. Conclusions and recommendations

Conclusions

Failing to include the primary actors (clinical staff) that interact with the solution during the early stages of the procurement process leads to a sub-optimal solution that fails to meet user objectives effectively. Additionally, the lack of adequate support and training for customer care teams results in unresolved technical issues and customer frustration.

Recommendations

Future research should explore strategies for more effective integration of end-user feedback into the procurement process. Studies should investigate the impact of enhanced customer support training on user satisfaction and system utilization. This could offer insights into the most effective training methods and their influence on overall solution success.

References

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