SIEMENS Healthineers

White paper

Jointly ensuring that the public healthcare sector is future-ready via long-term partnerships

The integration of medical technology in Value for Money assessments

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Value Partnerships

Edition #15

Introduction

Public-Private Partnerships (PPPs) are generally defined as long-term contractual arrangements between a government agency and a partner from the private sector.[1] First developed in the 1980s, they were intended to fund and reliably deliver public services while the partners shared the associated risks. Interest rose significantly in 2015, when the United Nations announced its Sustainable Development Goals. Since then, governments have increasingly turned to the private sector for help in funding infrastructure projects.[1,2]

In a recent publication, Siemens Healthineers explored the roles and opportunities of PPPs in the healthcare sector. We identified key financial (Value for Money) and non-financial (Value for People, Value for Innovations) metrics that are used to gauge the success of a PPP project. This publication will focus specifically on Value for Money (VfM) with an emphasis on the importance of demonstrating VfM in terms of MedTech.

› Glossary

[1]The Canadian Council for Public-Private Partnerships defines a PPP as "a cooperative venture between the public and private sectors, built on the expertise of each partner that best meets clearly defined public needs through the appropriate allocation of resources, risks, and rewards."[1]
[2]The European Commission defines a PPP as "an arrangement between two or more parties who have agreed to work cooperatively toward shared and/or compatible objectives and in which there is shared authority and responsibility; joint investment of resources; shared liability or risk-taking; and ideally mutual benefits."

Contents

Concept of VfM

VfM assessment has been established internationally as a critical foundation of decision-making in government contracting and a key element of PPPs. Simply put, achieving VfM can be described as "using public resources in a way that creates and maximizes public value."[3] It denotes a net measurement of the required benefits and other objectives balanced against the costs of achieving those benefits. Generally, it is assessed on a "whole of life" or "total value of ownership" basis. To live up to its promise, it should take into consideration both financial and non-financial factors. It's important to note, too, that VfM is not about securing the lowest price at the outset but rather about achieving the ideal balance of cost with quality over the entire life of the completed project.

Healthcare PPPs, invariably complex by nature and designed to deliver products or services that will be in use for long periods of time, must demonstrate a positive VfM during the bid stage and deliver on this throughout the project's lifecycle. A healthcare organization that delivers VfM is one that maximizes efficiency, enabling the patients it serves to receive the highest possible level of care for the expenditures that have been made.

In the past, VfM has been thought of in terms of getting the right quality in the right quantity at the right time from the right supplier at the right price, but this view has evolved. Healthcare agencies now focus on the ultimate outcome and associated benefits. Today, it is more appropriate to say that VfM is about securing a better quality of goods and services in more suitable quantities when needed, from better suppliers at better prices. VfM is also often described, more succinctly, in terms of the four E's: economy, efficiency, effectiveness, and equity.

Value for Money Key Considerations: The Four E's[5]

- Economy: Have quality and cost been appropriately balanced?
- Efficiency: Have the inputs been shown to deliver appropriate outcomes?
- Effectiveness: Have program goals been achieved?
- Equity: Have the benefits been distributed fairly?

When proposals are assessed for VfM, the following considerations are critical:

- Technical criteria
- Financial criteria (including price)
- Qualitative criteria
- Other value-added criteria

VfM is thus a multifaceted measure, the sum of outcomes for multiple components, including financing, design, construction, operations, and maintenance, as well as overarching social and economic benefits. VfM is a way to address a challenge in public procurement decision-making, namely the idea that the least-expensive option is always the best.[4]

Challenges associated with VfM

It should be noted that VfM is not a concept in practice everywhere. In fact, it is more commonly seen in developed countries and those with more-mature PPP frameworks. Also, how much is spent sometimes overshadows the more central question of what the funds have achieved. Calculating VfM is complicated and highly technical, requiring seasoned experts to accurately assess. The focus on the quantitative aspects of VfM can also overshadow critical qualitative aspects — including environmental and social benefits and costs. To mitigate against this risk, organizations such as the European PPP Expertise Centre, a division of the European Investment Bank, recommend "the use of a qualitative assessment as early as possible."[5] Accurately assessing and valuing qualitative factors is especially important in the medical technology context.

According to The Access and Delivery Partnership (ADP) the challenges specific to VfM assessments in general are the following:

- VfM is subjective and difficult to formalize in a single framework.
- VfM evaluation requires input from diverse stakeholders.
- Managers may be unwilling to change the practice of making decisions based on the lowest bid price.

As far as medical equipment in a healthcare PPP is concerned, it is often discussed how all parties can assure that innovation has its place in the long-term VfM calculation. The best medical technology of tomorrow is not known at the onset of the PPP project and, therefore, choosing the right technology within the tight contractual framework of a PPP throughout the lifetime can be a challenge.

VfM for medical equipment

In recent years, sophisticated medical equipment, like that used for X-ray radiography, magnetic resonance imaging, and computed tomography scans, has come to command an ever-larger share of the budget required to develop and deliver healthcare services, as clinical decision-making is increasingly driven by imaging results.[6] As more than 80 percent of all hospital visits include at least one imaging study to support clinical decisions, it's important to recognize that there are factors beyond expense that need to be considered when selecting sophisticated medical equipment.[7] However, the selection and purchase of technologically advanced medical equipment, or "MedTech," is rife with complicated and challenging concerns beyond expense: the rapid pace of innovation, the intimate relationship between medical equipment and clinical success, and the required ongoing expert maintenance and management.

For these reasons, focusing on VfM as it relates to medical technology and medical equipment is critical to the success of healthcare PPPs and is not a one-time exercise. MedTech companies must be considered essential partners in such healthcare PPPs to deliver the best care.

Partnerships with MedTech Companies Help Optimize VfM in Healthcare PPP Projects

How VfM is defined for medical equipment

As a rule, medical equipment is not part of VfM assessments in the U.K., Canada, and Australia, as the procurement of medical equipment is not included in the scope of the PPP projects subject to mandatory VfM assessments. Experience shows that performing a separate VfM assessment for medical equipment projects to define the best approach for long-term MedTech strategy and to compare a partnership approach with that of transactional procurement is the best way forward.[2]

There is no single accepted methodology, and various methods could be applied to define VfM for MedTech solutions, e.g., cost-effectiveness analysis, cost-benefit analysis, total value of ownership, etc.

The method of total value of ownership (TVO) is best suited to reflect VfM of medical equipment and adjacent solutions, as it allows the public partner to compare bids (submitted during the tender process) over the life of the project and consider the potential value that can be realized from each bid over its lifetime, including efficiencies gained, risk reduction, and improved quality, in addition to the total cost of ownership (TCO). TCO is a calculation of the cost of the equipment itself plus any associated costs, including installation (which may include the cost of structural changes needed to accommodate the equipment), operating, maintaining, and disposing of the equipment at the end of its lifecycle. In contrast, TVO, more comprehensively, considers all the benefits gained in owning the equipment.[8] While TCO is helpful in uncovering hidden costs, one of the main benefits of using TVO to calculate MedTech VfM is that it can help identify both hidden costs and benefits that may not be uncovered in a TCO calculation alone. [8,9]

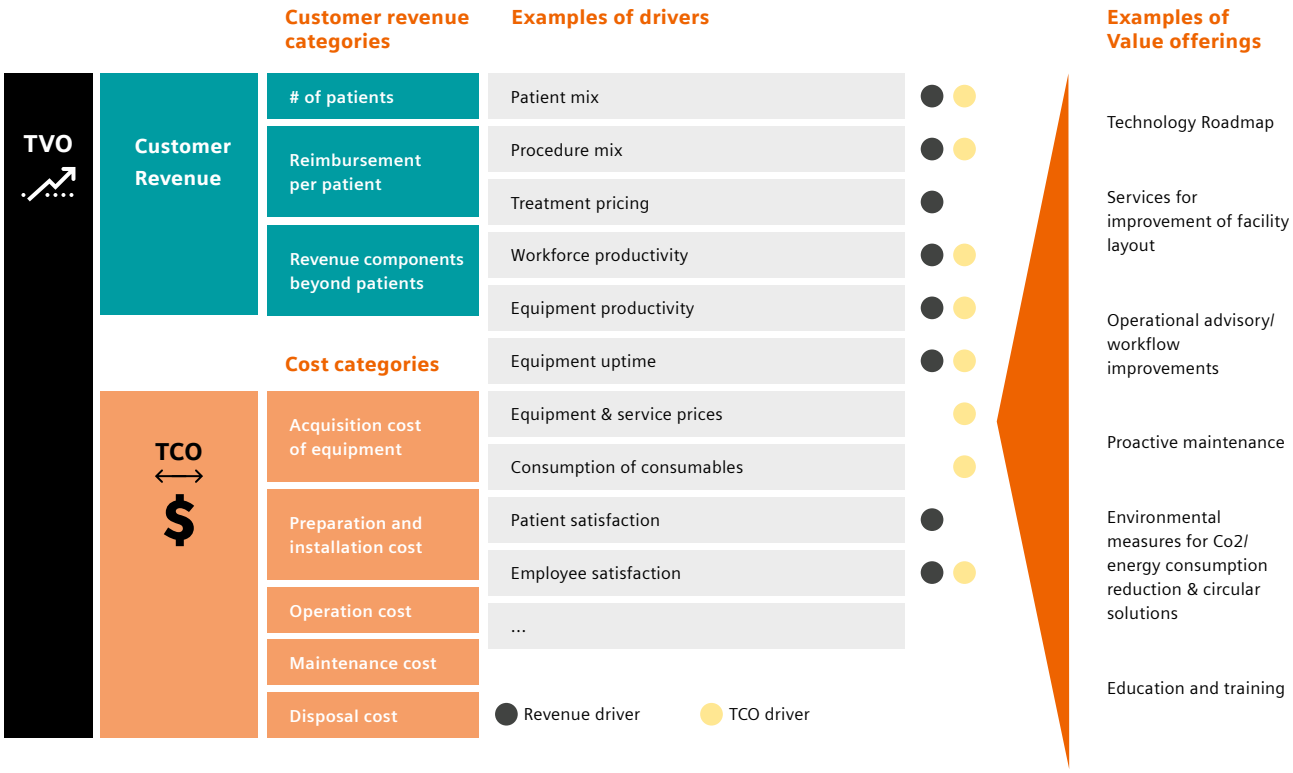


Figure 1: TVO

MedTech partnership approach demonstrates better VfM

TVO demonstrates the value of procuring solutions rather than simply buying pieces of equipment or, in other words, it shows the value of engaging in a partnership rather than simply executing transactions. For instance, adjacent solutions, such as digital tools and services, amplify performance of the medical equipment and provide insights so it can be better managed.

But how can the public partners make sure that there is room for innovation and technological leapfrogs while maintaining the safe environment of clear cost and quality key performance indicators KPIs?

A reputable MedTech company can offer long-term performance-oriented partnerships around medical equipment that constitute a proven framework for value creation, innovation, and sustainability. This approach is increasingly embraced by governments. In their public procurement directive, the European Union (EU) suggests applying "criteria concerning the candidates' capacity in the field of research and development and of developing and implementing innovative solutions"[10] to the vendor selection framework. As a response to these market demands, Siemens Healthineers offers **Value Partnerships** — long-term performance-based relationships that provide a flexible framework that helps healthcare provider organizations meet current challenges and plan for the future. Value Partnerships are designed to create value across one or more of these key domains contributing to overall VfM:

Technology
Services are available to manage current and future medical technology needs and to create strategies for helping the healthcare provider achieve goals, including guidance on rightsizing of technologies to ensure they meet each healthcare provider's unique needs in the most cost-efficient manner possible. Rightsized medical technology helps reduce capital expenditures, while operational efficiency, including energy-efficient MedTech, reduces ongoing operating costs.

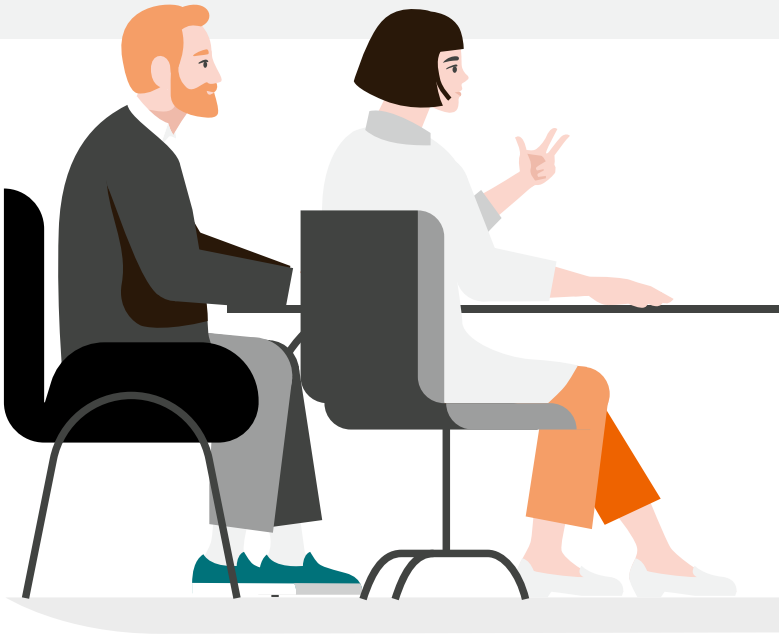
Operations
Streamlining operations and optimizing equipment performance help to ensure peak equipment utilization and efficiency. Streamlined operations optimize operating expenditures (OpEx) while enhanced patient satisfaction increases revenue.

Workforce
Education and staff management solutions help to maximize throughput and equipment utilization without placing undue strain on either the staff or the hospital budget. Improving staff retention can have a substantial effect on overall OpEx, considering the expense of replacing highly trained, credentialed clinical staff.

Facility
Future-proofed facilities work to ensure that there are no unexpected installation costs and that facilities are designed to accommodate future generations of imaging equipment. A modern facility, fit for purpose, can save on both capital expenditures (CapEx) and OpEx costs over time.

Strategic Transformation
Expert advisory services helps to prepare for meeting future challenges and improving performance to continuously realize VfM. A partnership geared toward strategic transformation can help healthcare organizations meet KPIs and secure a firm financial footing for the customer (optimization of CapEx and OpEx).

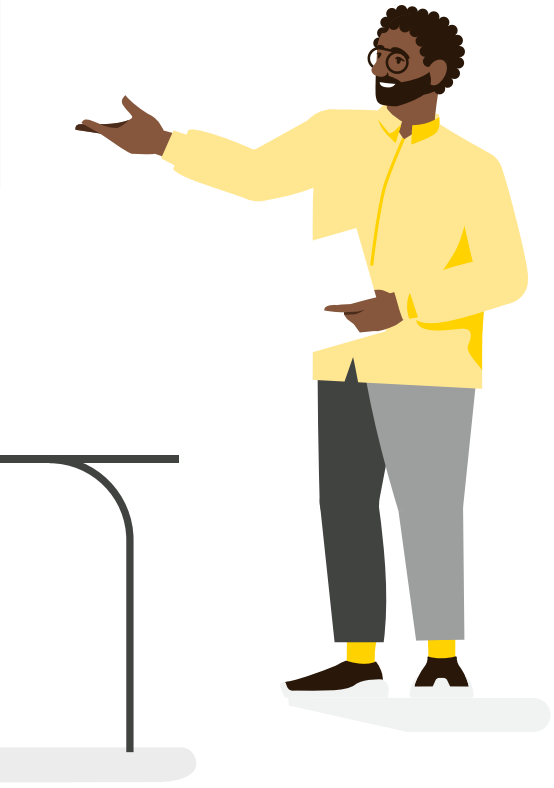
Digital Innovation
Guidance and advisory services on new approaches encourages optimization of both clinical and operational aspects of the institution (OpEx). Leveraging these new approaches in a thoughtful manner can help healthcare provider organizations reach their clinical and financial goals and obligations both immediately and in the long term.



How to procure MedTech in PPPs to achieve maximum VfM

Value-based procurement

Healthcare systems need to improve value in care delivery rather than focus exclusively on volume, costs, and single clinical indicators.[11] Value-based procurement (VBP) is the practice of evaluating potential products, services, and solutions to maximize overall VfM rather than focusing only on the lowest purchase price.
Many countries have already seen a significant change in the way medical equipment is procured. One agent of such change is legislation like the Directive 2014/24/EU on public procurement.[10] In general, medical equipment acquisition today is transitioning from price-based procurement to output-based procurement. The next logical step is to move to a value-based approach. Such an approach is supported by the Directive 2014/24/EU on public procurement, which aims to improve procurement by promoting quality and innovation while considering longer-term costs as well as, for example, environmental and social factors.



From the MedTech provider's point of view, the superior procurement model is one that accommodates procurement of a medium-term/long-term MedTech partnership and is tendered directly (model 1a)

When medical equipment for a PPP project is procured directly from MedTech vendors who commit to providing valuable service in addition to products, VfM is maximized. The value of the products and services is enhanced through bundling of products and services. It's reasonable to describe the relationships that deliver these optimal results as "MedTech partnerships." Different MedTech companies are offering partnerships, including Siemens Healthineers, which pioneered this approach under the name of "Value Partnerships."

Maximizing VfM for MedTech is highly dependent on the PPP procurement model employed. The critical element is how much opportunity the MedTech company will have to apply its knowledge and experience. Many healthcare organizations use an industry partner to handle installation, training, upgrading, service, and repair of their medical technology through a managed equipment services (MES) contract. Such a contract is most successful and delivers the optimal value when the MedTech vendor can fully engage with the end users of its equipment and services. In some cases, industry partners will help develop a technology road map to guide provider organizations' medical equipment strategy for years or even decades.

An MES is a value-added procurement model, one that provides the healthcare organization with continuous access to the latest advancements in the technology. An all-inclusive solution, an MES can positively impact total value of ownership and preserve capital budgets. There are different modes of procurement and ways to ensure VfM for the MedTech component of a project.

Model 1: Incorporating the benefits of value-based procurement Preferred model: Direct procurement of MES/Value Partnerships (model 1a)

Based on value-based procurement principles, the best VfM could be achieved in model 1a. In the case of model 1a, MedTech is procured in parallel to the Special Purpose Vehicle (SPV) in the form of an MES/Value Partnership. The MedTech provider has a **direct agreement with the public partner.** In this arrangement, medical equipment procurement is streamlined as direct communication between the MedTech company and the public healthcare providers/hospital management. This allows for both time savings and clear communications since there are no intermediaries between the MedTech partner and the public partner. Multiple projects — and even multiple hospitals — can be bundled together, providing for economies of scale and further optimizing efficiencies for the entities involved.

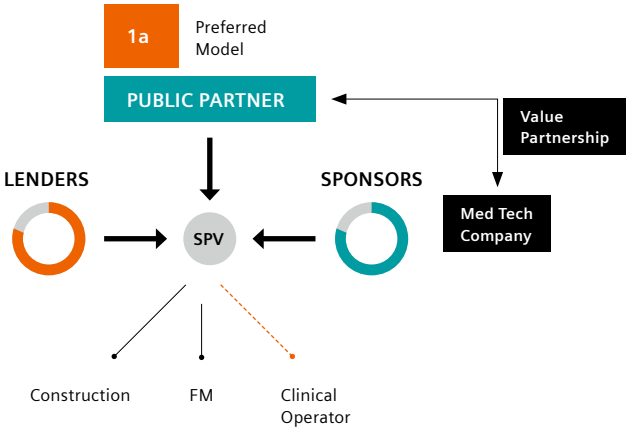
The key principle in operation here is the fact that MedTech is just as important as infrastructure in a healthcare project. This arrangement leverages the expertise of the MedTech partner directly and facilitates ongoing collaboration with end users, department heads, and other key stakeholders.

Second-best model: Indirect procurement of MES/Value Partnerships (model 1b)

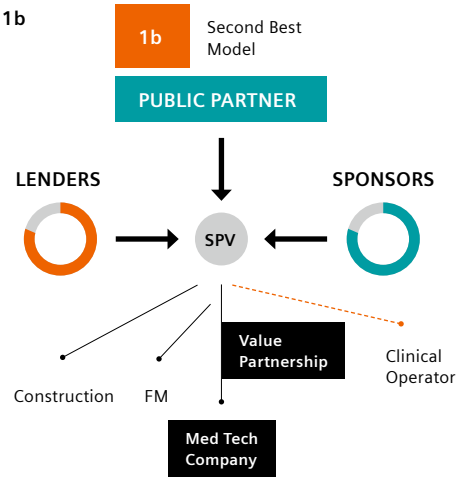
MedTech is included within the scope of the PPP project, but procurement is arranged through the SPV/its members and is, therefore, subject to the limitations and boundaries. Generally, construction companies and facility management companies in so-called "facility management PPP models" are not particularly interested in managing medical equipment, as they are not responsible for clinical outcomes and have no expertise in managing MedTech. These contractors tend to buy transactionally just to ensure necessary equipment is available, without any added-value services.

The way to enhance VfM under this procurement model and to ensure long-term benefits associated with procurement of MedTech products and services is to have the public partner provide the SPV with **parameters for procurement of MedTech that allow for the purchase of MedTech partnerships.** The SPV should have incentives or even direct assignment from the public partner to accommodate for long-term benefits associated with MedTech partnerships. Under this model, public partners should be aware of existing modalities and the benefits and costs associated with long-term MedTech strategies — often spanning over 20 years —and specifically incorporate these requirements into PPP tenders.

Model 1a



Model 1b



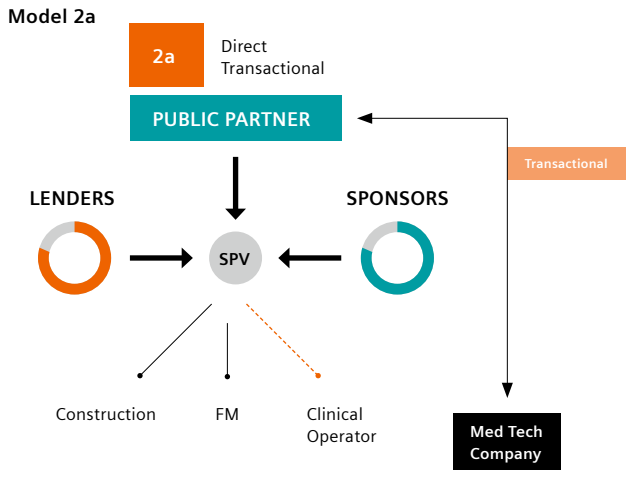
Model 2: Price-based procurement; no accommodation for an MES/Value Partnership

Model 2 is a fundamentally transactional approach that does not reflect value-based procurement and is primarily based on price.

Direct Transactional Procurement (model 2a)

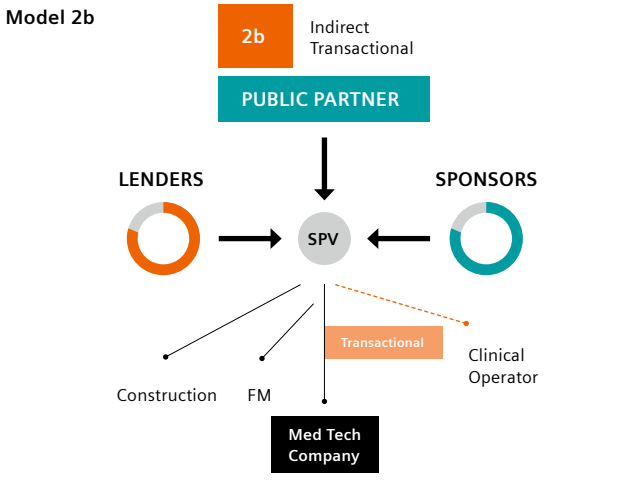
Procurement of medical equipment occurs transactionally as a one-time buy. Upgrades, innovative digital health solutions, facility design, education, and other relevant services that potentially could have a positive impact on VfM are excluded from the transactional procurement.

Recommended route to achieve a better VfM under this procurement mode:
Analyze the benefits of the long-term strategic MedTech partnership and switch to model 1a.



MedTech is included within the scope of the PPP project and is procured through the SPV/its members and is, therefore, subject to all the limitations and boundaries. There is no accommodation for the addition of supplementary services or solutions. Communications between the public partner and the MedTech experts might be limited, if they occur at all. Clinical outcomes will not be a focus because clinical operations are not part of the PPP scope.

In this scenario, the bulk of the medical equipment is procured by an SPV under parameters provided by the public partner. The purchased equipment will be accounted for as CapEx. By contrast, consumables, replacement parts, and additional solutions will be procured by the hospital but under a different budget — as OpEx.



Indirect Transactional Procurement via Special Purpose Vehicle (Model 2b)

Recommended route to achieve a better VfM under this procurement mode:
It is recommended to combine products, services, and consumables in one contract. This would require the merging of CapEx and OpEx budgetary allocations and procurement of a long-term MES contract. It's recommended that public authorities switch ideally to model 1a or to the second-best option, model 1b.

Our recommendations

Regarding VfM for PPP projects, in general, we recommend the following:

1. Understand that VfM is the best practice that should, in principle, be mandatory.
   a. VfM for healthcare PPP projects should be performed for all projects and in all jurisdictions and should include VfM for medical equipment, with the appropriate methodology chosen based on jurisdiction and available data
   b. At the outset of the process, align with all stakeholders on what is exactly meant by VfM and how it could be achieved.
   c. VfM should include evaluations for both financial and nonfinancial benefits.

2. VfM should be assessed before the tender and after the tender, with regular reviews throughout the project. Key milestones of the VfM cycle include[4]
   a. Initial VfM that leads to a decision to pursue a PPP route or not;
   b. Post-tender VfM adjustment based on VfM of the winning bid;
   c. Regular revisions of VfM during project implementation;
   d. Ex-post VfM evaluation, arriving at final VfM value.

3. Market sounding[3] a can be useful for examining market situations and integrating innovations and best solutions into tender requirements. Market sounding should be used by public partners to get informed about the private sector's best practices and existing innovations to create up-to-date technical specifications for the PPP tender.

4. To apply principles of VfM, use value-based procurement to overcome short-term cost containments and to partner for long-term, patient-centric, sustainable healthcare.

As to MedTech VfM specifically, we recommend the following:

1. Understand the value behind MedTech solutions, including the importance of innovations and upgrades over the life of the equipment.
2. VfM analysis should be performed for medical equipment, and the recommended methodology, from our point of view, is TVO.
3. Public authorities should procure comprehensive solutions rather than just "boxes" and should factor in clinical impact and patient experience. They should enable their teams to pursue value-based procurement and make necessary budgetary and legal arrangements to the procurement process to ensure smooth procurement of MedTech products and services in one contract (e.g., Value Partnerships/MES). Accordingly, MedTech suppliers should provide evidence-based value propositions and TVO parameters to address the needs of the public partners.
4. Consider the preferred model from MedTech suppliers' point of view: direct procurement of medical equipment in a form of an MES/Value Partnership. This is the best model of procurement for MedTech to ensure maximized value for healthcare providers, patients, and hospitals, and it also takes away MedTech -related risks from the SPV. Best practices are available to manage the relationship between a MedTech company and the SPV.

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[1] Market sounding is the communication of information to representatives of the private sector prior to the announcement of a PPP tender to sound out the interest of the markets, and hence the prospects of success, or to gauge the attractiveness of their own offering.

Conclusion

Optimal VfM for healthcare projects requires direct communication with MedTech experts

In summary, PPPs for healthcare projects must achieve VfM, as should PPPs of all types. That is, however, an empty goal if MedTech expertise is sidelined. The pace of change, the sophistication of medical technology fleets, and the critical nature of medical technology to patient outcomes, together, point to the need to treat MedTech partnerships on a par with infrastructure partnerships.

By including MedTech specialists on the frontlines of decision-making throughout the project lifecycle, healthcare PPPs can deliver optimal clinical, social, and financial outcomes. Ideally, medical technology should be procured in parallel to the main PPP contract and procured under a long-term MES (as in Siemens Healthineers Value Partnerships). The magnitude of the investment and the high stakes for government agencies, private partners, and patients mean that a MedTech provider must not be relegated to subcontractor status without a remediation strategy behind it (e.g., public partner secures procurement criteria reflecting a combination of products and services rather than products only to be purchased in line with value-based procurement). Naturally, the MedTech partner and the SPV should work closely together to ensure that infrastructure and technology are compatible and complementary in order to deliver the highest possible VfM through the PPP project's lifecycle.

Learn more about Public-Private Partnerships in this informative white paper from Siemens Healthineers

https://www.siemens-healthineers.com/services/public-private-partnerships

Are you interested to discuss your potential PPP project? Contact Siemens Healthineers Enterprise Services to see how we can help you shaping the next decade of healthcare:

ppp@siemens-healthineers.com

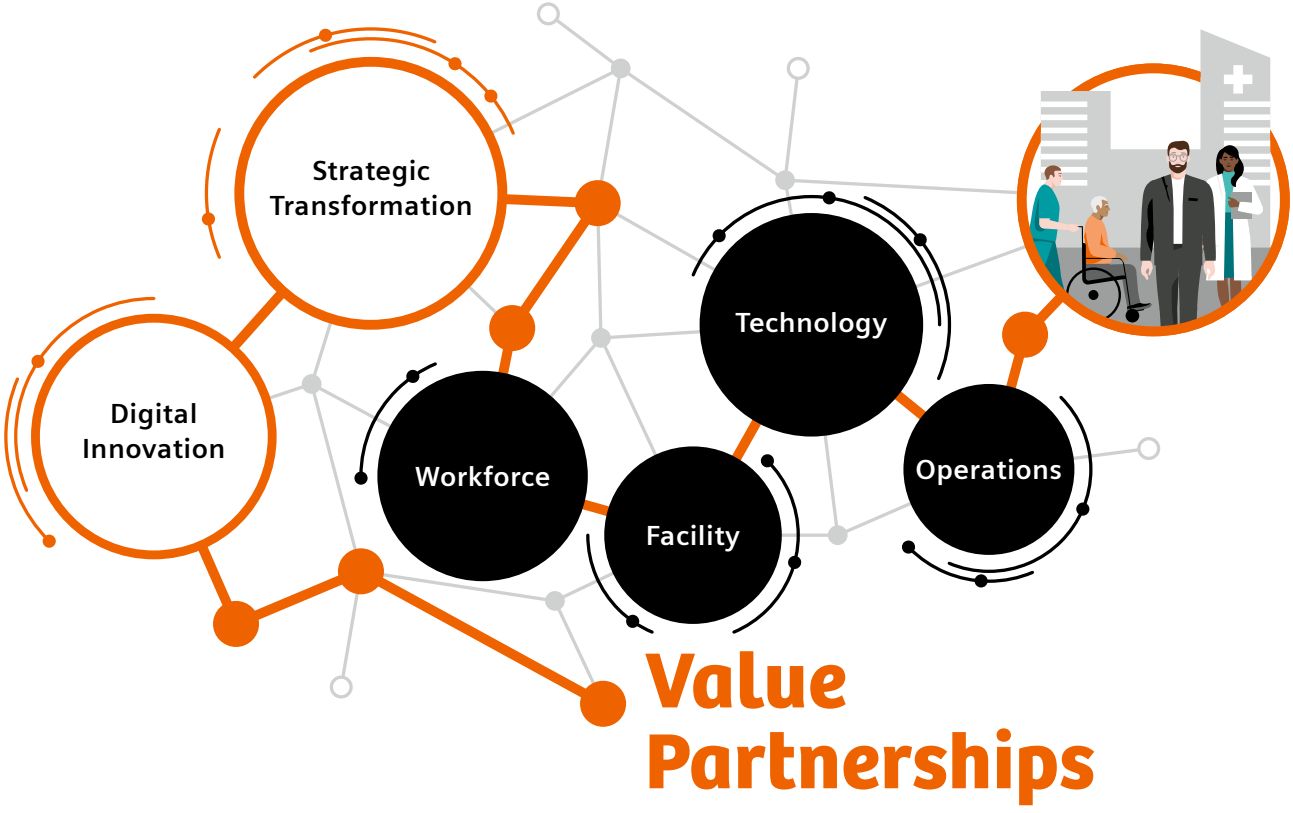
Natalia KoKorchakova-Heeb,
Global Lead for Sustainable Healthcare Infrastructure, Siemens Healthineers

"This approach to MedTech procurement in the context of a PPP — exemplified by Siemens Healthineers Value Partnerships — delivers clear benefits at every step of development. In addition, these benefits will continue to accrue for many years to come."

About Value Partnerships

Siemens Healthineers Value Partnerships are long-term, performance-oriented, collaborative engagements. We bring a combination of clinical insight, medical technology innovation, strategic vision, implementation expertise, and operational excellence to the table for you. As trusted partners, we help you formulate and achieve your strategic goals, increasing enterprise-wide value.

Value Partnerships drive value across your entire enterprise with focus on four domains: Technology, Operations, Workforce and Facility. Furthermore, together we enable breakthroughs through holistic and transformative initiatives such as Strategic Transformation and Digital Innovation.



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11) European Health Procurement Alliance

Glossary

CapEx = Capital Expenditures
MES = Managed Equipment Services
OpEx = Operating Expenditures
PPP = Public-Private Partnership
SPV = Special Purpose Vehicle
TCO = Total Cost of Ownership
TVO = Total Value of Ownership
VBP = Value-Based Procurement
VfM = Value for Money

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