

Value Based Procurement in MedTech

Building Blocks for Enabling Implementation in India

March 2022



Contents

#	Detail
1.	Executive Summary
2.	VBP as a concept
3.	VBP in the global landscape
4.	Procurement in the Indian healthcare ecosystem
5.	Challenges for implementing VBP in India
6.	Broad contours for VBP framework in India





Section 1

Executive Summary

Executive summary

Value Based Procurement (VBP) is a method in which procurement decisions are made focused on total value rather than cost. In doing this, VBP focuses on how a product or solution can best deliver desired outcomes, reduce the total cost of care, and provide long term benefits to all the stakeholders in the healthcare ecosystem, rather than focusing exclusively on initial cost, which is usually equated to price.

Standard procurement, in contrast, typically focuses on lowest cost. VBP, however, proposes to look at multiple aspects of value, instead of focusing primarily on the product's up-front cost.

VBP is enabled by agreements between manufacturers and purchasers (providers, commercial payers, governments) or even patients themselves. While these arrangements can take the form of risk sharing, which commits payers, providers, and manufacturers to share benefits and risk with the goal of providing desired clinical/health outcomes for patients while overcoming existing uncertainty about clinical or economic value. However, they can also take the form of more basic agreements that embed value-based criteria and better, transparent dialogue with industry into the bidding criteria and processes themselves. Over the years VBP has evolved globally and many countries in certain geographies have adopted the concepts of VBP for their MedTech procurement requirements.

In the Indian healthcare system, both the public and private sector have different models of MedTech procurement. In the public sector, qualification is based on technical specifications and the final decision is based on the lowest commercial quotation.

The providers in the private sector use various elements of cost benefit analysis to assess the value in MedTech procurement which currently focuses on cost saving.

VBP implementation in India faces certain challenges, such as like low awareness, high out of pocket expenses, lack of data on clinical outcomes, lack of capability in the procurement team to assess value, and the lack of incentivization for delivering the best outcomes and overall patient and user experience.

The suggested VBP framework can be used to comprehensively assess patient outcomes, stakeholder benefits, access to care, long-term relevance, and lifecycle costs. Both public or private providers should be able to customize the framework parameters and elements according to their needs.

A comprehensive approach is best advised going forward, with engagement of all key stakeholders. This would include the Government, MedTech companies, healthcare providers and the payors. Collaboration among these stakeholders is the key to successful implementation of VBP in India.

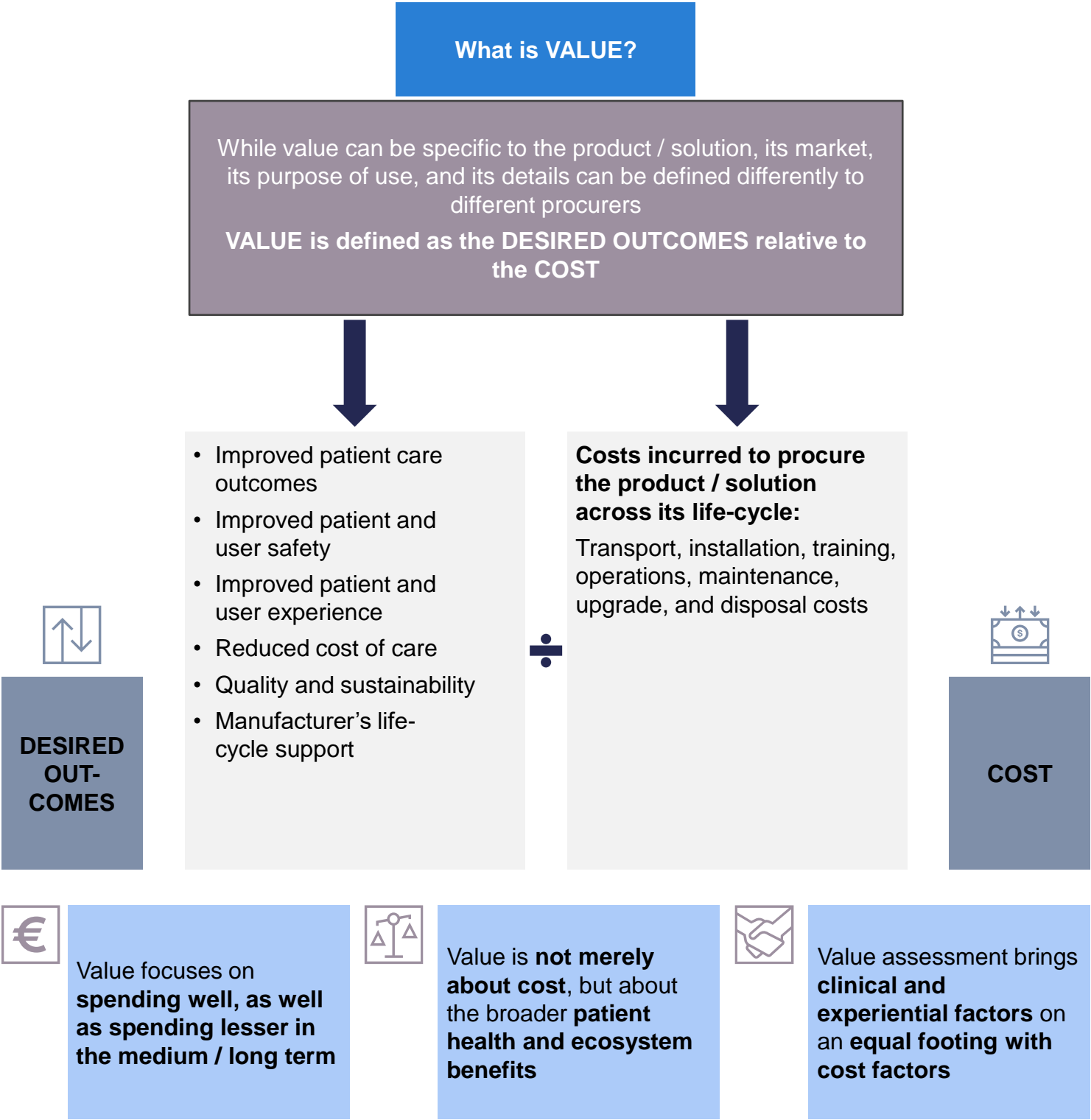




Section 2

VBP as a concept

While the definition of “value” may often be procurer specific and subjective, value can be defined as desired outcomes related to the costs incurred



Hence, the concept of “Value Based Procurement” proposes a holistic approach to procurement with an end-to-end outlook, encompassing multiple aspects

What is VALUE BASED
PROCUREMENT (VBP)?

VBP entails making purchasing decisions that consider how a product or solution can best deliver the predefined outcomes and reduce the total cost of care, rather than focusing exclusively on purchasing a specific product at the lowest possible price

Procurement perspective

Even a **product/ solution with a high initial price can result in savings** when its overall economic, clinical, social and societal context are considered



Procurement of a product

More **focus on the effect** of the **purchase** rather than the cost of the item itself – **instead of buying inputs, the focus should be on outcomes**



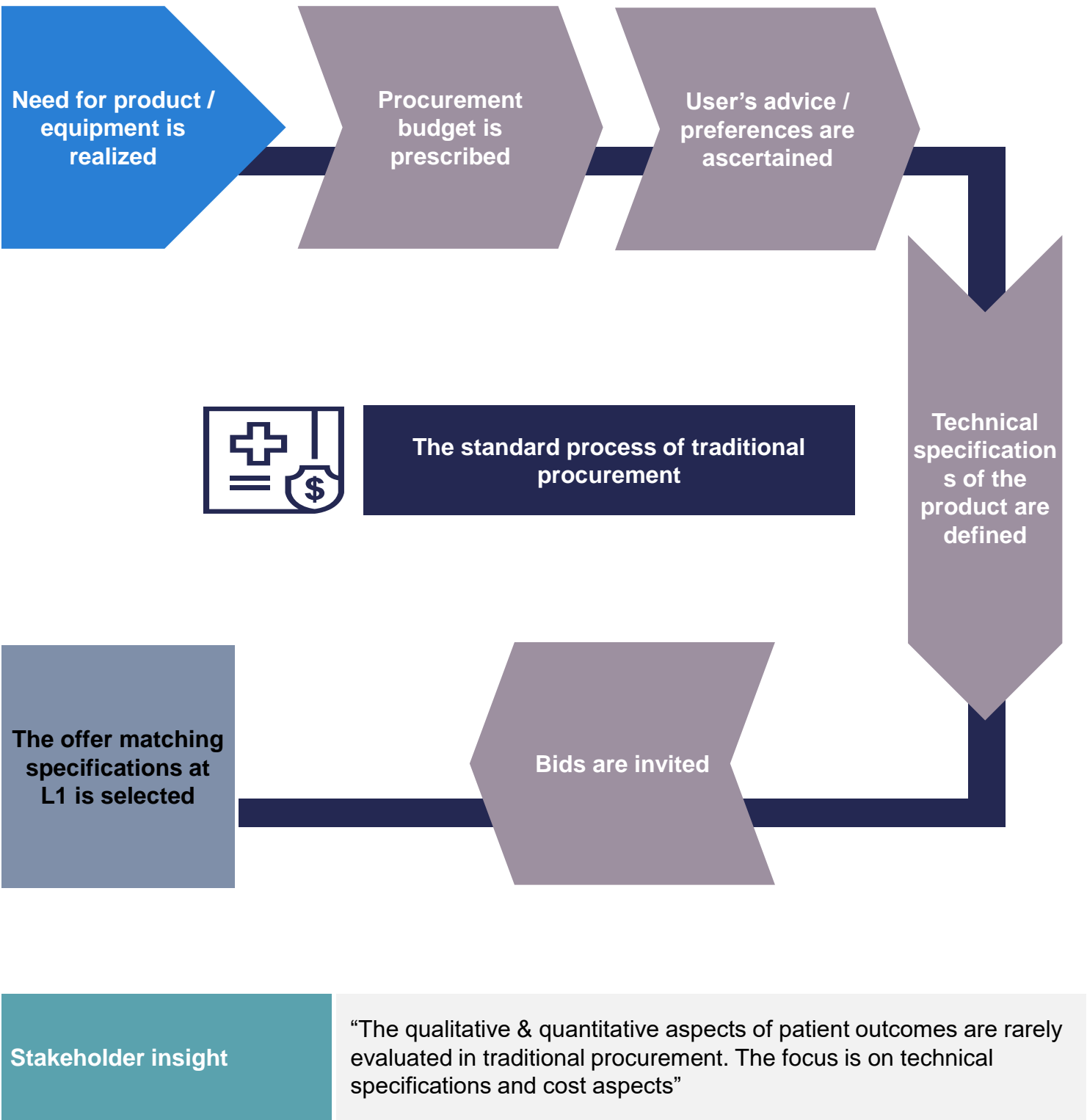
Procurement of a solution

Targeting care outcomes as the basis for awarding tenders.
Involves the **procurement of all tools and value-added services that are necessary to manage a given disease**, rather than the procurement of only one tool or one service



Sources: <https://www.advamed.org/wp-content/uploads/2021/09/Good-Practices-for-Procurement-Innovative-Medical-Technology-Barcelona.pdf>, Primary interviews

Traditionally, procurement in healthcare largely follows a standard chain of events where the lowest cost “L1” is the determining factor among competing bids



Source: Primary interviews; *This process is commonly followed for public procurement in most countries

Although standard L1 procurement is the prevalent model, it has inherent limitations in terms of the inputs, the processes, as well as the outputs

Escalating costs



According to Eurostat, **health care delivery costs are rising disproportionately** across the European Union and make up **~70% of the total health care spend** as seen over a ten-year period

Silos in the ecosystem



Procurement today **does not** necessarily **consider patient outcomes, comprehensive stakeholder involvement** and **other costs** outside the procurement budget

Shortsighted procurement perspectives



The **focus on lowest price-based** procurement **leads to higher total costs** due to **low quality, breakdowns and lack of user friendliness**

Variability in patient outcomes









Even highly developed Organisation for Economic Co-operation and Development countries show a high level of variations in routine treatment modalities like:

- **~36x variation** in capsule complications after cataract surgery in a Swedish hospital
- **18x variation** in reoperation rates after hip surgery in a German hospital

Through its salient features, VBP proposes to address these limitations

Sources: Secondary research and primary interviews

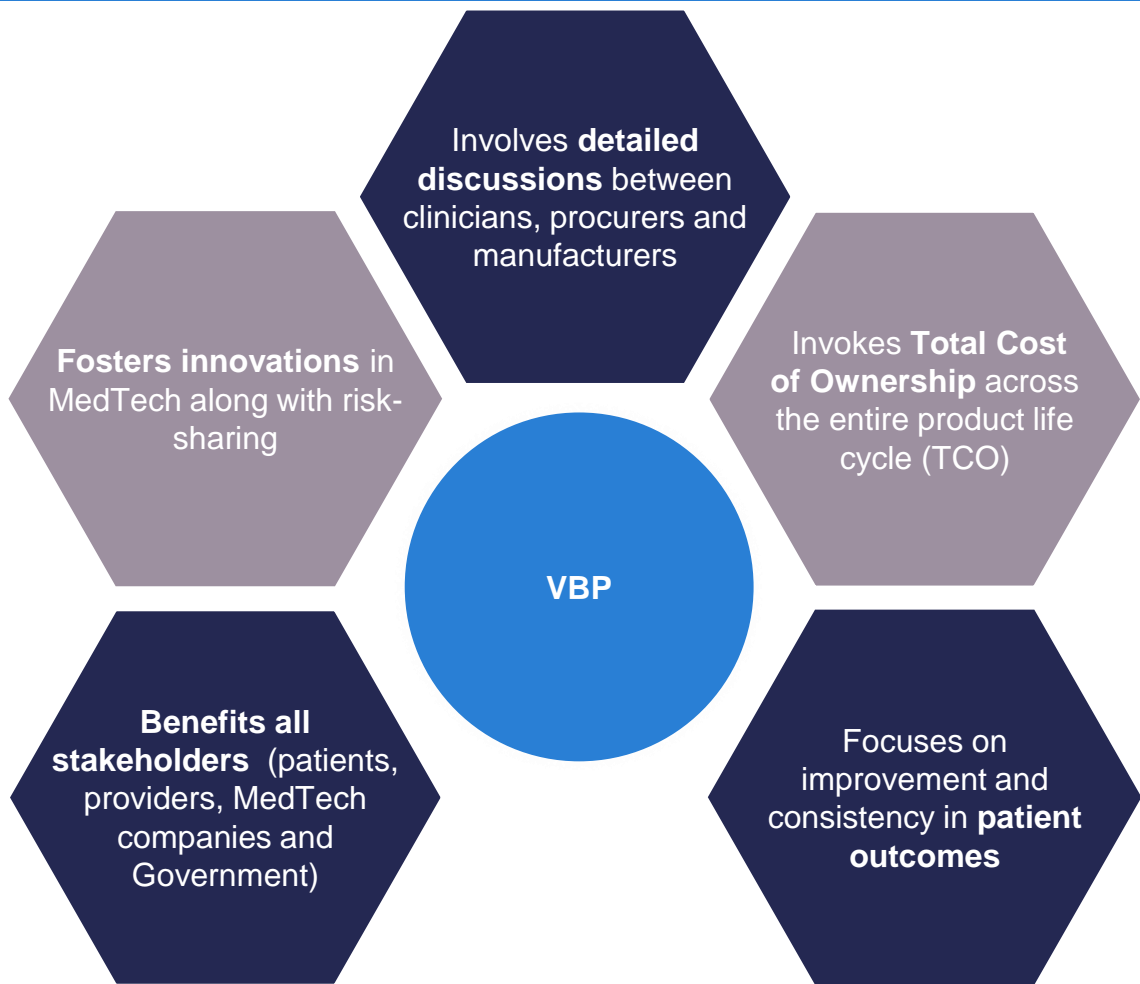
VBP, however, looks at multiple aspects of value such as patient outcomes, stakeholder benefits, sustainability, and total cost of ownership (TCO)

	Standard Procurement	Value Based Procurement
Perspective 	<ul style="list-style-type: none"> • Direct attention on the product/service itself • Specifications of the product/service 	<ul style="list-style-type: none"> • Focus on enhanced desired outcomes • End to end life-cycle of the product/service
Bid evaluation 	<ul style="list-style-type: none"> • Lowest Price (L1) is the main/major criterion 	<ul style="list-style-type: none"> • Looks not only at commercials, but also at qualitative aspects and outcome impact of the product/service
Influencers 	<ul style="list-style-type: none"> • Physicians: opinion driven • Procurement team: heavy bargaining and risk spreading, ensuring lowest cost 	<ul style="list-style-type: none"> • Data and Outcome driven. Outcomes relevant to all key stakeholders-providers (including physicians, nurses/paramedics), patients, payors • All relevant stakeholder capabilities are leveraged
Cost weightage 	<ul style="list-style-type: none"> • Reducing the (up-front) purchase price • Partial utilization of the planned budget 	<ul style="list-style-type: none"> • Management of total cost of ownership • Optimal utilization of planned budget
Purchase strategy 	<ul style="list-style-type: none"> • Purchase strategy is 'minimizing costs' with little or consideration of benefits or outcomes 	<ul style="list-style-type: none"> • Alignment with healthcare providers objective and pain points • Sustained cost benefits across the life-cycle
Output 	<ul style="list-style-type: none"> • The isolated product at minimum cost isolated product at minimum cost, not factoring in already invested resources (in case of capital equipment's) 	<ul style="list-style-type: none"> • A comprehensive solution that improves outcomes • Management of total cost of ownership and care delivery

Sources: <https://www.sailab.fi/wp-content/uploads/2021/01/sailab-finland-value-based-procurement-in-europe-16feb2021-hbax.pdf>

VBP looks at the entire chain of procurement operations from procurement planning to product disposal and allows involvement of all relevant stakeholders

The practice of Value Based Procurement (VBP) evaluates potential new products, services, and solutions to maximize the overall value for money, rather than focusing only on the lowest purchase price

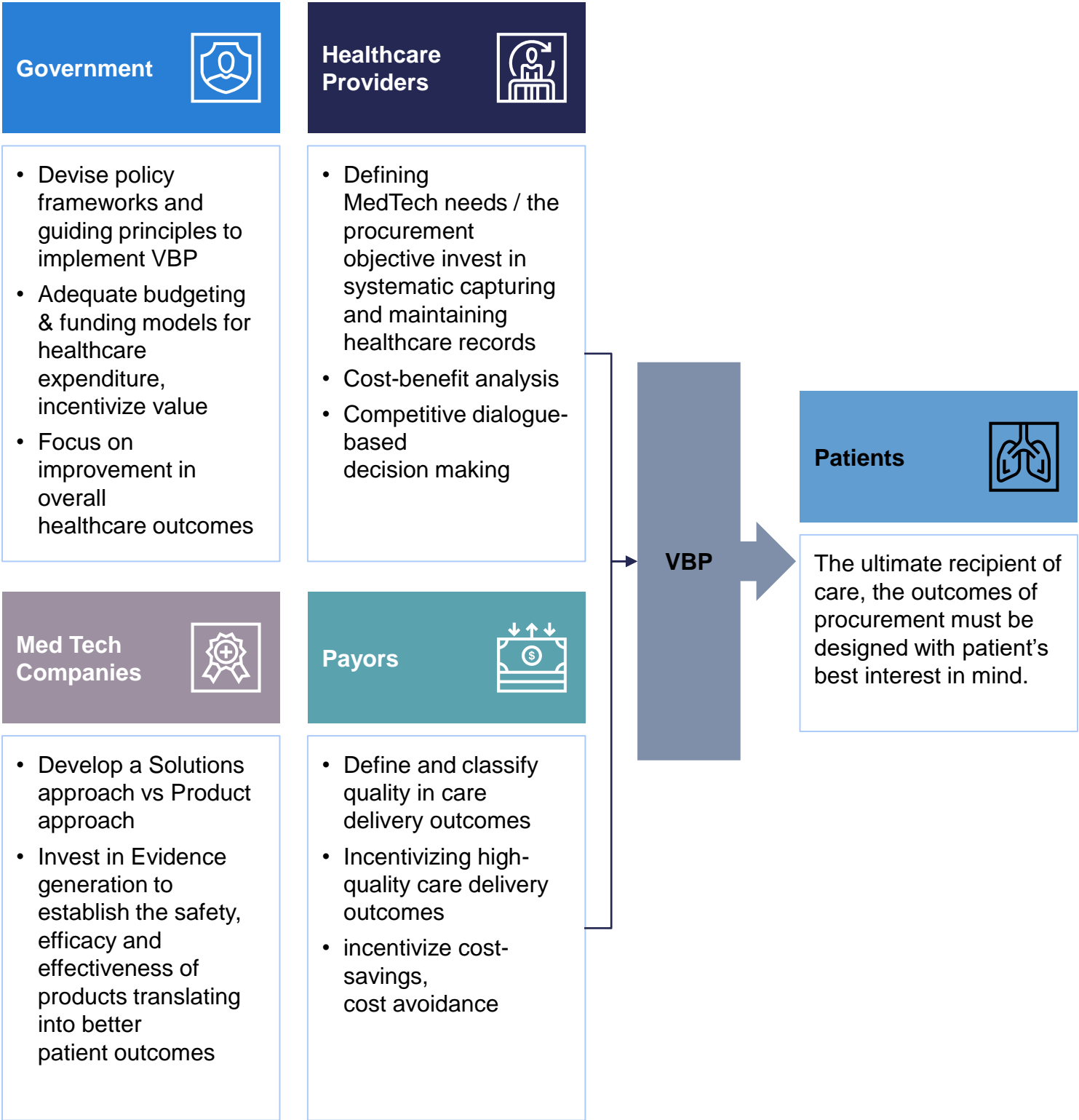


VBP offers long term clinical and financial benefits from a more holistic perspective;

VBP includes transparent, relevant, and objective measures that incorporate the right set of selection and awarding criteria, and consider the needs of patients, HCPs, and system managers. It also reflects realistic evidence requirements.

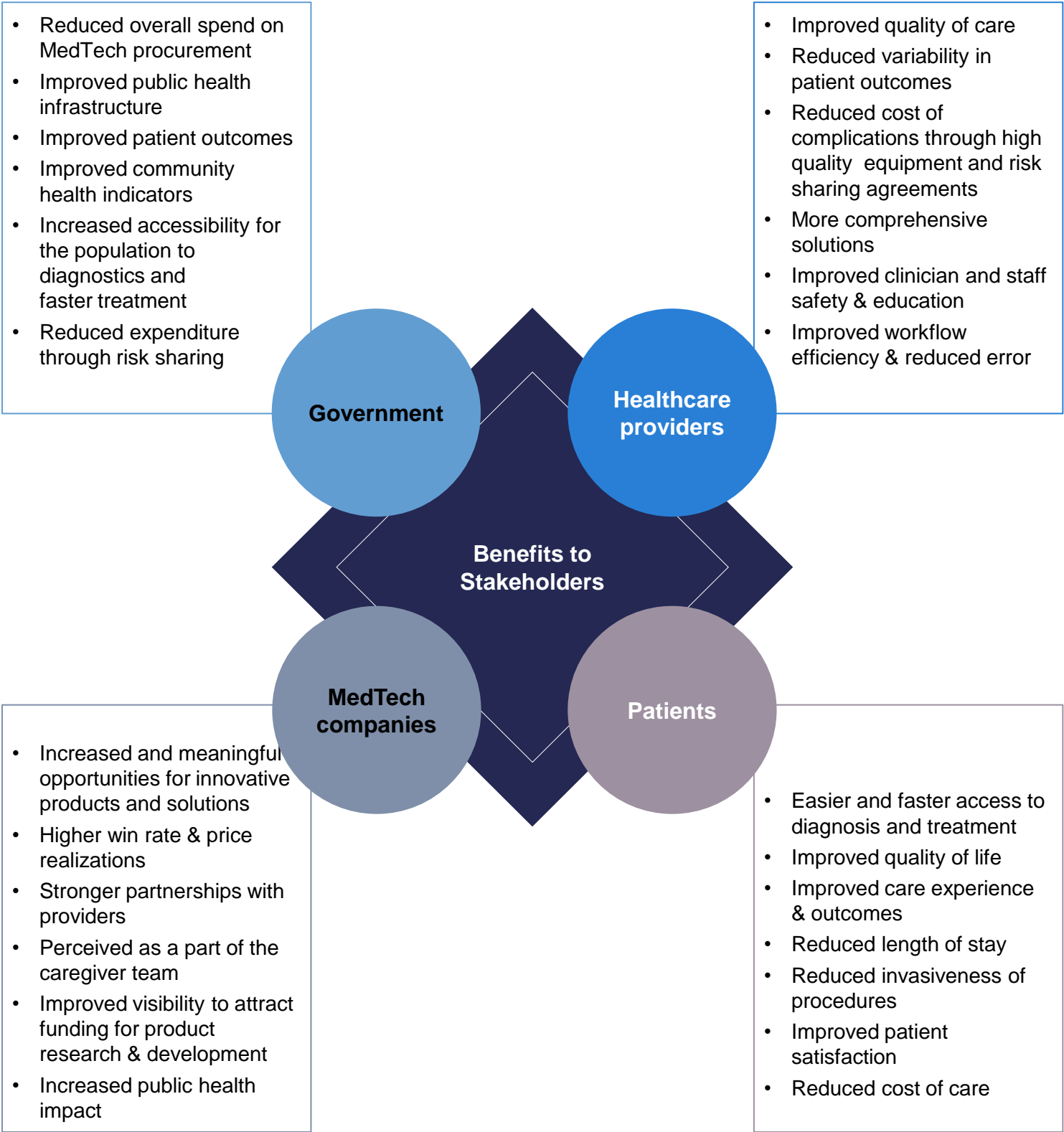
Sources: Secondary research, Primary interviews

The Government (regulators), healthcare providers (procurers) as well the MedTech companies (manufacturers) have vital roles to play in VBP implementation to ultimately benefit patient care



Sources: Secondary research, Primary interviews

The stakeholders involved in the VBP process have the opportunity of reaping relevant benefits in terms of desired outcomes, this in turn facilitates a healthier healthcare ecosystem

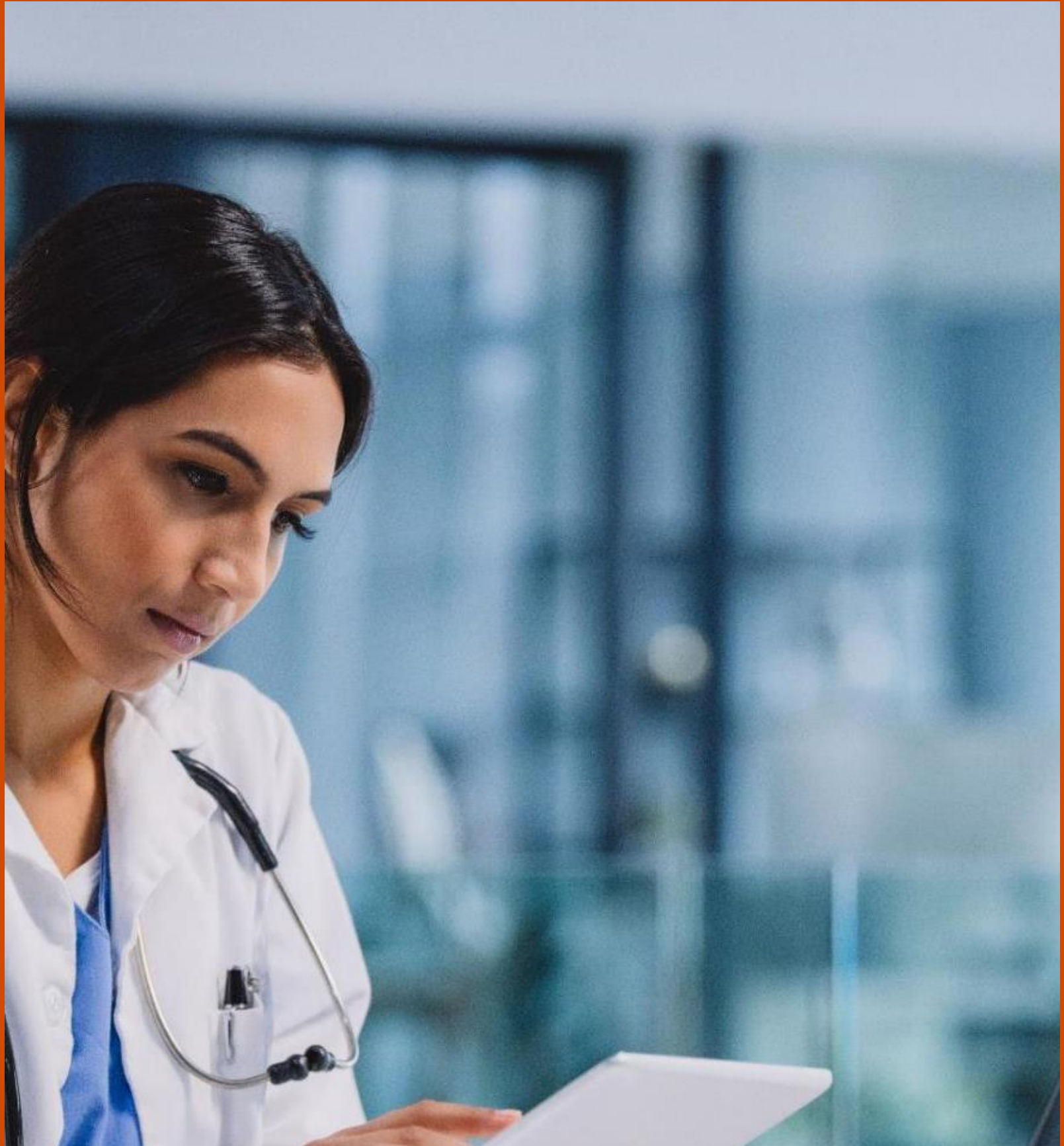


Sources: Secondary research, Primary interviews



Section 3

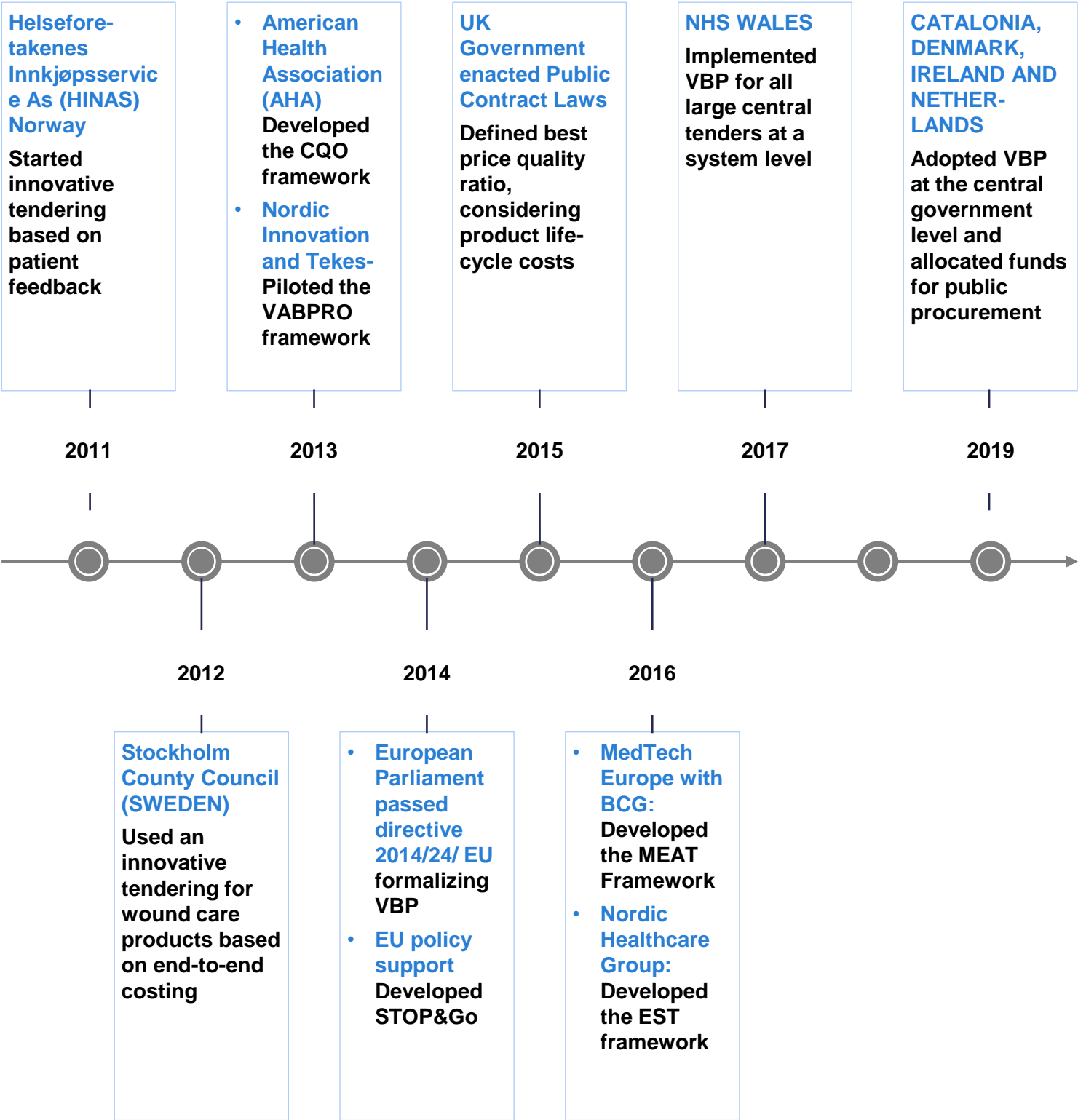
VBP in the global landscape



Advent and extent of VBP implementation globally

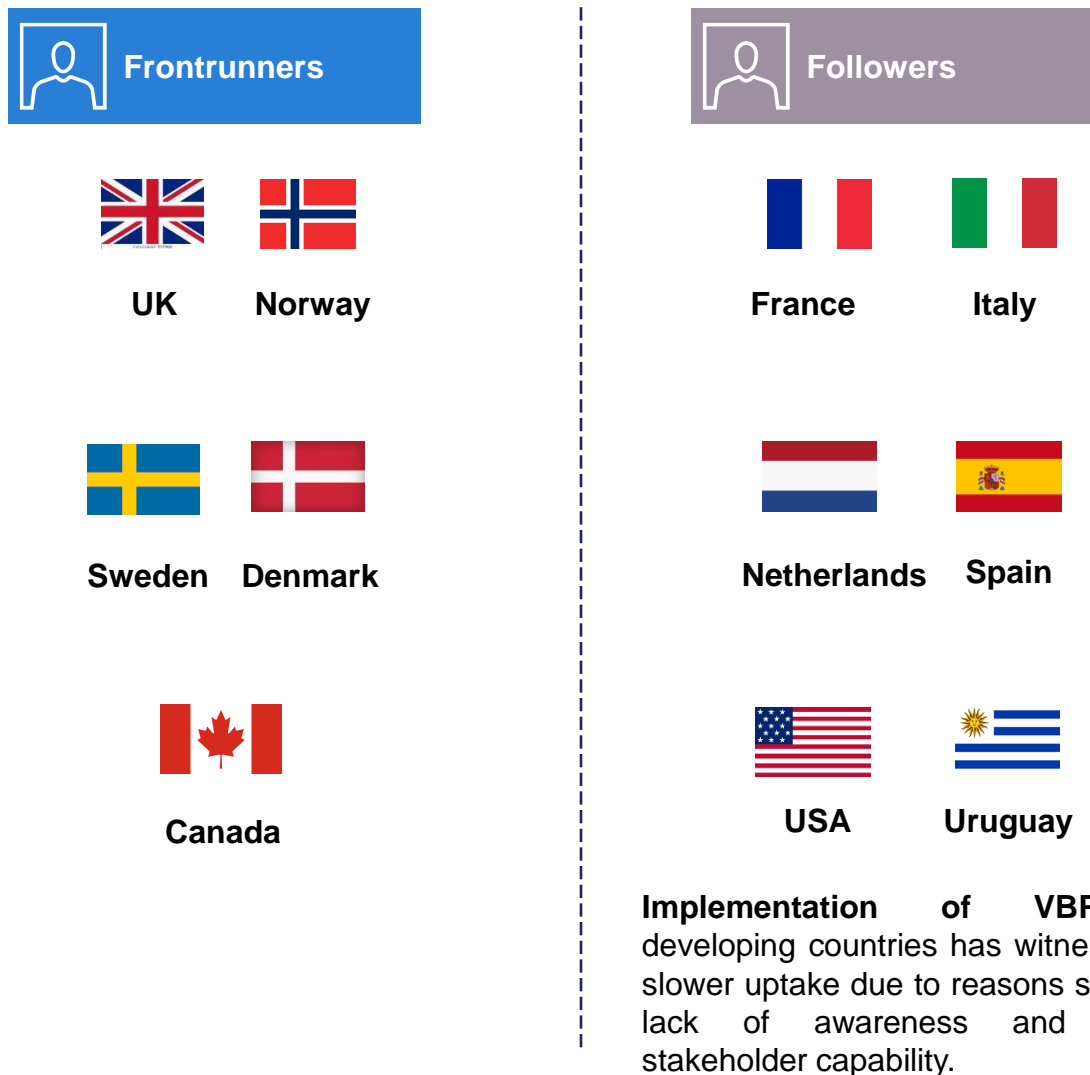


Over time, VBP has seen an uptake in multiple countries...



Sources: Secondary research

...though the intensity has varied across geographies



- Basic versions of innovative procurement started in ~2011 in small pockets around Europe
- The American Health Association (AHA) developed the Cost, Quality and Outcomes (CQO) framework for VBP in 2013
- The EU directive in 2014 on VBP was a defining milestone which proposed the formal implementation of VBP in public procurement by 2016. The actual implementation began in 2017-2018

Sources: Secondary research

The EU directive on MedTech procurement in 2014 was a major impetus as it proposed formalized implementation of VBP in public procurement at the national level

EU directive: Article 67
Subsection 3, Award of the Contract
Article 67, Contract-Award Criteria

EU directive: Article 68
Subsection 3, Award of the Contract
Article 68, Life-cycle Costing

The **Most Economically Advantageous Tender (MEAT)** from the point of view of the contracting authority shall be identified on the basis of price or cost, using a **cost-effectiveness approach**, such as **life-cycle costing** in accordance with Article 68, and may include the **best price-quality ratio**, which shall be assessed on the basis of **criteria**, including **qualitative, environmental, and/or social aspects**, linked to the subject matter of the public contract in question

Life cycle costing shall to the extent relevant cover parts, or all of the following **costs over the life cycle** of a product, service, or works:

- Costs related to **acquisition**
- **Costs of use**, such as consumption of **energy and other resources**
- **Maintenance** costs
- **End-of-life** costs
- Costs imputed to **environmental externalities**

Public bodies can procure based on value in terms of qualitative and financial benefits to all stakeholders, not just on price

Procurers can ask MedTech players to provide life-cycle costing calculations for making an objective assessment


Additionally, the directive mandated that all member states make VBP into a national law by 2016

Sources: Secondary research



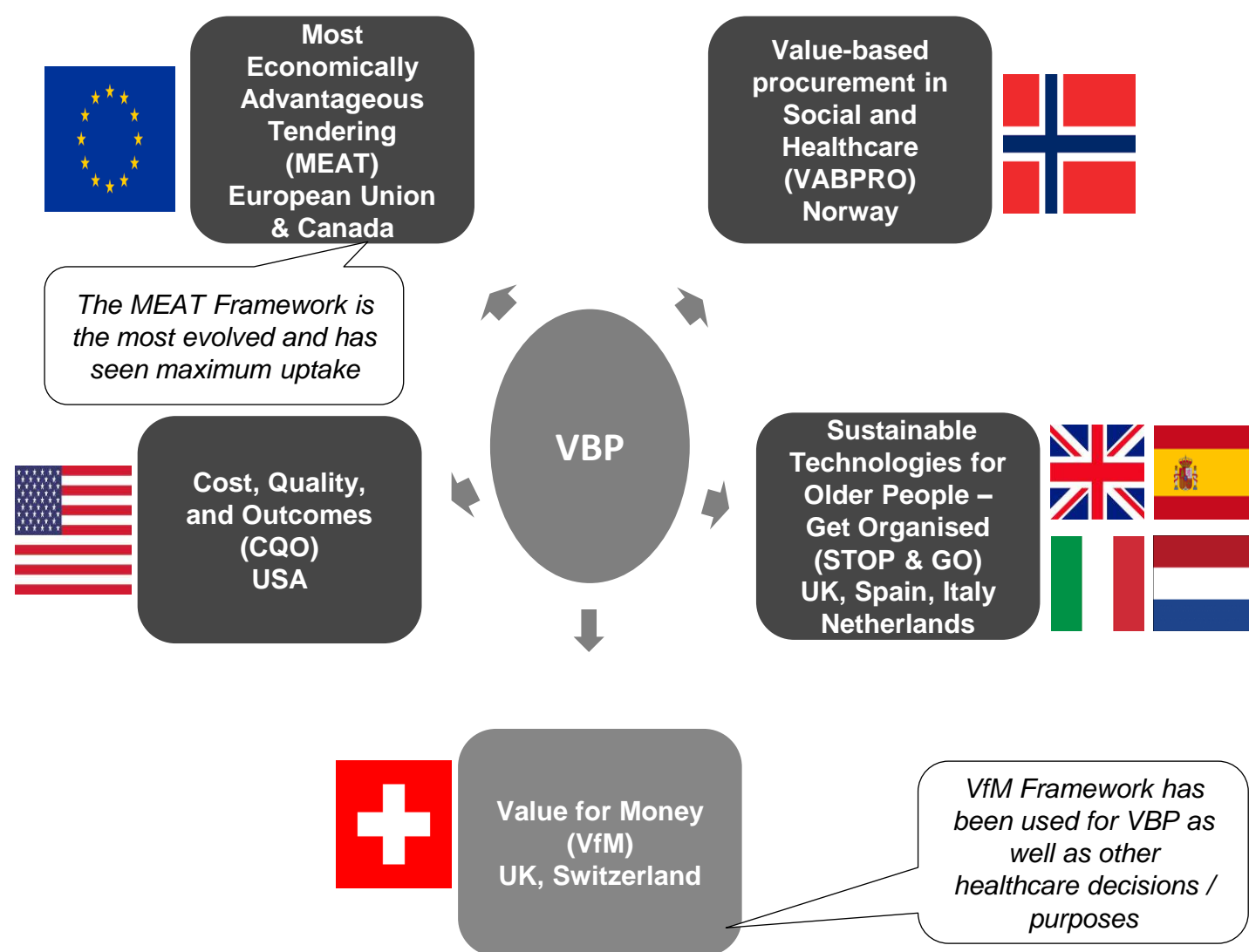
Typical process and frameworks for
VBP implementation

The following are the broad steps in the VBP process

1	Defining desired outcomes and evaluation criteria in the tender	2	Competitive dialogue and shortlisting the closest matches	3	Cost & benefit analysis through VBP framework	4	Awarding the tender & maximizing the value proposition mutually
<ul style="list-style-type: none"> • Review of current and historic patient, user and procurer outcomes with the current item • Documentation of desired patient outcomes and outcome-based specifications • Documentation of technical specifications • Collaborative discussion between key stakeholders: users (clinicians, nurses etc.), • Define the product/ solution evaluation and vendor selection criteria comprehensively in the tender document • Float the tender in the public domain 		<ul style="list-style-type: none"> • Review of available offerings including innovations • Review of research-based outcomes data on the offerings • Competitive dialogue with MedTech companies based on desired outcomes • Analysis of proposed patient, user and ecosystem benefits including return on investment • Invite bids from the shortlisted vendors that match the desired outcomes • Pilot usage of shortlisted products / solutions with documentation of patient, user and ecosystem outcomes 		<p>VBP framework typically consists of the following parameters:</p> <p>Cost parameters</p> <ul style="list-style-type: none"> • Analysis of Total Cost Of Ownership (TCO) for the shortlisted offerings <p>Outcome parameters</p> <ul style="list-style-type: none"> • Evidence of outcomes • Risk-sharing • Safety/convenience for patients and users • Tech support and operational maintenance for providers • Innovativeness • Healthcare ecosystem benefits • Sustainability & environmental impact <p>Select the vendor / offering with the most value through Outcome vs Cost</p>		<ul style="list-style-type: none"> • Rediscuss critical aspects of the tender with the winning bidder to maximize value including outcomes and user satisfaction • Award the tender • Jointly plan further steps for the product / solution lifecycle 	

Sources: Primary interviews, Secondary research

Multiple Value Based Procurement frameworks have been used in MedTech procurement globally



Sources: Secondary research

Cost, Quality & Outcomes framework (CQO)



Parameter	Details
Inception	January 2013
Governance	Association for Health Care Resource & Materials Management (AHRMM) of the American Hospital Association
Location	Major focus on United States of America
Salient features	<p>The AHRMM Cost, Quality, and Outcomes (CQO) refers to the intersection of cost, quality and outcomes and a more holistic view of the correlation between:</p> <ul style="list-style-type: none"> • Cost: All costs associated with delivering patient care and supporting the care environment especially supply chain costs • Quality: Patient-centered care aimed at achieving the best possible clinical outcomes • Outcomes: Financial reimbursement driven by outstanding clinical care at the appropriate costs as instead of viewing each independently

Value Based Procurement in Social and Healthcare (VABPRO)



Parameter	Details
Inception	Between March 2013 and December 2014
Governance	The project was funded by Nordic Innovation and Tekes, the Finnish Funding Agency for Technology and Innovation
Location	Focus on Norway, Denmark and Finland
Salient features	<p>VABPRO seeks to promote value overlapping with outcome through the following:</p> <ul style="list-style-type: none"> • An innovative procurement process design • Considering both the manufacturer perspective as well as the user/patient perspective • A dialogue with users/patients on their needs and requirements to reach a thorough understanding of their perception of value • User driven innovation methodology

Sources: <https://www.ahrmm.org/cqo-movement/what-is-cqo>, : https://nhg.fi/vabpro/20150215_VABPRO_presentation.pdf

Sources: <https://www.ahrmm.org/cqo-movement/what-is-cqo>

Sustainable Technologies for Older People –Get Organized (STOPandGO)



Parameter	Details
Inception	Launched in April 2014 and was under implementation for four years
Governance	A Public Procurement of Innovative Solutions pilot project funded by the Information and Communication Technologies Policy Support Programme as part of the Competitiveness and Innovation Framework Programme of the EU
Location	Focus on 11 geographies in four countries (Italy, Spain, UK, and the Netherlands) with a budget of 17 million euros
Salient features	<p>A service deployment project with the following features:</p> <ul style="list-style-type: none"> • Focused on procurement as a solution • Redesigned the model of care to include technology as an integral part of the service and looked at integration and the simultaneous improvement of models of care and cure rather than utilizing specific products or technological components • Focused on providing innovative solutions for elderly care

Most Economically Advantageous Tendering (MEAT)

MEAT Framework is the most recent tool. The weightage for parameters in the framework is flexible and is left for providers and procurers to deliberate and define



Parameter	Details
Inception	March 2016
Governance	MedTech Europe, in partnership with The Boston Consulting Group (BCG) and procurement experts
Location	Currently EU
Salient features	<p>The Most Economically Advantageous Tender (MEAT) criterion enables the contracting authority to take account of criteria that reflect qualitative, technical and sustainable aspects of the tender submission as well as price through a three-layered assessment framework:</p> <ul style="list-style-type: none"> • Core Layer: Patient outcomes over costs (looks for improved outcomes at reduced costs) • 2nd Layer: Other benefits for key stakeholders (like patients, hospital, staff and the ecosystem) • 3rd Layer: Broader impact on society (Sustainability, socioeconomic impact and innovation)

Sources: <https://www.ingentaconnect.com/contentone/sil/impact/2017/00002017/00000006/art00034?crawler=true&mimetype=application/pdf>, <https://www.sailab.fi/wp-content/uploads/2021/01/sailab-finland-value-based-procurement-in-europe-16feb2021-hbax.pdf>

Value for Money (VfM)



Department
for International
Development









THE ACCESS AND
DELIVERY PARTNERSHIP

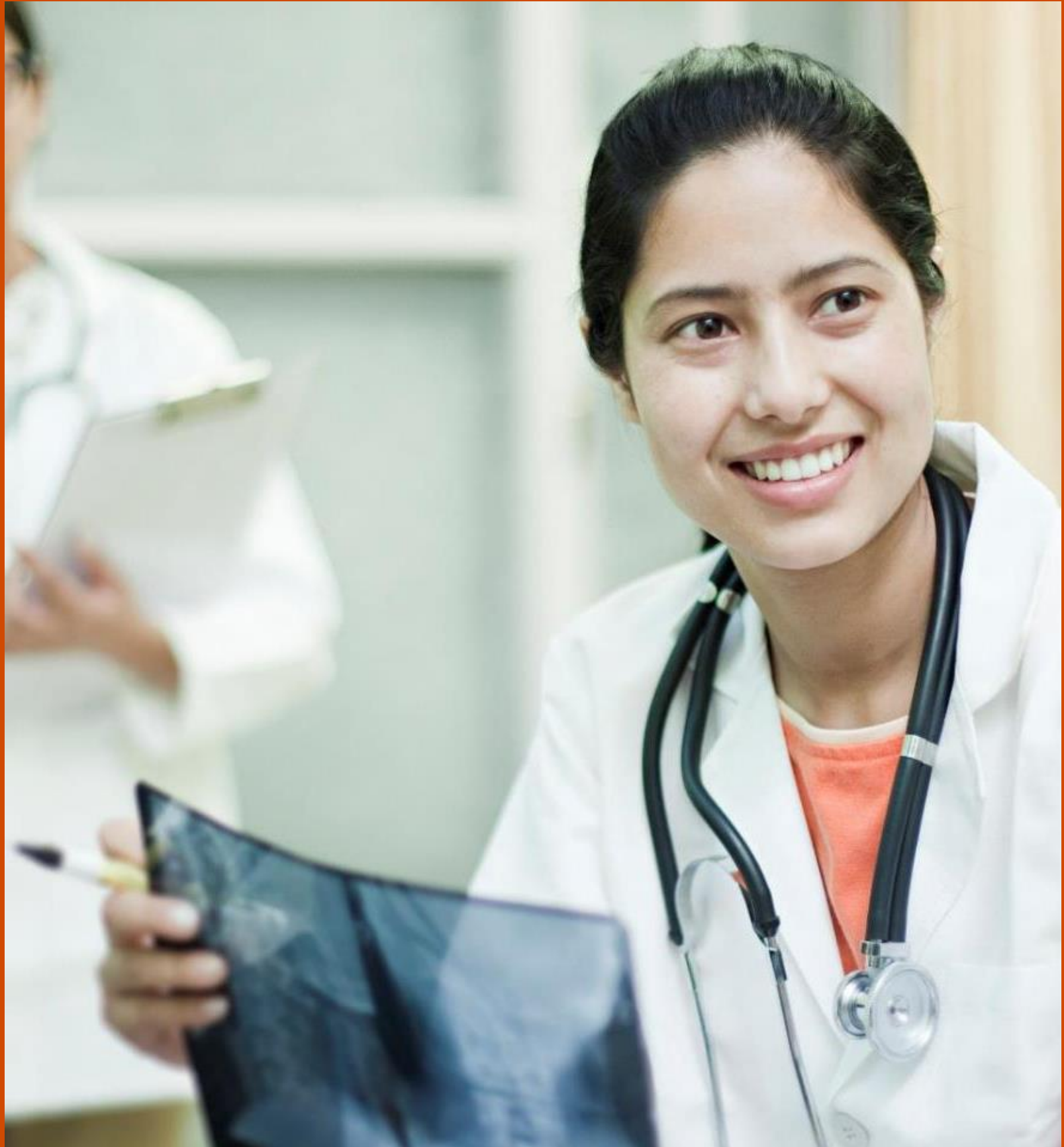
Parameter	Details
Inception	July 2011, reformed in November 2019 and June 2020
Governance	Originally by the UK Department for International Development; further development by “The Global Fund Geneva” Switzerland
Location	Ethiopia, Malawi, Tanzania, Zimbabwe, Kenya, Sudan, Thailand, and other developing countries
Salient features	<p>VfM is a concept that defines how to maximize and sustain equitable and quality health outputs, outcomes, and impact for the given level of resources. VFM evaluation framework can be subjective; however, it typically considers five key elements.</p> <ul style="list-style-type: none"> • Economy: Does the equipment provide the required health services at the lowest TCO? • Effectiveness: Can the equipment effectively contribute to better health outcomes? • Efficiency: Does the equipment / service model maximize patient, clinician, or health system benefits relative to equipment or service alternatives? • Equity: Does the equipment support the health needs of all populations? • Sustainability: Can a health facility, program, or system maintain the equipment / service model over the long-term?

Sources: Value-based procurement of medical equipment, The Access and Delivery Partnership (ADP), June 2020;
https://www.theglobalfund.org/media/8596/core_valueformoney_technicalbrief_en.pdf?u=637169196780000000
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/49551/DFID-approach-value-money.pdf

While all frameworks focus on evaluating outcomes in relation to costs, the relevant parameters and their importance vary

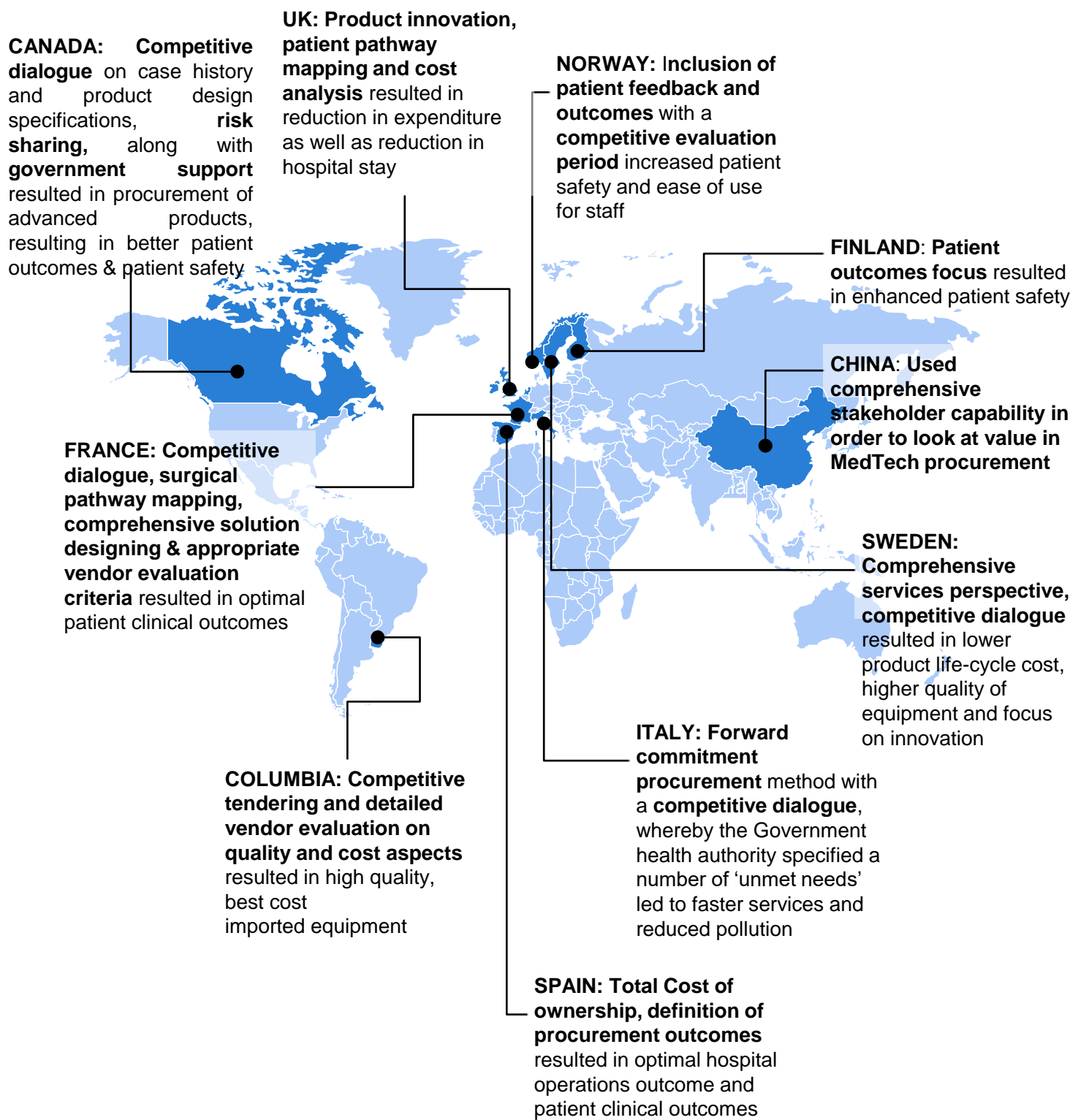
	STOP&GO	VABPRO	CQO	VFM	MEAT
					
Assessment parameters 	Evaluation of <ul style="list-style-type: none"> • Patient’s clinical outcomes • Performance level of the technology used • Population impacted 	Overlapping factors between <ul style="list-style-type: none"> • Outcomes (patient, user, commissioner) and • Value (individual and subjective value) resulting in a win-win for the payer, provider, and patient 	Evaluation of <ul style="list-style-type: none"> • TCO—across the product life-cycle, e.g., installation, maintenance , disposal costs etc. • Product quality and patient outcomes rating against alternatives 	Evaluation of <ul style="list-style-type: none"> • Overall costs • Health outcomes • Impact on all directly related stakeholders • Societal impact <p>Assessment is done using the following criteria:</p> <ul style="list-style-type: none"> • Economy • Effectiveness • Efficiency • Equity • Sustainability 	Sequential evaluation of <ul style="list-style-type: none"> • Patient’s clinical outcomes divided by the TCO • Patient and user safety and experience, hospital and ecosystem KPI improvement • Innovation, sustainability, and socio-economic impact

Sources: Secondary research



Global case studies on VBP implementation

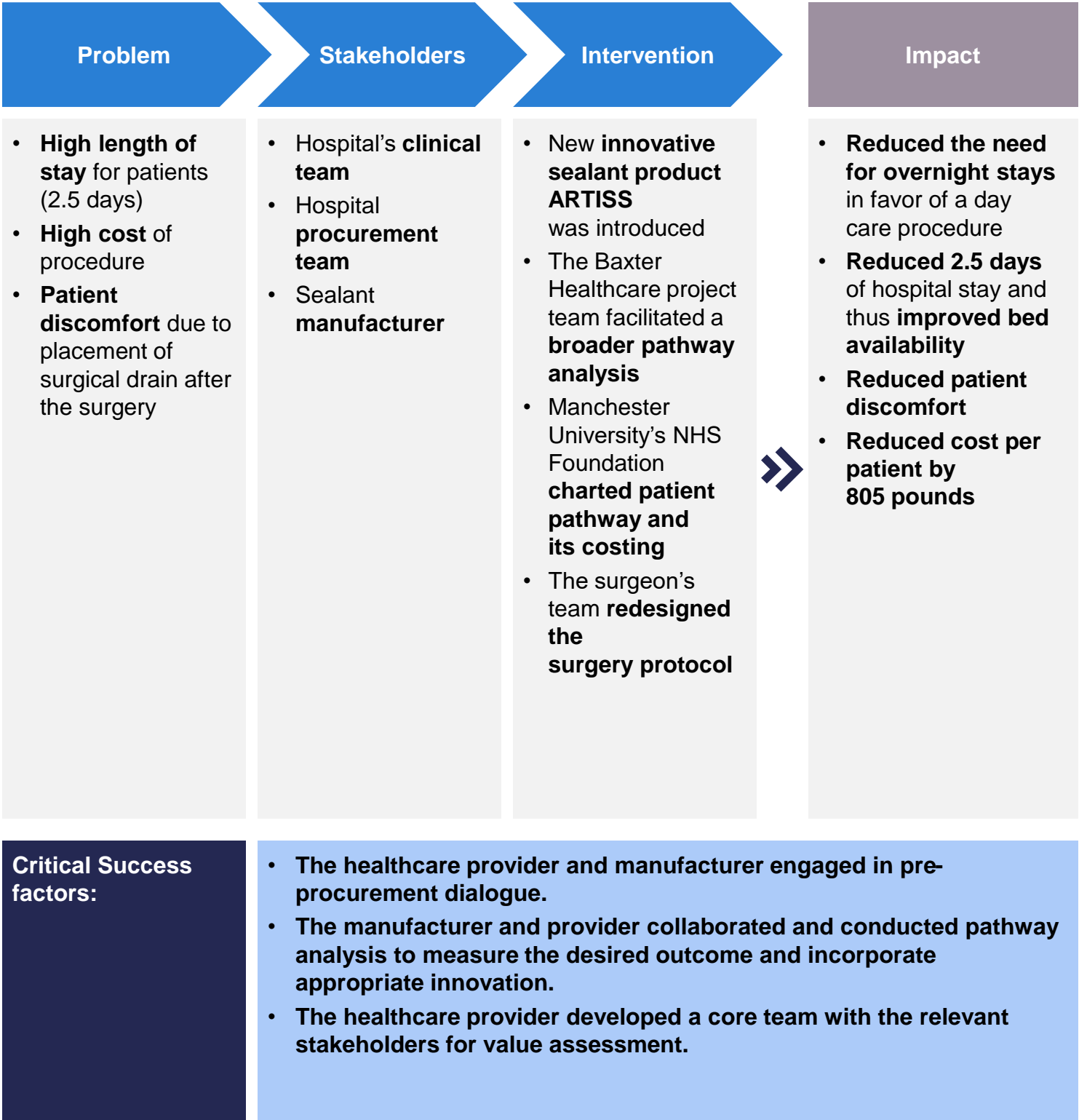
Concepts of VBP have been implemented with varying intensities across different geographies



Sources: Secondary research

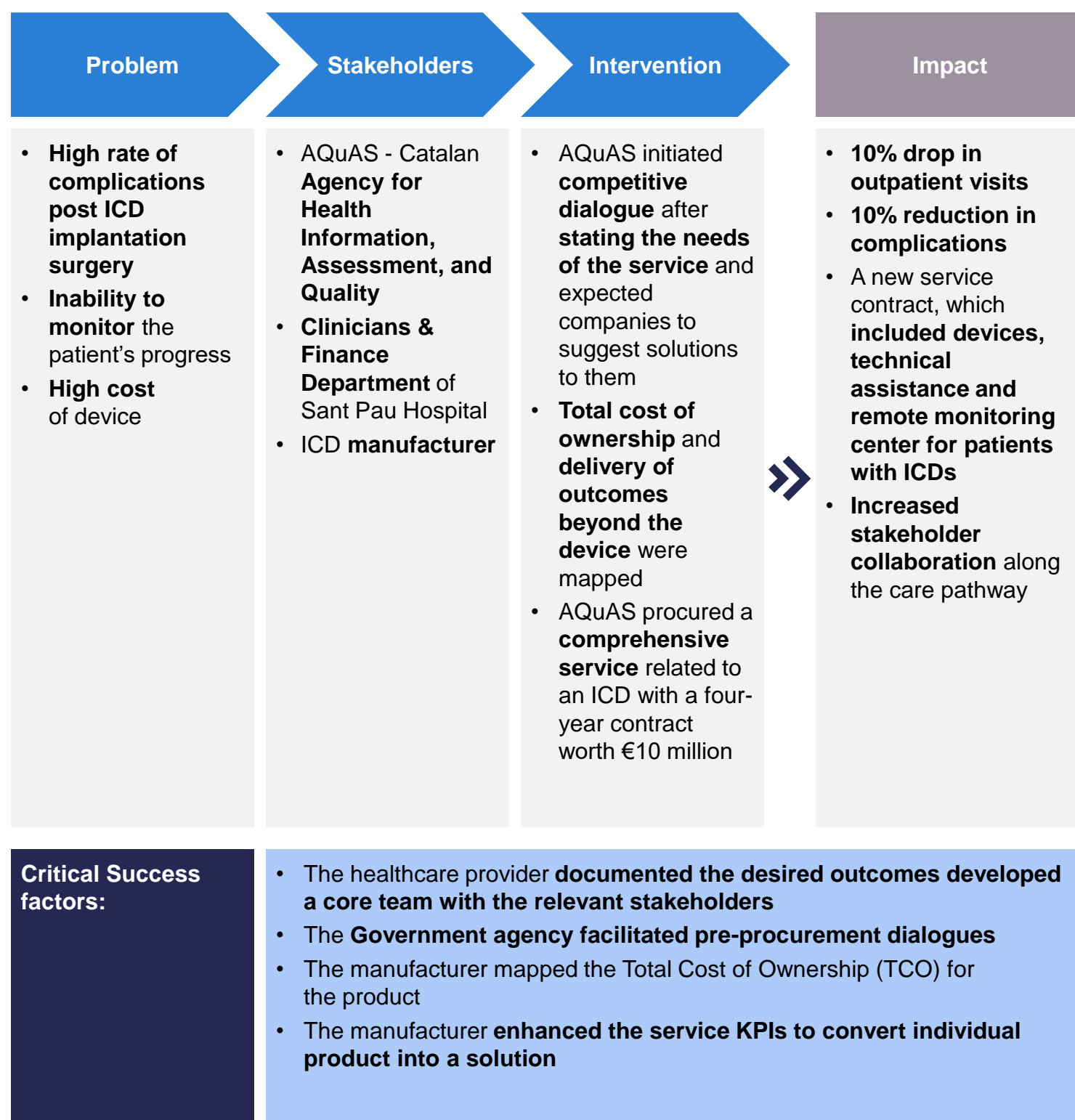
Case Study 1: VBP Implementation in United Kingdom

Innovative solution reduced the cost and length of stay in parotidectomy surgery



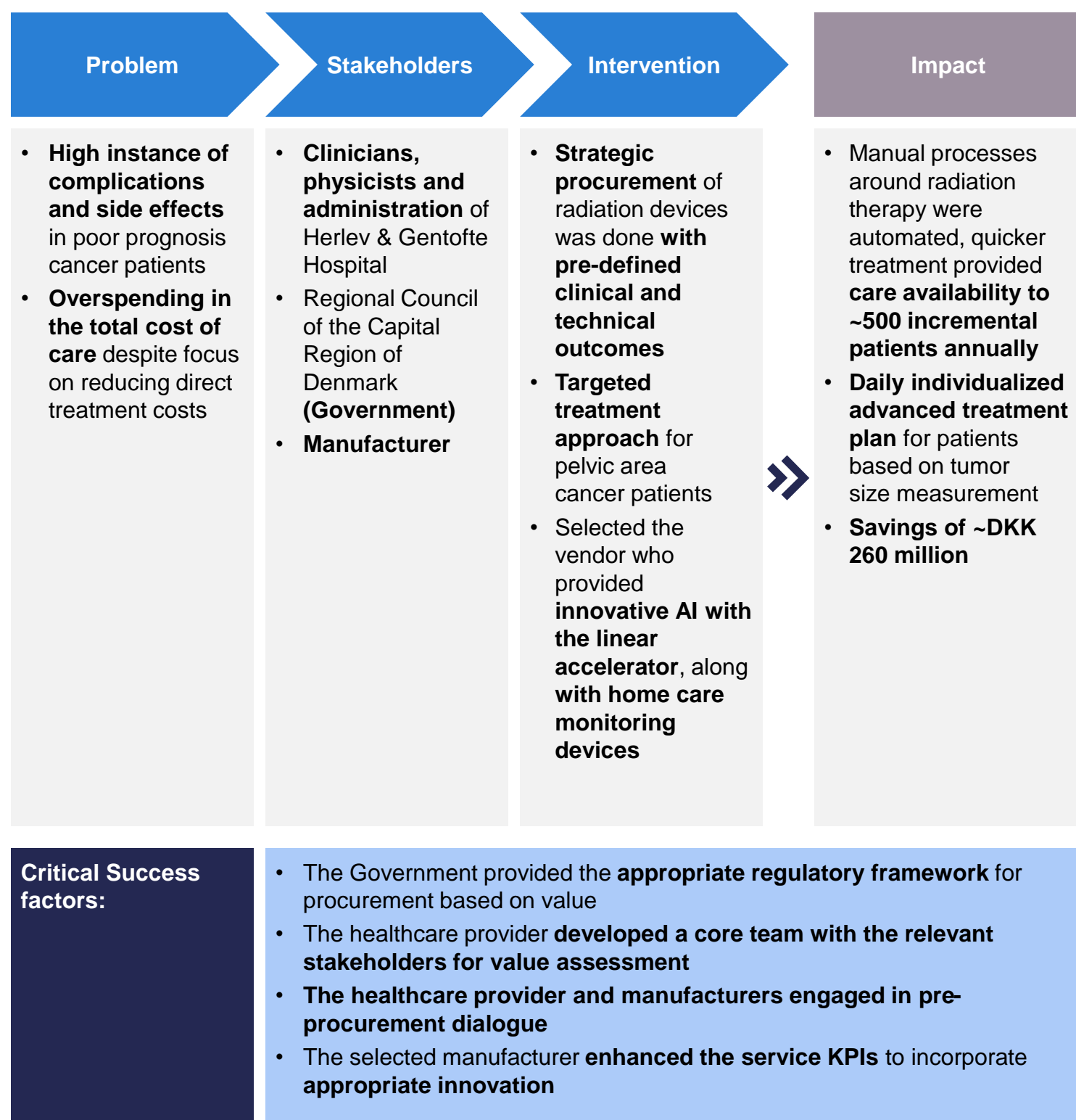
Sources: <https://www.supplychain.nhs.uk/news-article/collaborative-working-reduces-overnight-stays-for-parotid-surgeries-in-value-based-procurement-pilot/>

Case Study 2: VBP Implementation in Catalonia – Assisted in improving cost efficiency for Implantable Cardioverter Defibrillators (ICD device)



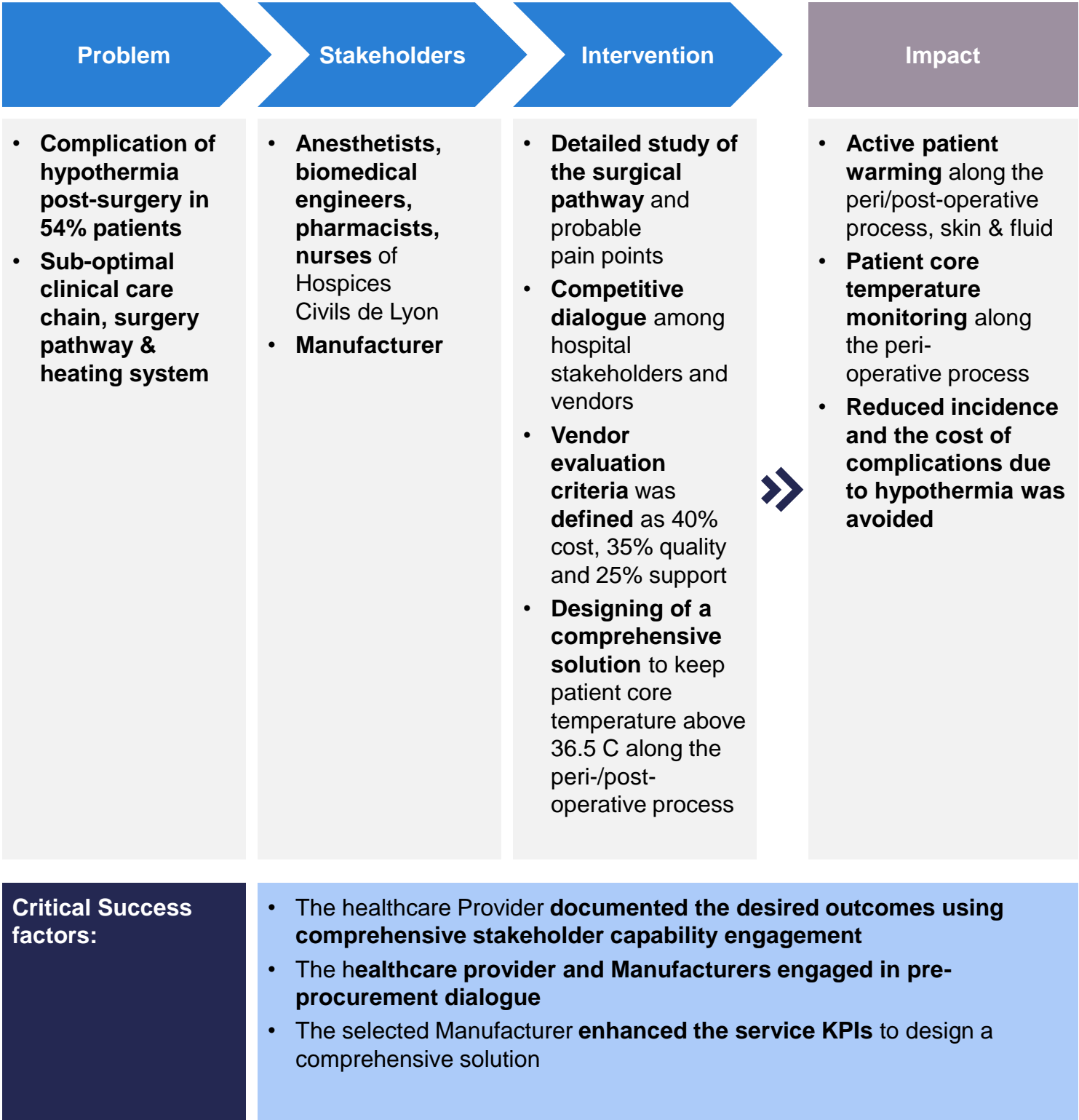
Sources: <https://magnify.partners/wp-content/uploads/2020/06/The-European-public-procurement-opportunity-Delivering-value-in-medtech-final.pdf>

Case Study 3: VBP implementation in Denmark – *Helped in higher throughput & savings by using Artificial intelligence (AI) for providing optimal radiation therapy to pelvic area cancer patients*

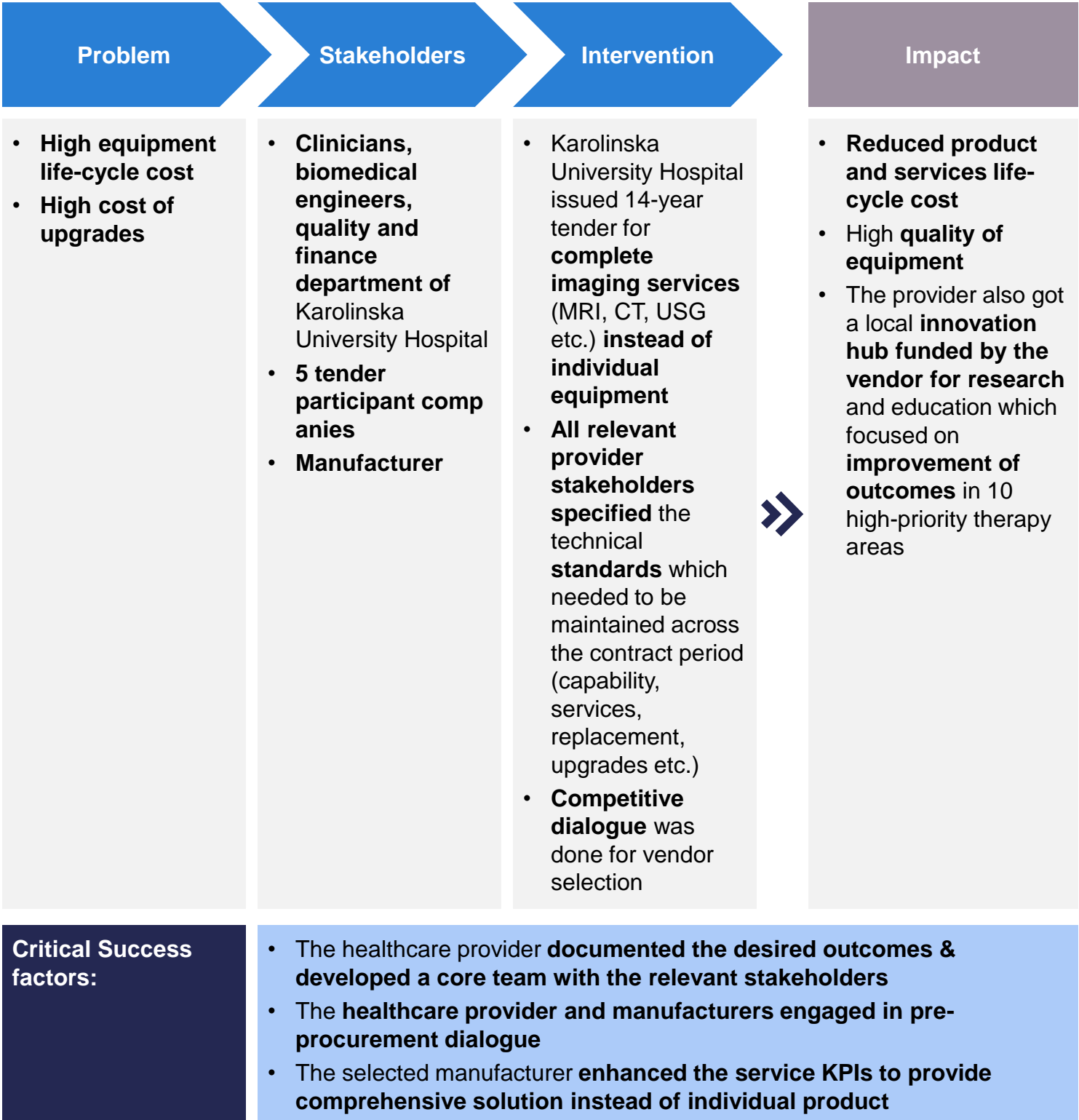


Sources: <https://magnify.partners/wp-content/uploads/2020/06/The-European-public-procurement-opportunity-Delivering-value-in-medtech-final.pdf>

Case Study 4: VBP implementation in France – *Helped in reducing the hypothermia rate in post-operative patients*

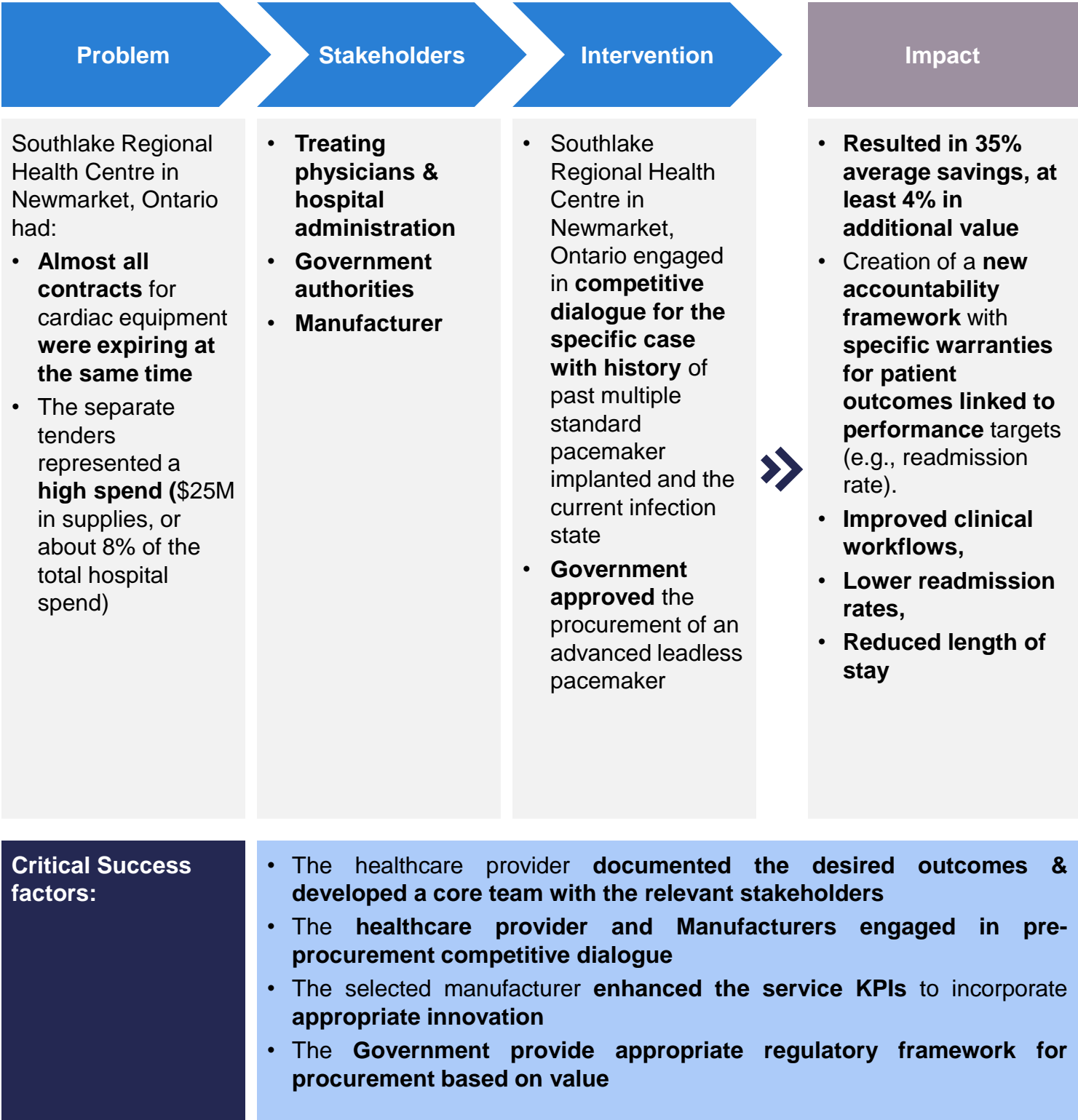


Case Study 5: VBP implementation in Sweden – *Led to better patient outcomes and improvement in overall quality of services*



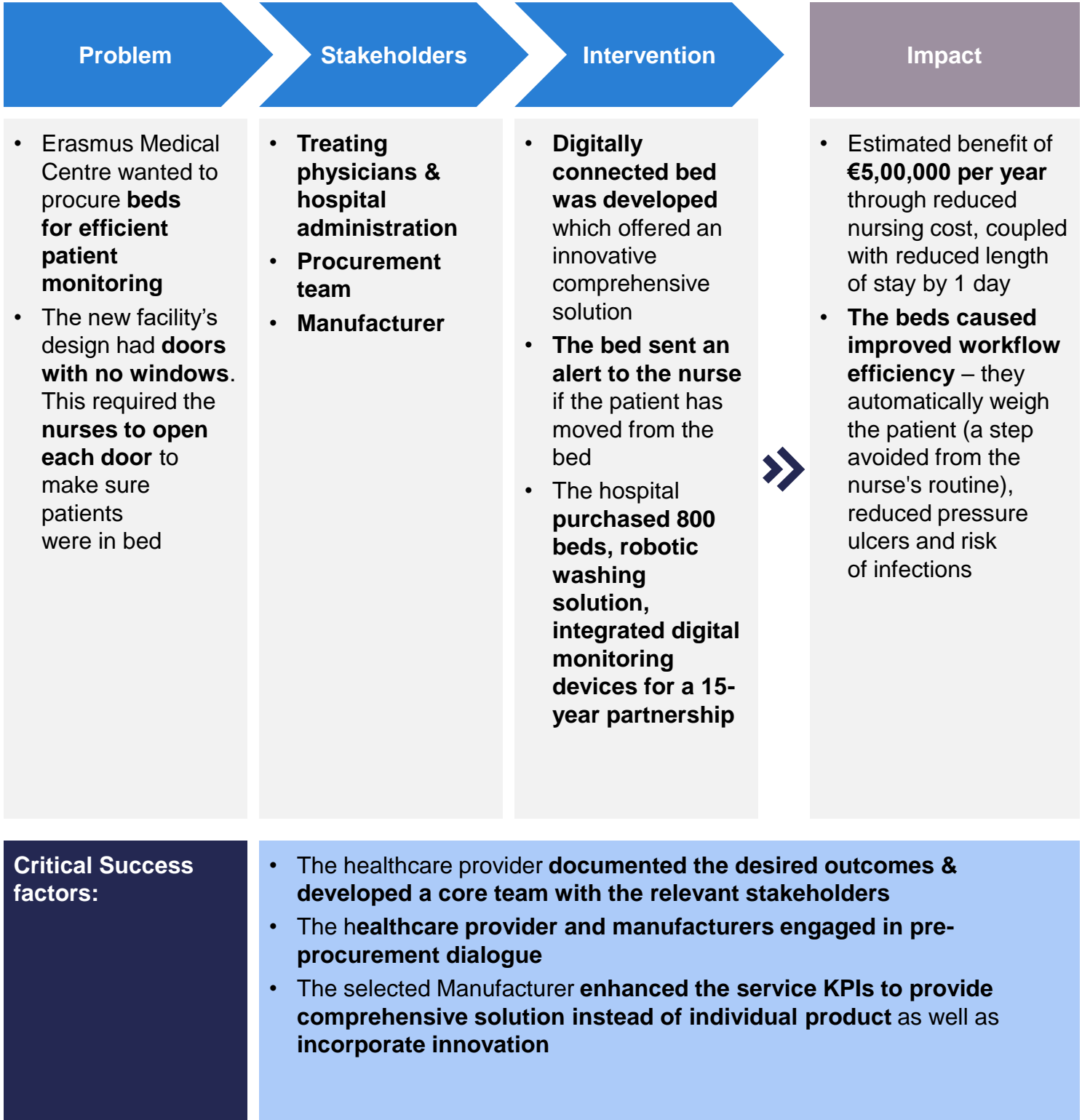
Sources: <https://www.sailab.fi/wp-content/uploads/2021/01/sailab-finland-value-based-procurement-in-europe-16feb2021-hbax.pdf>

Case Study 6: VBP implementation in Canada – *Led to optimal patient outcomes and significant cost benefits*

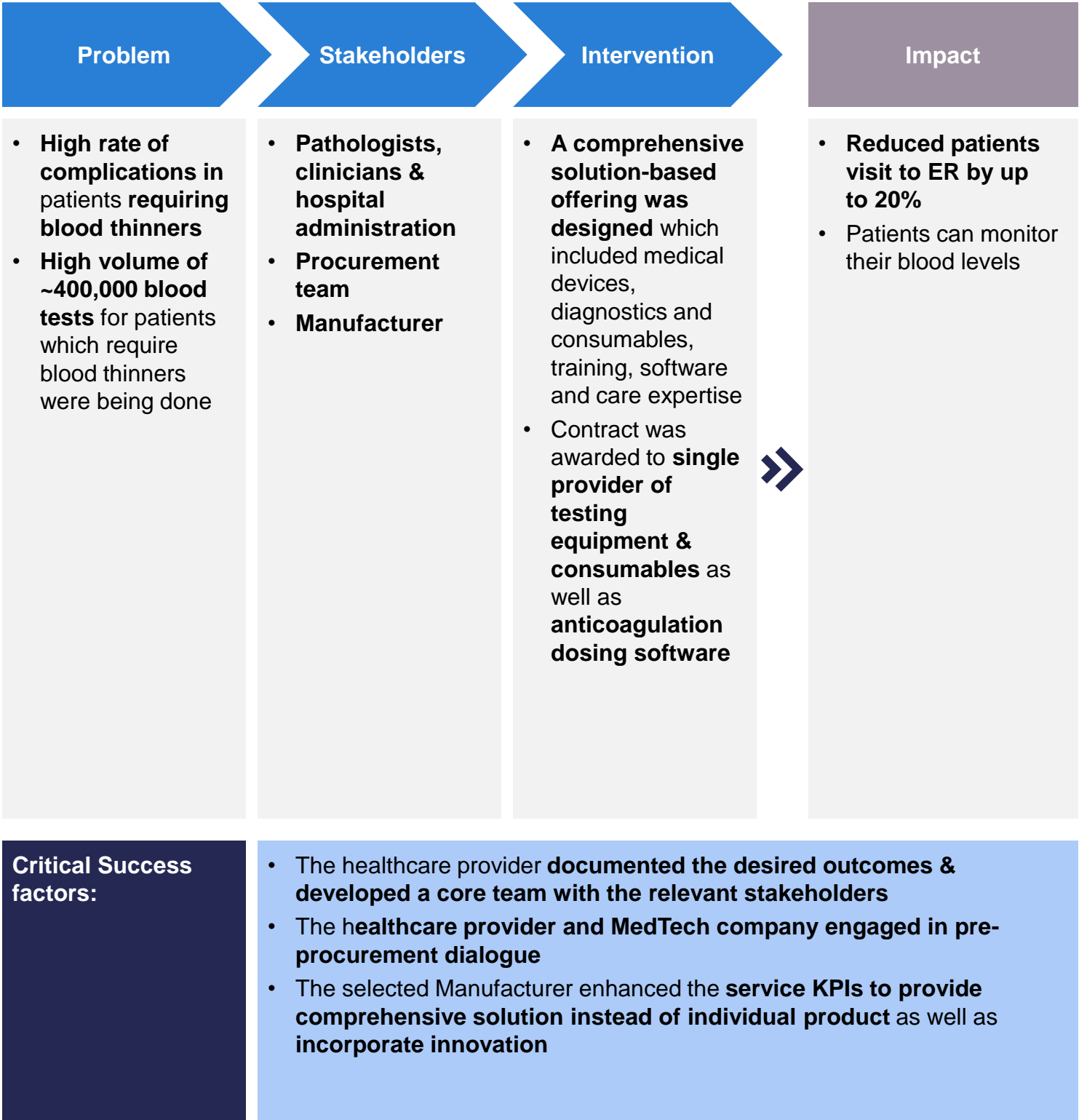


Sources: https://www.medtronic.com/ca-en/about/news/Innovative_procurement.html

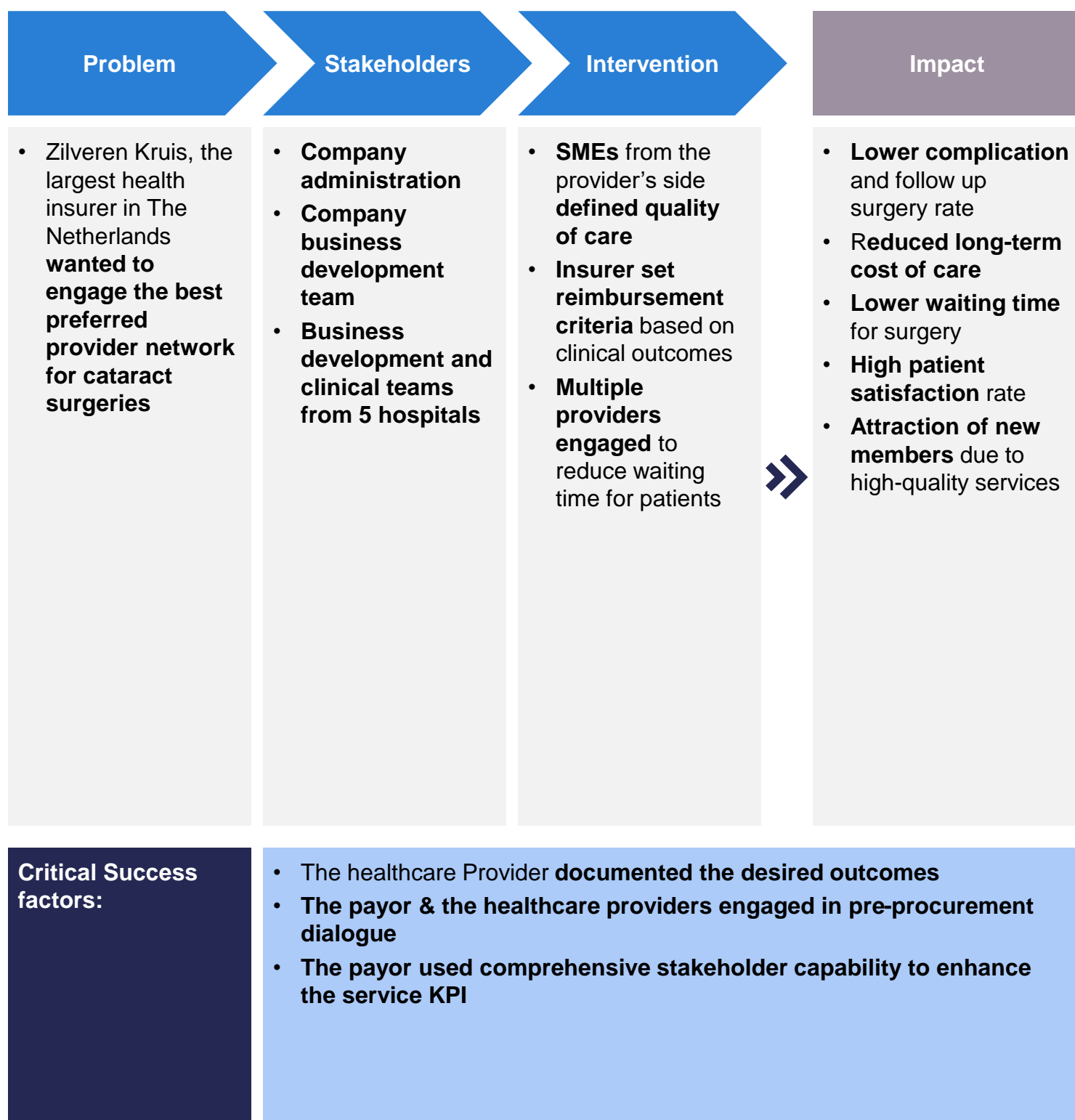
Case Study 7: VBP implementation in Netherlands – *Assisted in cost efficient and effective patient monitoring by procurement of a comprehensive solution*



Case Study 8: VBP implementation in Wales – *Led to reduced complications & better management of volumes by procurement of a comprehensive solution*

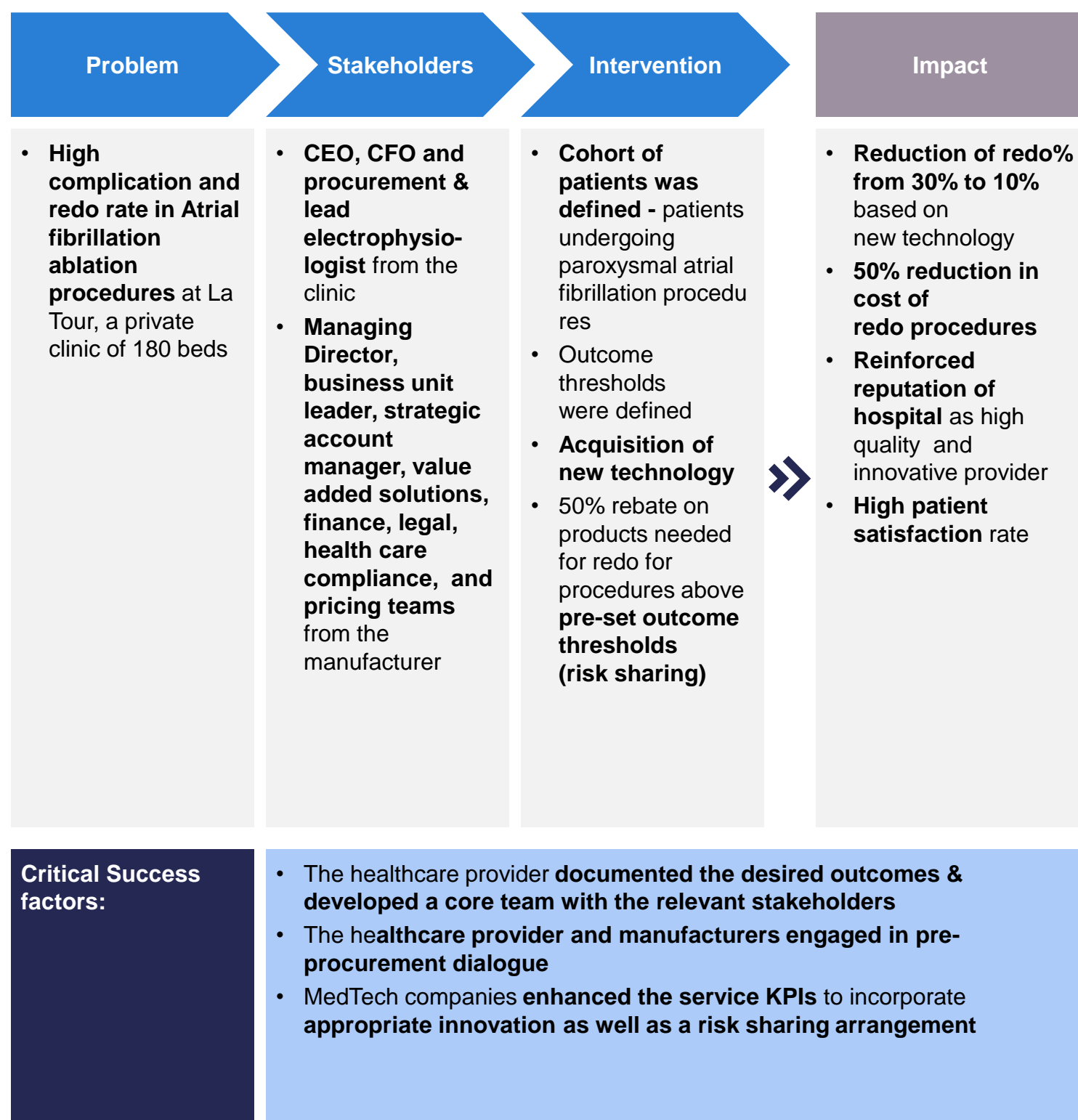


Case Study 9: VBP implementation in Netherlands- *Assisted best preferred provider selection for cataract surgeries*



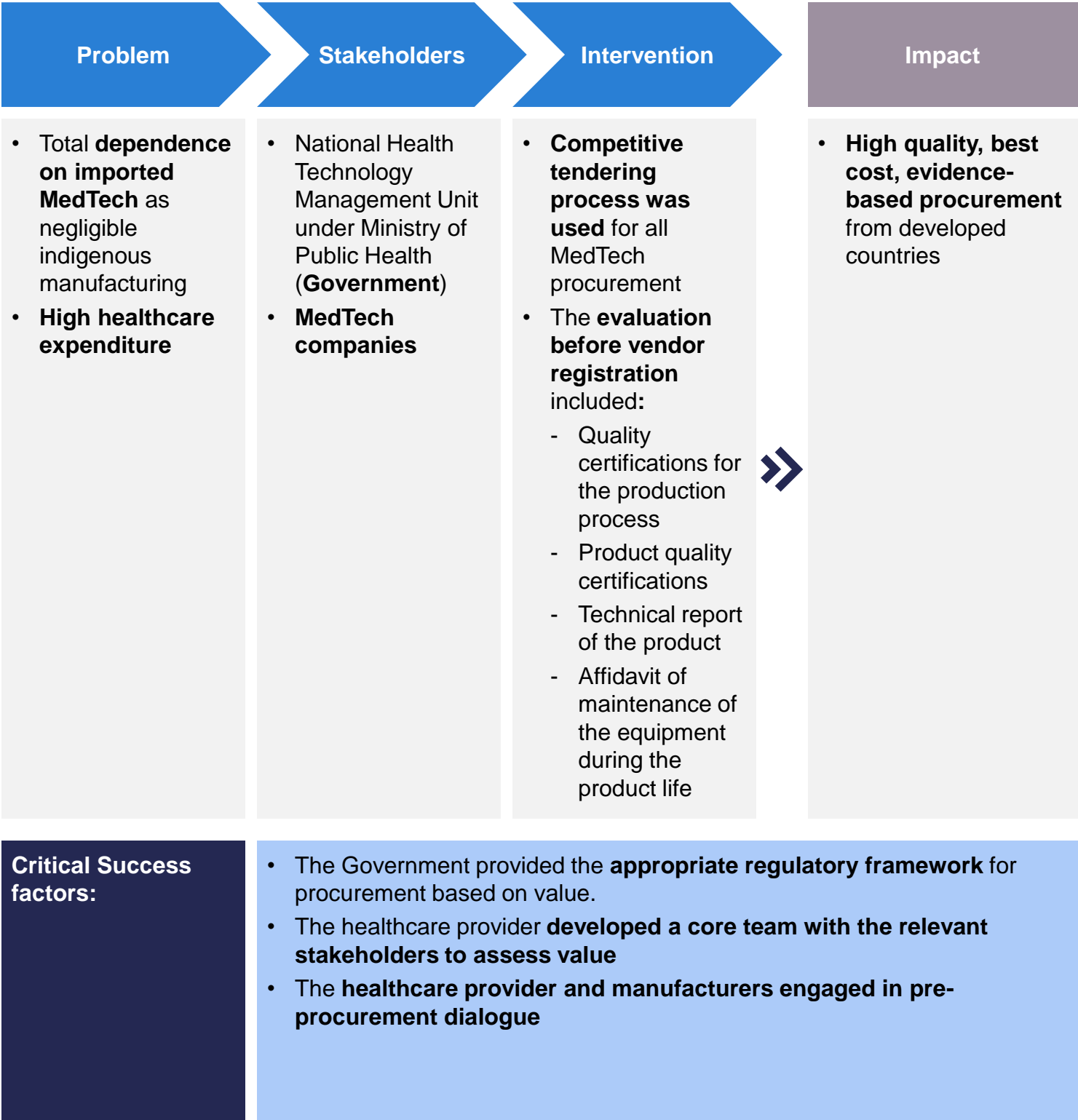
Sources: <https://www.tnabevents.be/MedtechConference2019/Posters/6.pdf>

Case Study 10: VBP Implementation in Switzerland – *Assisted in reduction of redo cases*



https://www.vbpcommunity.eu/documents/1_AtrialFibrillation_RomanIselin_LaTour.pdf

Case Study 11: VBP Implementation in Uruguay – *Helped in procuring quality imported equipment at lowest cost*





Sources: https://2016.export.gov/industry/health/healthcareresourceguide/eg_main_116248.asp

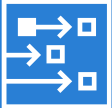



Key learnings from the global case studies















In summary, the global case studies highlighted various facets of VBP implementation and offered evidences that VBP can be implemented across different types of economies as well as care settings

<div></div> <div>TYPES OF ECONOMY</div>	Developed	<ul style="list-style-type: none">• VBP has been implemented across both developed (case studies in Netherlands, UK, Switzerland and Catalonia) and developed economies (case study on Uruguay)• Developed countries have seen faster uptake due to higher awareness, regulatory reforms and better capability of the procurement teams to assess value	Stakeholder insights
	Developing		<p>“In developed economies, VBP implementation is often seen as a normative practice like in the EU”</p> <p>“A basic level of VBP implementation is being done in developing countries like Uruguay and India without any specific framework”</p>
<div></div> <div>TYPES OF CARE SETTINGS</div>	Public Sector	<ul style="list-style-type: none">• VBP has been implemented in both public (case study in Catalonia) and private healthcare (case studies in Switzerland, Netherlands (Insurance))• Public sector implementation is driven by the Government making regulatory reforms to include outcome-related aspects in procurement• Private sector uses VBP to enhance care quality and reputation, which also aids in increasing patient footfalls through word-of-mouth referrals	<p>“The EU directive on healthcare procurement was a major milestone in spurring governments to implement VBP”</p> <p>“The private sector uses VBP to distinguish itself from competition and become a center for excellence through efficient treatment”</p>
	Private Sector		

The global case studies also highlighted that VBP can be implemented across different types of procurement offerings and payment mechanisms in the healthcare ecosystem

<div></div> <div>TYPES OF OFFERINGS</div>	Products	<ul style="list-style-type: none">• VBP can be implemented for both individual products (case studies in Switzerland and Catalonia) and comprehensive solutions (case study in the Netherlands)• VBP is more suitable for products which are relatively more complex and have higher room for improvement through research & innovation	<div>Stakeholder insights</div> <div><p>“VBP has been implemented with good results in products ranging from radiation therapy machines right up to under pads!”</p><p>“We developed a digitally connected bed which automatically weighs the patient and alerts the nurse when the patient has gotten up out of bed”</p></div>
	Solutions		
<div></div> <div>TYPES OF PAYMENT MECHANISMS</div>	Diagnostic Related Groups (DRG)	<ul style="list-style-type: none">• VBP has been implemented irrespective of payor type• DRG mechanisms also support VBP due to focus on outcome-based reimbursement• The Fee for Service model focuses on process improvement to achieve effectiveness and efficiency vis-à-vis the cost	<div><p>“In many member countries, the reimbursement is done on the successful outcome of procedure based on the DRG”</p><p>“The Columbian Health System still has a fee for service system, but steps are taken to customize VBP implementation.</p></div>
	Fee for service		

The case studies also highlighted that key stakeholders had to take multiple steps for effective implementation of VBP

<div>Government</div> <div> Focus on improvement in patient outcomes</div> <div> Appropriate regulatory landscape in procurement to include outcomes</div> <div> Facilitating transparent pre-procurement dialogue with the MedTech companies</div>	<div>Providers</div> <div> Define desirable criteria and procurement objectives</div> <div> Carry out care pathway process mapping to highlight pain points</div> <div> Engage comprehensive stakeholder capability</div> <div> Engage in pre-procurement dialogue with the MedTech companies</div> <div> Maintain and share data on care delivery outcomes</div>
<div>MedTech Companies</div> <div> Ensure availability of research-based outcomes data</div> <div> Enhance the service offer for products as well as innovate to develop comprehensive solutions</div> <div> Participate in competitive dialogue and trial-based selection process</div> <div> Propose feasible risk-sharing modules to share cost of complications</div>	<div>Payors</div> <div> Define and classify quality in care delivery outcomes</div> <div> Incentivize high-quality care delivery outcomes</div>

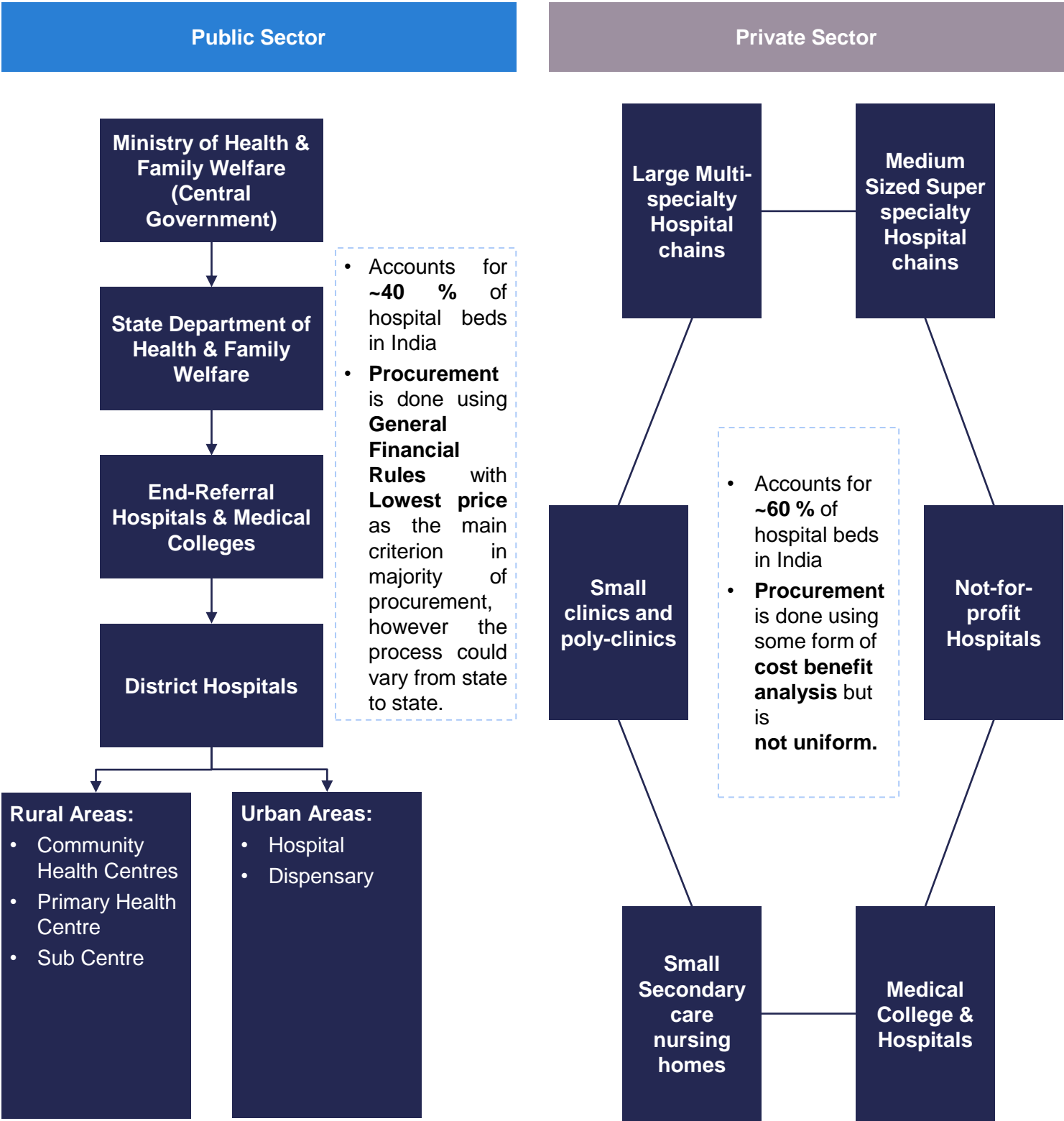
Sources: Secondary research, Primary interviews



Section 4

Procurement in the Indian ecosystem

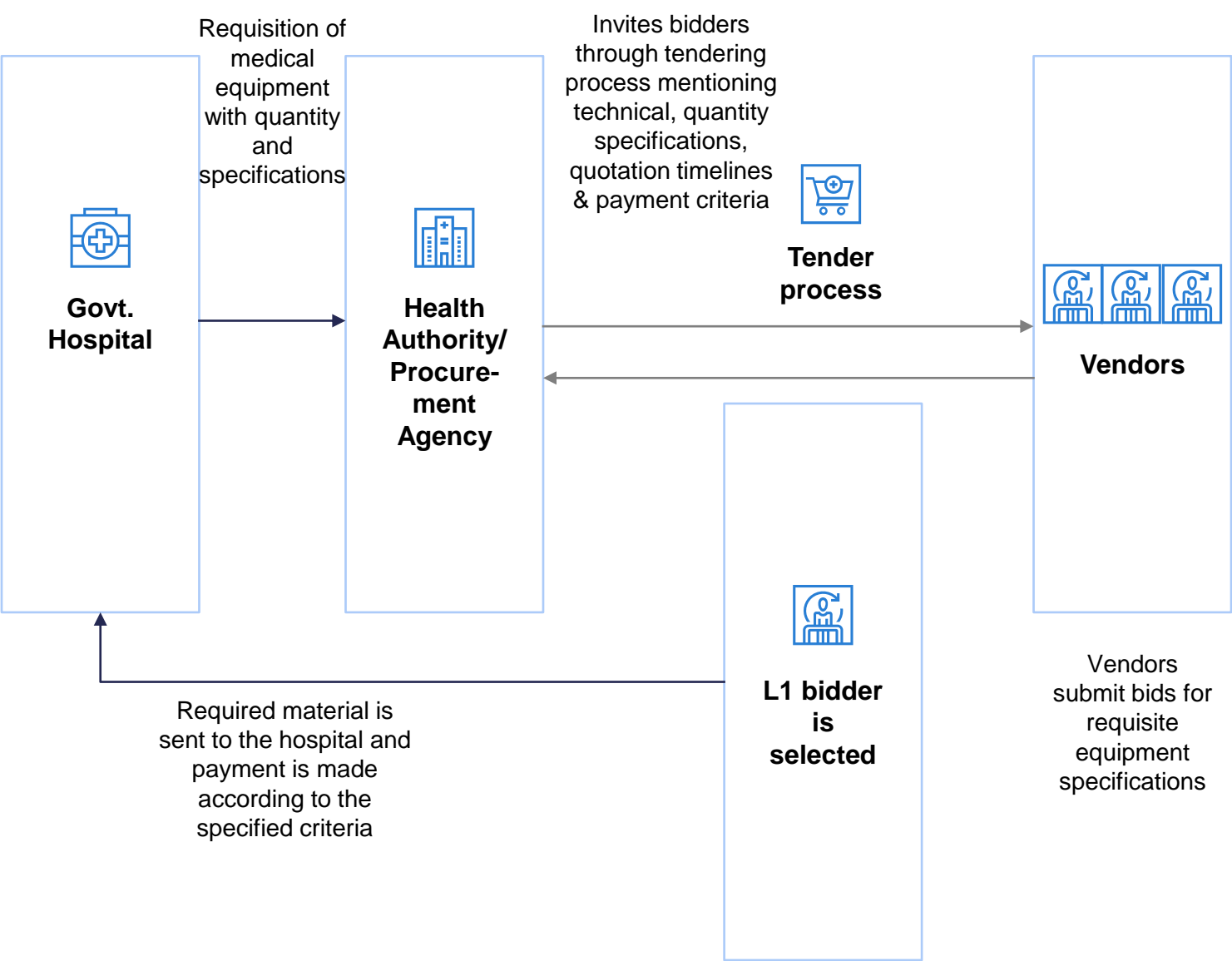
Both public and private providers engage in health care delivery in India, and both follow different models of procurement



Sources: <https://ficci.in/pressrelease-page.asp?nid=3677>

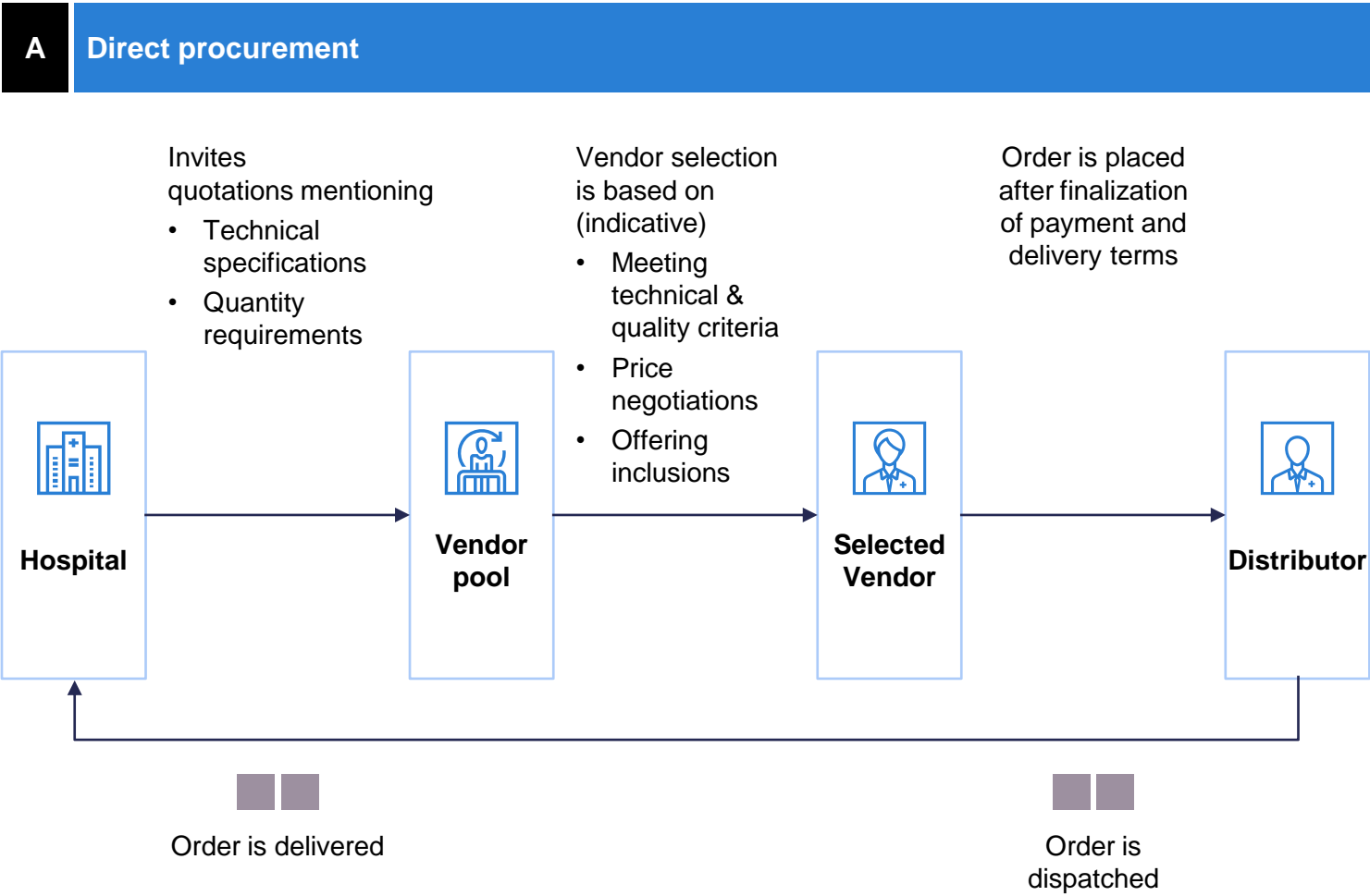
Procurement of MedTech in the public sector is done as per General Financial Rules (GFR) 2017 which specifies regulations for requisition, bidding, selection and payment among others

- **General Financial Rules (GFR)** are a **compilation of rules and orders** of Government of India for matters involving **finances**.
- These rules and orders are treated as **executive instructions** to be **observed by all departments and organizations under the Government**



Sources: https://doe.gov.in/sites/default/files/GFR2017_0.pdf

While the private healthcare sector does not focus only on L1, the procurement methodology today largely does not cover all facets of VBP



Stakeholder insights

“The private sector in India performs varying levels of cost benefit analysis before procurement of MedTech. The whole exercise is more often done to avail products at best costs”

“Many corporate hospitals use the capabilities of a procurement team which involves the clinicians who are users, the operations team members, the biomedical engineering team and the finance department members”

“ Private Hospitals while doing some aspects of VBP despite not under the name of VBP, do not generally map desired clinical outcomes and engage in risk-sharing mechanisms”

Case study 12: Methodology at a leading private healthcare provider in India for procurement of a new PET Scan machine

A The proposition

The **decision** had to be made **between** the **Analog PET-CT** scanner & the **digital PET-CT scanner**.

- The Analog PET-CT scanner has majority installations in the market, has a comparatively lower cost, but uses older technology.
- The digital PET-CT scanner on the other hand uses latest technology but is double the cost and has comparatively lower number of installations.

C The process

- The TEWG evaluated each bid by **rating** the parameters like **service level, user preference and usability, technical specifications and lifecycle costs** on a **scale of 1 to 5** and assigned a **weightage** of 25%, 20%, 25% and 30% to each parameter, respectively.
- The Tender Evaluation Committee then conducted price negotiations with the eligible vendors. The Unit operations team prepared the business plan which was then approved by the Executive committee and the board.

B The people and parameters involved

- **The Hospital Director** along with the **Head-Nuclear Medicine and Medical Strategy Operation Group** conducted assessment of current and future clinical needs & prepared the specification requirements list.
- Global tenders were then invited, and product demonstrations were done before the **Tender Evaluation Working Group (TEWG)** which includes clinical and technical expert members.
- In addition to basic technical and infrastructural specifications, evaluation was also done on **other quality and outcome parameters** like image resolution, patient comfort, availability of advanced applications, accuracy of data readings, patient safety, scan TAT, redundancy of technology.

D The product chosen

The provider **decided to procure the Digital PET-CT Scan** machine from the selected successful vendor (based on both technical and commercial score) as it yielded **benefits** like:







- Better image resolution helping in higher lesion detectability
- Advanced applications like flow motion scanning with continuous bed movement which provides higher patient comfort and avoids overlapping scans.
- Flow motion scanning also helps in differentiating normal physiological uptake vs localized FDG uptake.
- Accurate data for clinical studies,
- Lesser amount of FDG consumption per patient,
- Reduced scan TAT translating to 40-50 % increase in scan capacity.



Innovative models in Indian public procurement

A. Government e-Marketplace (GeM) is an online procurement facilitating transparency and ease in all categories of procurement including MedTech procurement for public sector healthcare facilities



Ownership <p>Launched on 9th August 2016. Owned by GeM SPV (Special Purpose Vehicle) which is a Government-owned, non-profit company under the Ministry of Commerce and Industries, Government of India</p> 	Regulation <p>As per the General Financial Rules 2017 , procurement of goods and services by Ministries or Departments will be mandatory for goods or services available on GeM</p> 	Purpose <p>GeM facilitates online procurement of common use goods & services required by various Government Departments / Organizations / PSUs either by direct buying or by the bidding process</p> 
Vendor Evaluation <p>The credentials of suppliers on GeM shall be certified by Directorate General of Supplies & Disposals (DGS&D)</p> 	Pricing <p>The Government buyers may ascertain the reasonableness of prices before placing the order using the Business Analytics (BA) tools available on GeM including the last purchase price on GeM, department's own last purchase price etc.</p> 	Golden parameters <p>Golden Parameters are further detailed specifications which have maximum impact on technical aspects and allow the procurer additional scope of evaluating a product to influence buying decision</p> 

Sources: Secondary research

B. Procurement under General instructions on Procurement and Project Management (October 2021) using Quality and Cost Based Selection (QCBS)

Parameter	Details
In effect from	29.10.2021
Governance	Procurement Policy Division, Department of Expenditure, Ministry of Finance, Government of India
Intent	To reform the public procurement policy for non-consultancy services and works (for items deemed as Quality Oriented Procurement (QOP), for procurement value of up to Rs. 10 Crore, where procurement was initially done using the L1 method only.
Features	<ul style="list-style-type: none"> • In all cases of QOP, a Special Technical Committee is constituted that defines the quality, technical, and financial rating criteria. • The instructions allow Pre-Notice Inviting Tender (NIT) where the procurement entity may not have the required knowledge to formulate tender provisions; a pre-NIT conference can be organized publicly to get inputs from vendors. This conference also discusses the defined quality criteria and the scoring methodology. • An independent committee is constituted to conduct an objective evaluation of the procurement based on the pre-defined criteria. • The weightage given to the non-financial criteria (quality / technical) and financial criteria are 30% and 70%, respectively; the bidder scoring the maximum overall is selected.

Sources: General instructions on Procurement & Project Management (29th October 2021)

Case study 13: Methodology for procurement of Linear Accelerators by West Bengal Medical Services Corporation (WBMSCL) for 4 Government Medical College Hospitals

A	The proposition	B	The people and parameters involved	C	The process
	<p>WBMSCL was requested by the Government of West Bengal to procure 6 Linear Accelerator machines on their behalf to be supplied and commissioned in 4 Government Medical College Hospitals. The 3 types required were as follows:</p> <ul style="list-style-type: none"> • High-End High Energy LINAC (2 nos.) • High-End High Energy LINAC (with 15 MV photon Energy Trimmed off) (1 no.) • High Energy LINAC (3 nos.) <p>Along with the machines, WBMSCL required relevant software, hardware and accessories to be included in the procurement.</p>		<ul style="list-style-type: none"> • The Technical Evaluation Committee and the Financial Evaluation Committee of the WBMSCL and representatives from the manufacturer were the main stakeholders involved. • The technical committee pre-defined the specifications for aspects of machine performance, internal quality assurance checks, patient safety, ease of utility, currentness of technology etc. • Measurable quality standards were also defined with their rationale e.g., radiation dose rate, image resolution, size, collimators etc. • The finance committee looked for comprehensive aspects of costs like, product cost, maintenance costs, operationalization costs, import costs, training costs etc. along the product life cycle 		<ul style="list-style-type: none"> • The WBMSCL floated the tender mentioning detailed requirements of the manufacturer, the product, the accessories and the life-cycle costing. • WBMSCL engaged in a pre-bid discussion with the manufacturers interested in bidding in order to clarify the requirements. • Post the evaluation of quality, technical specifications and lifecycle costs, each bid was ranked in the QCBS method based on the total score obtained using the weightage of 40% and 60% for the "cost" and the "quality" respectively. • The bidder obtaining Highest Combined Quality and Cost Score (CQCS) was awarded the contract.



Section 5

Challenges for implementing VBP

Low awareness, high percentage of OOPes, lack of data on clinical outcomes are some of the challenges in the Indian healthcare ecosystem

Low awareness about VBP	Regulatory framework limiting procurement beyond L1	Lack of data on clinical outcomes
<ul style="list-style-type: none">Globally the concept of VBP is evolving and gaining traction across multiple countriesHowever, our discussions with the stakeholders highlighted that the awareness (and therefore also the benefits) about VBP in India is currently limited including in the private sector	<ul style="list-style-type: none">In India, the policy mandates the public sector hospitals to procure MedTech products as per the GFR (2017). The rules mandate that public sector entities engage in a tendering process mentioning technical and quantity specifications, and finalize the bid based on L1.	<ul style="list-style-type: none">The global case studies indicate that healthcare stakeholders measured and documented patient clinical outcomes.In India, however there is limited baseline information availability in terms of capturing, maintaining and sharing of data w.r.t clinical outcomes. This deters the evaluation of 'value' from a patient outcome perspective.

Stakeholder insights

<p>“VBP is still a nascent concept in India, there needs to be a lot more generation of awareness regarding VBP, its features and benefits”</p>	<p>“Public sector procurement, including the GEM portal currently has bid qualification based on technical specifications and bid finalization based on lowest cost, the value based on outcomes is not seen”</p>	<p>“Due to high volumes of work with stressed manpower, it becomes difficult to actively capture and maintain data on clinical outcomes on a consistent basis”</p>
---	---	--

Source: # hospitals, hospital beds per 1000 population are from various years post 2010 for different countries ^WHO's Global Health Observatory, World bank data

The challenges also include limited capability of the procurement team to assess value and lack of appropriate incentivization to healthcare providers



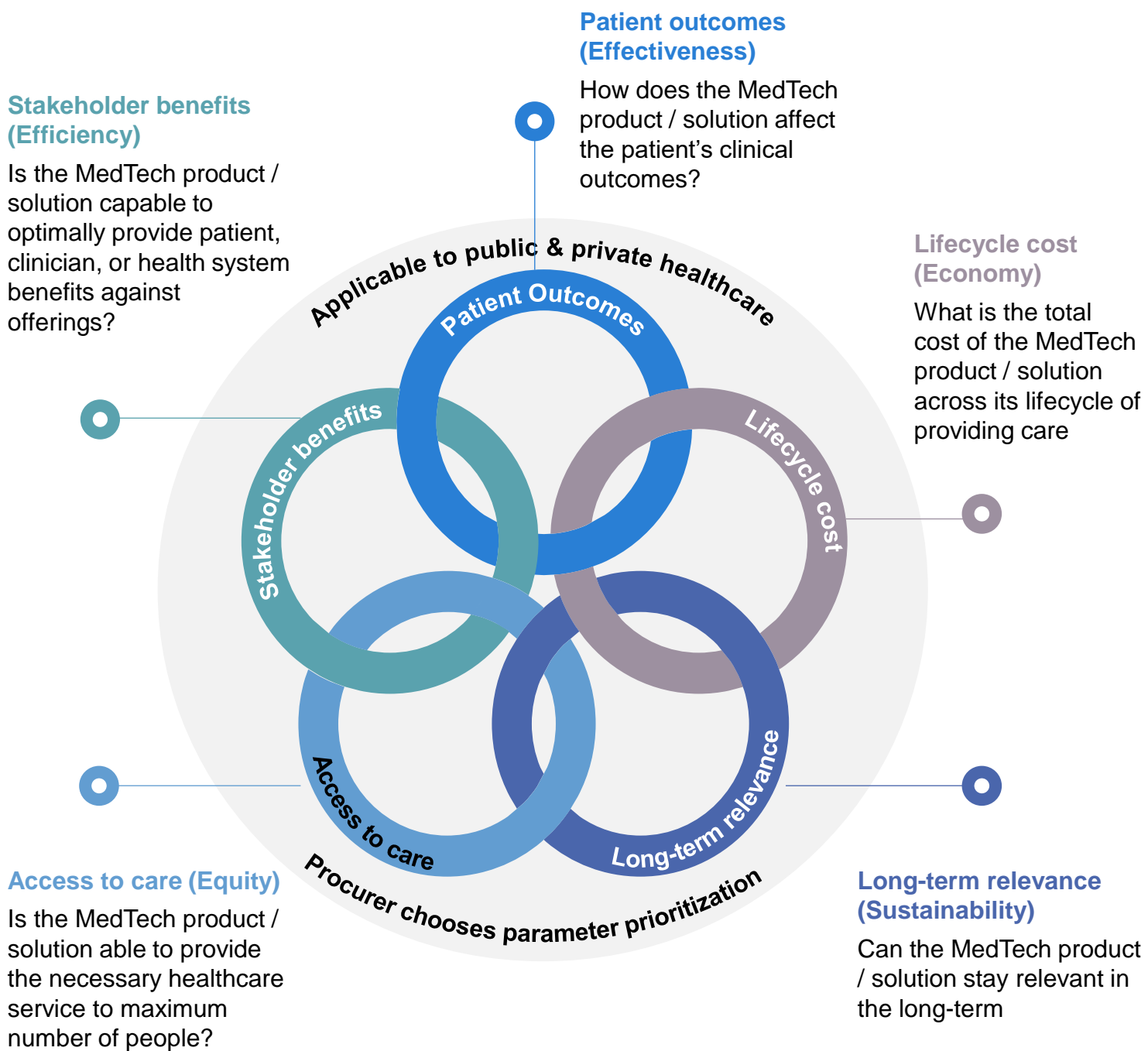
Source: # hospitals, hospital beds per 1000 population are from various years post 2010 for different countries ^WHO's Global Health Observatory, World bank data



Section 6

Recommendations and the way forward

The VBP framework in the Indian context could focus on the following parameters



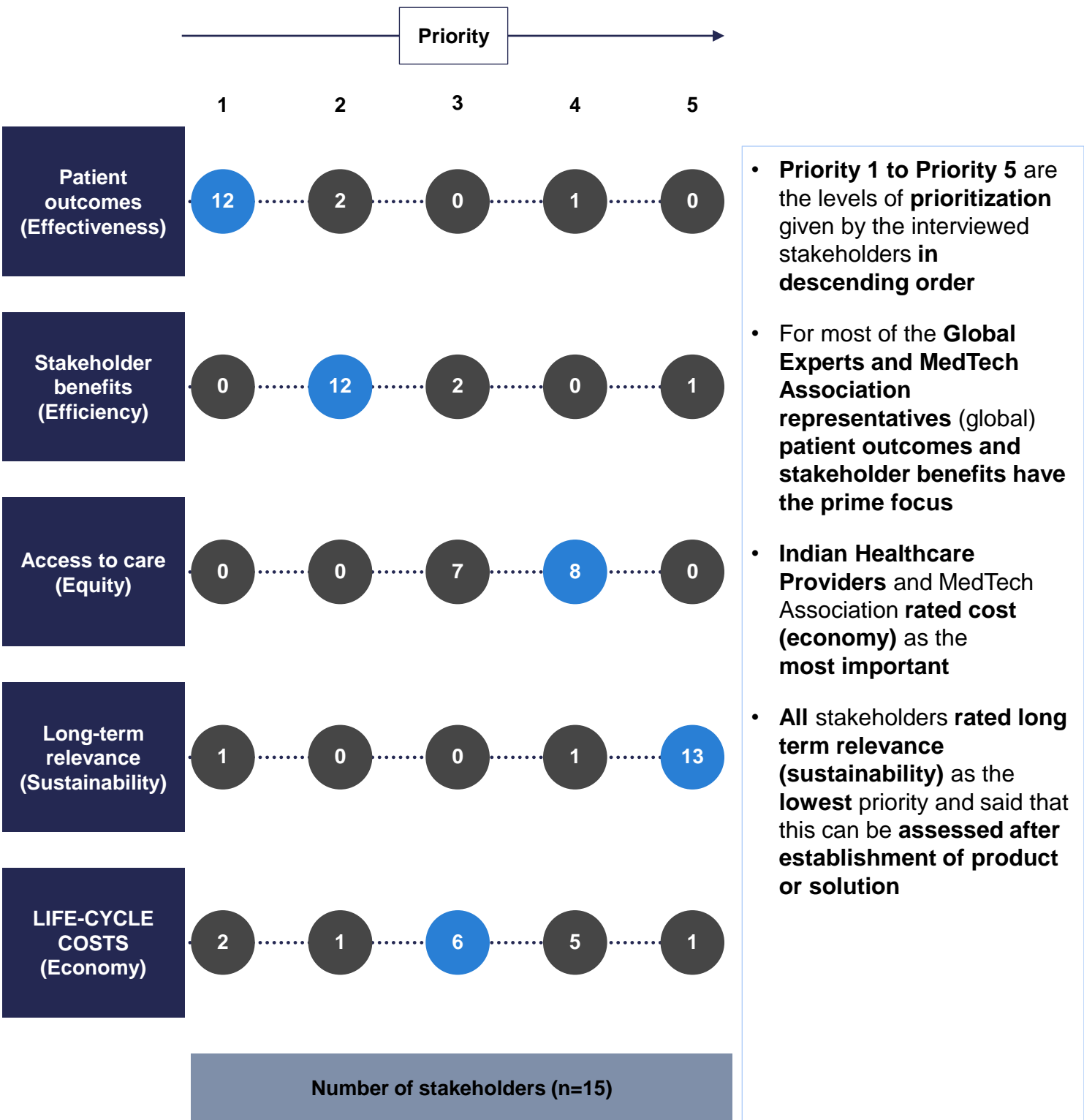
Adapted from Value-based procurement of medical equipment, The Access and Delivery Partnership (ADP), June 2020;
https://www.theglobalfund.org/media/8596/core_valueformoney_technicalbrief_en.pdf?u=637169196780000000
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/49551/DFID-approach-value-money.pdf

For these parameters, the following is the indicative list of measurable elements; each provider can customize the relevant parameters and elements based on its requirements

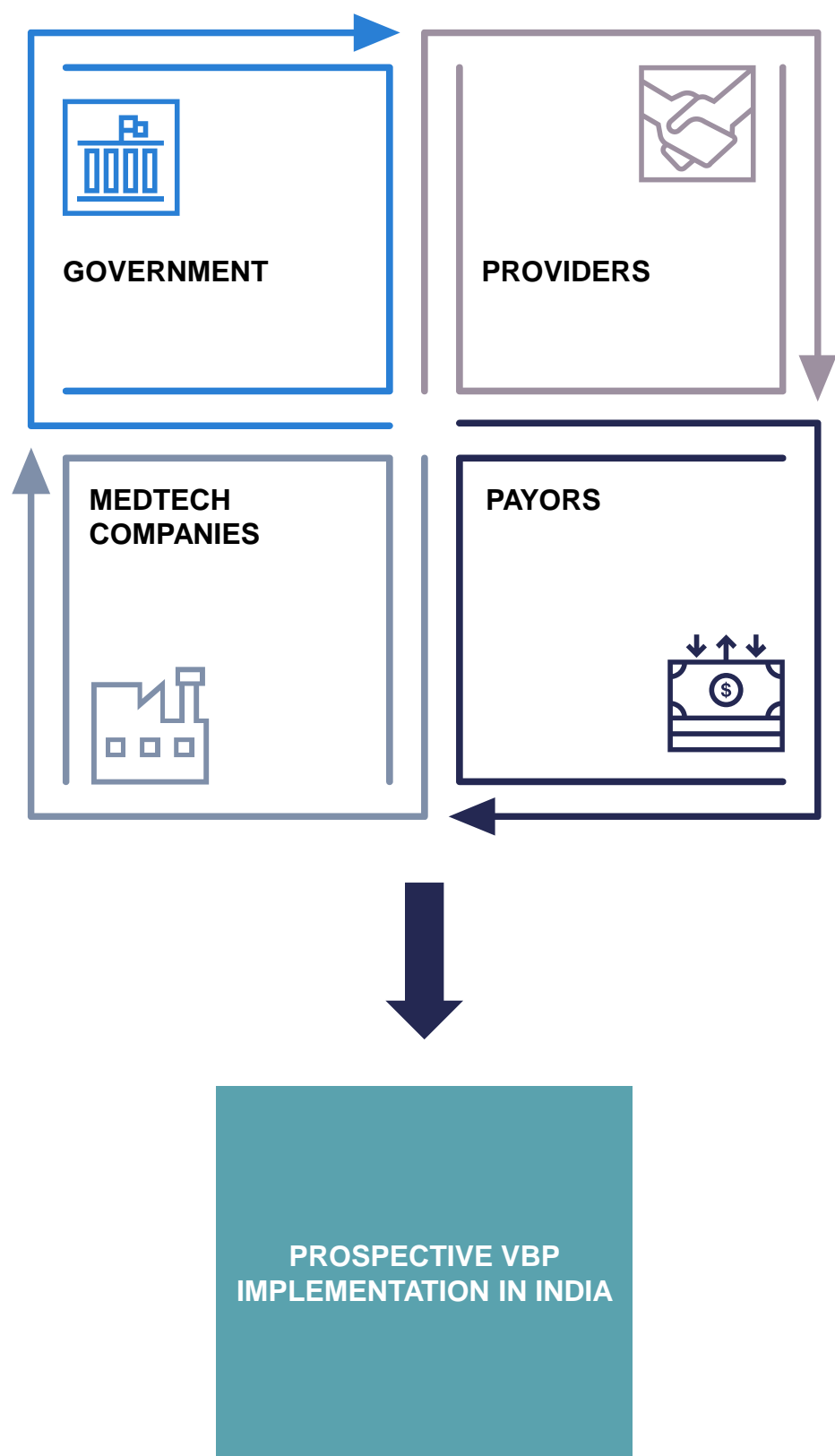
PATIENT OUTCOMES (Effectiveness)	LIFE-CYCLE COSTS (Economy)	STAKEHOLDER BENEFITS (Efficiency)	ACCESS TO CARE (Equity)	LONG-TERM RELEVANCE (Sustainability)
<p>Impact on clinical outcomes like reduction in :</p> <ul style="list-style-type: none"> • return to OPD, • re-admission/redo-surgery, • re-infection, • LOS, • invasiveness etc. <p>a) Proof of outcome improvement</p> <p>b) Proof of outcome standardization</p>	<p>1. Phase 1 - Purchase, Transport, Installation, Training costs etc.,</p> <p>2. Phase 2 – Operational, Maintenance, Breakdown, Consumable costs etc.</p> <p>3. Phase 3 – Upgradation, Post warranty, Condemnation cost etc.</p>	<p>1. Care pathway ease</p> <p>2. Staff safety & feedback</p> <p>3. Cost reduction</p> <p>4. Vendor assistance in education & research</p> <p>5. Vendor provides life-cycle support as appropriate</p> <p>6. Reduction in diagnostic time / processing time / treatment time</p>	<p>1. Increased capability for patient intake / utilization</p> <p>2. Improvement in social health indicators</p> <p>3. Patient satisfaction / feedback</p> <p>4. Cost reduction</p> <p>5. Improved mobility / independence / quality of life in patients</p>	<p>1. Quality certifications</p> <p>2. Currentness of technology</p> <p>3. Level of technology use</p> <p>4. Pace of innovation & innovativeness of product</p> <p>5. Need for upgrades</p> <p>6. Compatibility with Internet of Things (IOT)</p> <p>7. Provision for remote monitoring</p>

Adapted from Value-based procurement of medical equipment, The Access and Delivery Partnership (ADP), June 2020;
https://www.theglobalfund.org/media/8596/core_valueformoney_technicalbrief_en.pdf?u=637169196780000000
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/49551/DFID-approach-value-money.pdf

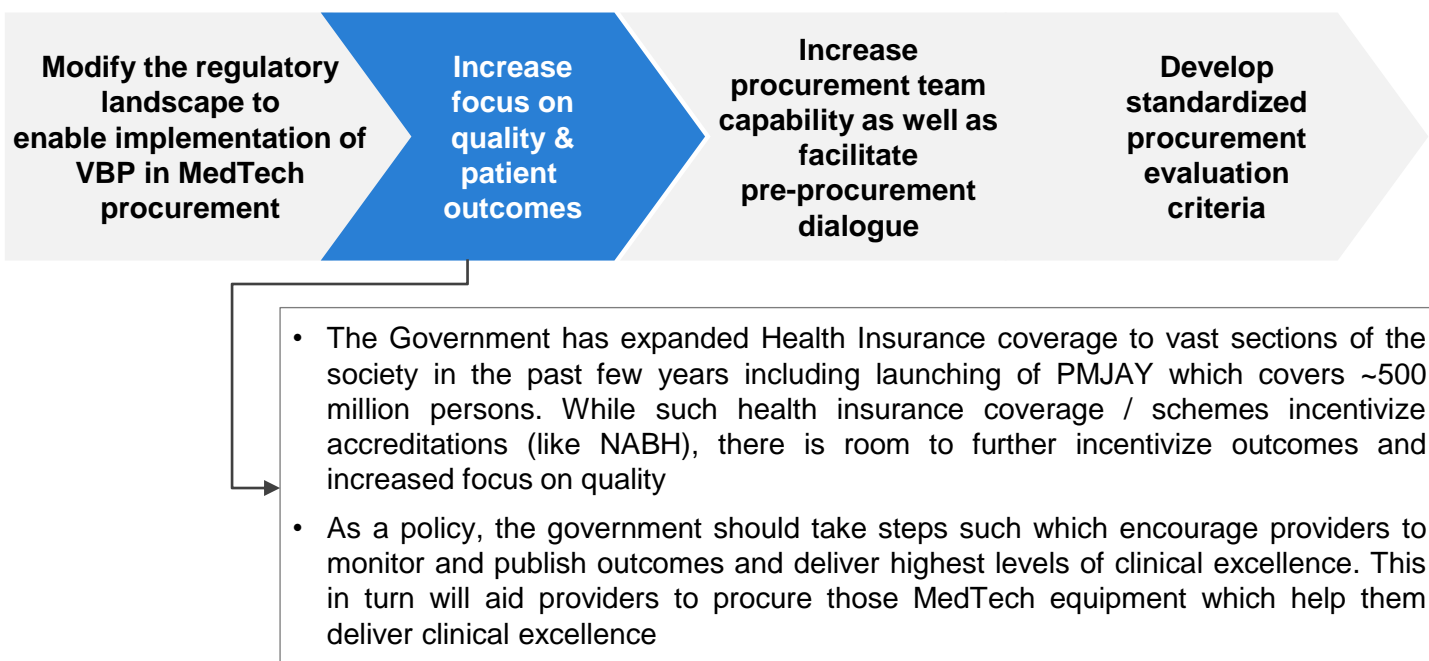
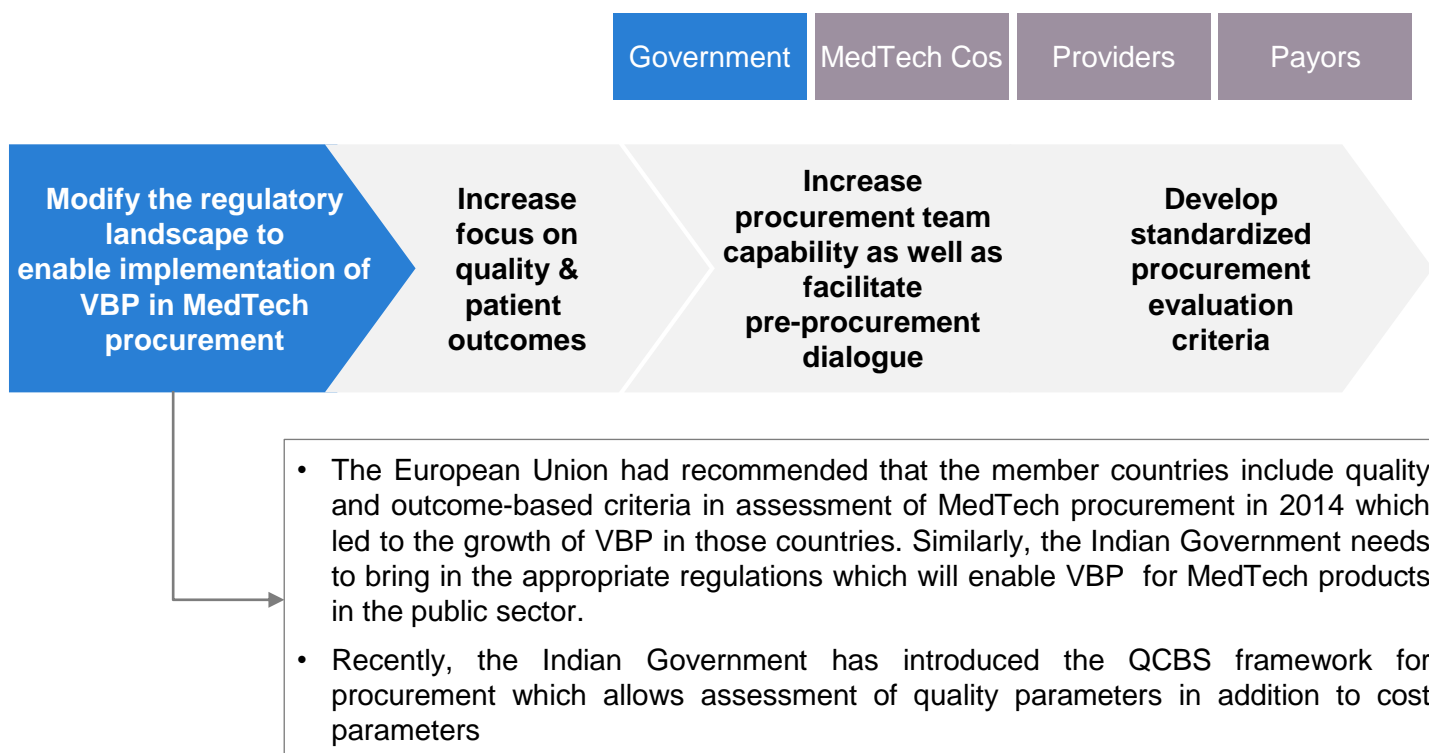
A varied group of 15 stakeholders including representation from Global experts, MedTech Associations, Healthcare providers, Government and Regulatory bodies rated the prioritization of the 5 parameters of the VBP framework



For facilitating VBP implementation in India, each of these stakeholders needs to take multiple steps



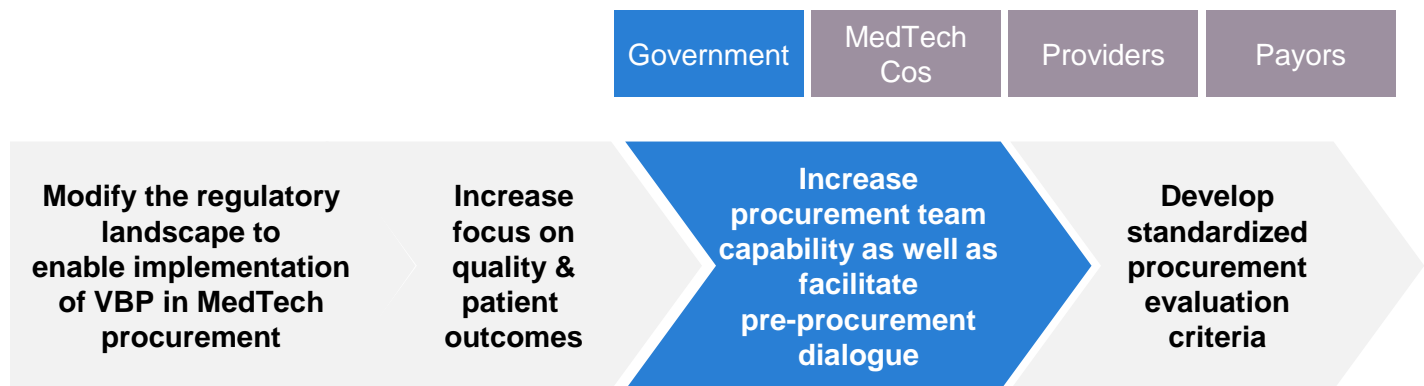
The Government of India can facilitate VBP implementation through updated procurement policies and develop standardized procurement guidelines...



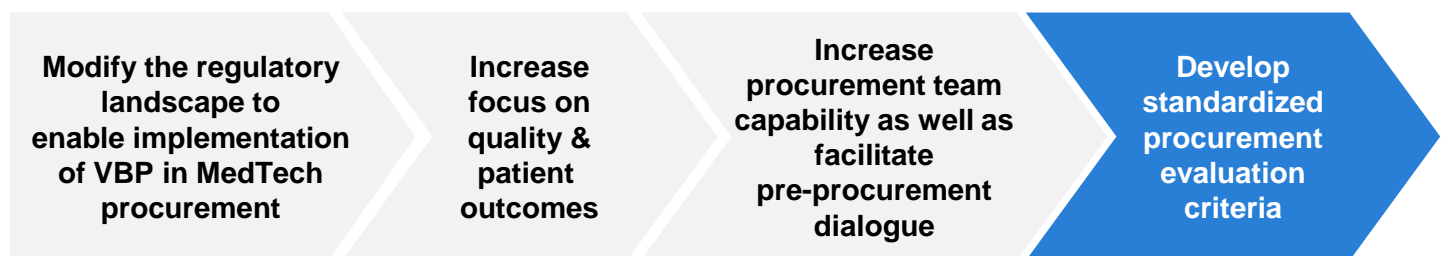
Sources: Stakeholder discussions, analysis



...as well as develop policies to increase focus on patient outcomes



- VBP entails involvement of multiple stakeholders within the providers, as well as looking at multiple aspects of value beyond L1. Hence the procurement team needs to be equipped with capabilities to evaluate aspects of other dimensions beyond price
- The Government thus should run training programs to equip the procurement team with the requisite skill sets
- The government should also encourage the public sector hospitals to undertake pre-bid discussions with the MedTech companies like it was seen in the case studies of Catalonia, Denmark, France etc.

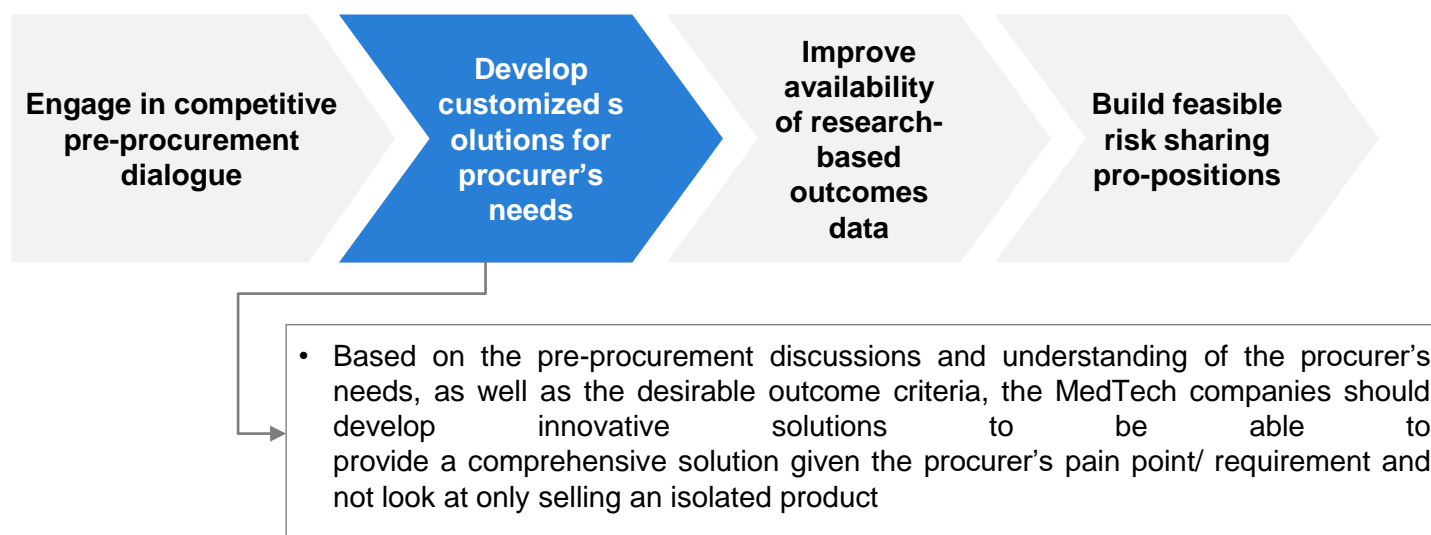
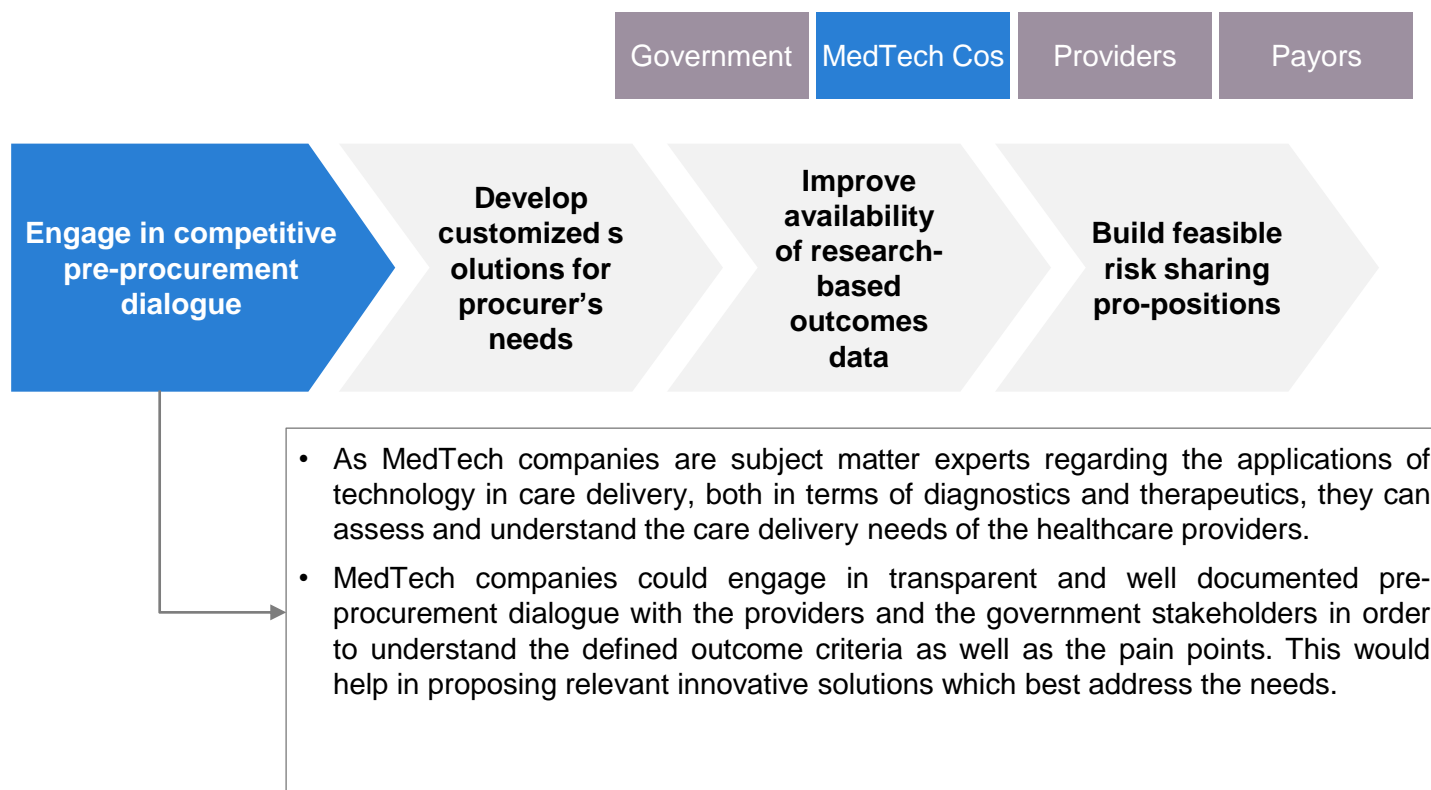


- While few states / procurement agencies might have started looking at procurement criteria beyond L1, Department of Procurement / Government of India can look at developing standard / suggestive guidelines with respect to procurement of medical equipment by incorporating aspects of VBP.
- Government can also work on creating awareness about the benefits of VBP as well as the abovementioned guidelines (as and when developed) amongst various Government procurement agencies / departments.

Sources: Stakeholder discussions, analysis



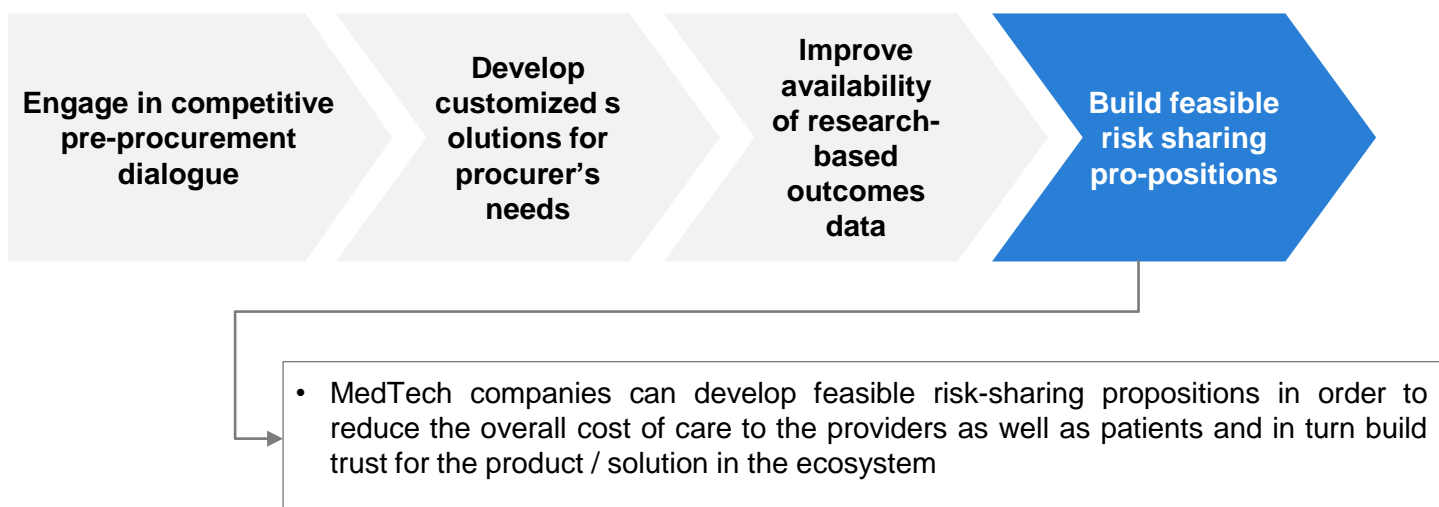
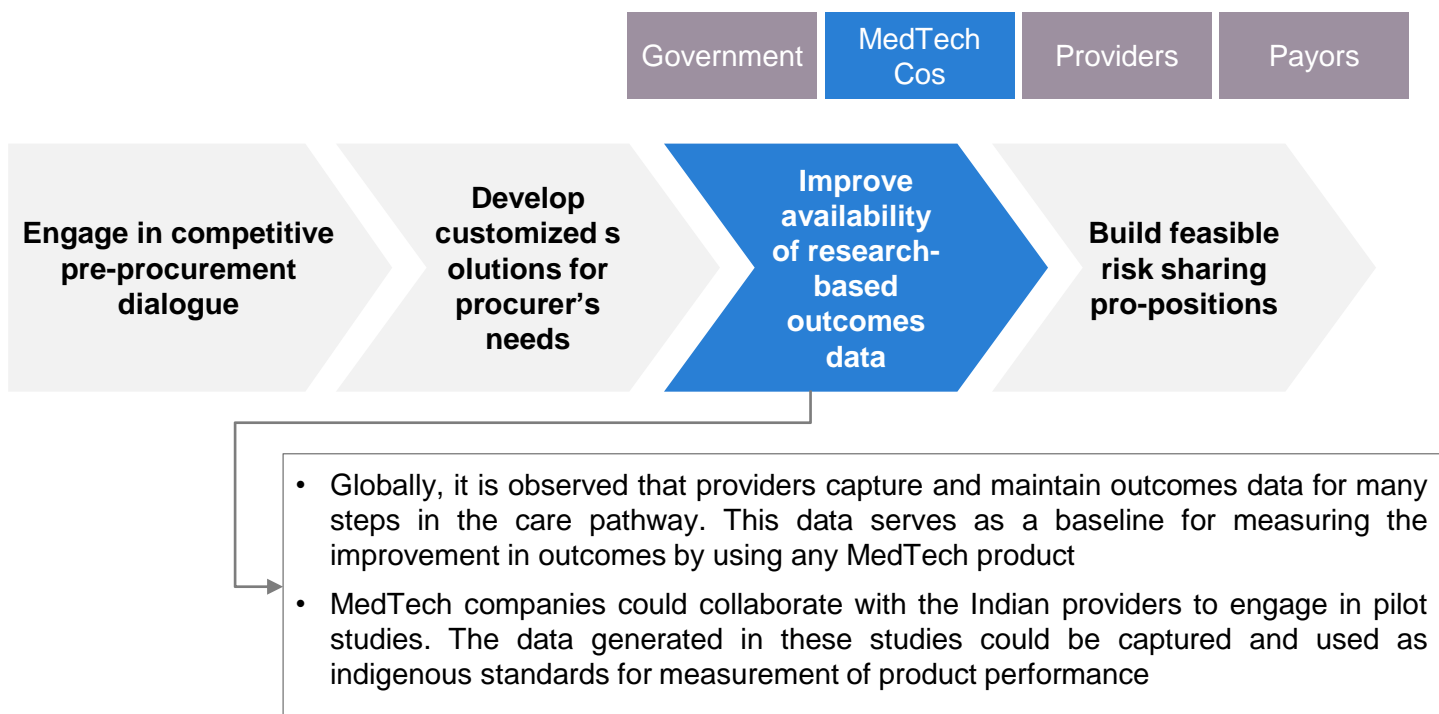
MedTech companies can engage in fruitful pre-procurement discussions with procurers to develop customized solutions...



Sources: Stakeholder discussions, analysis



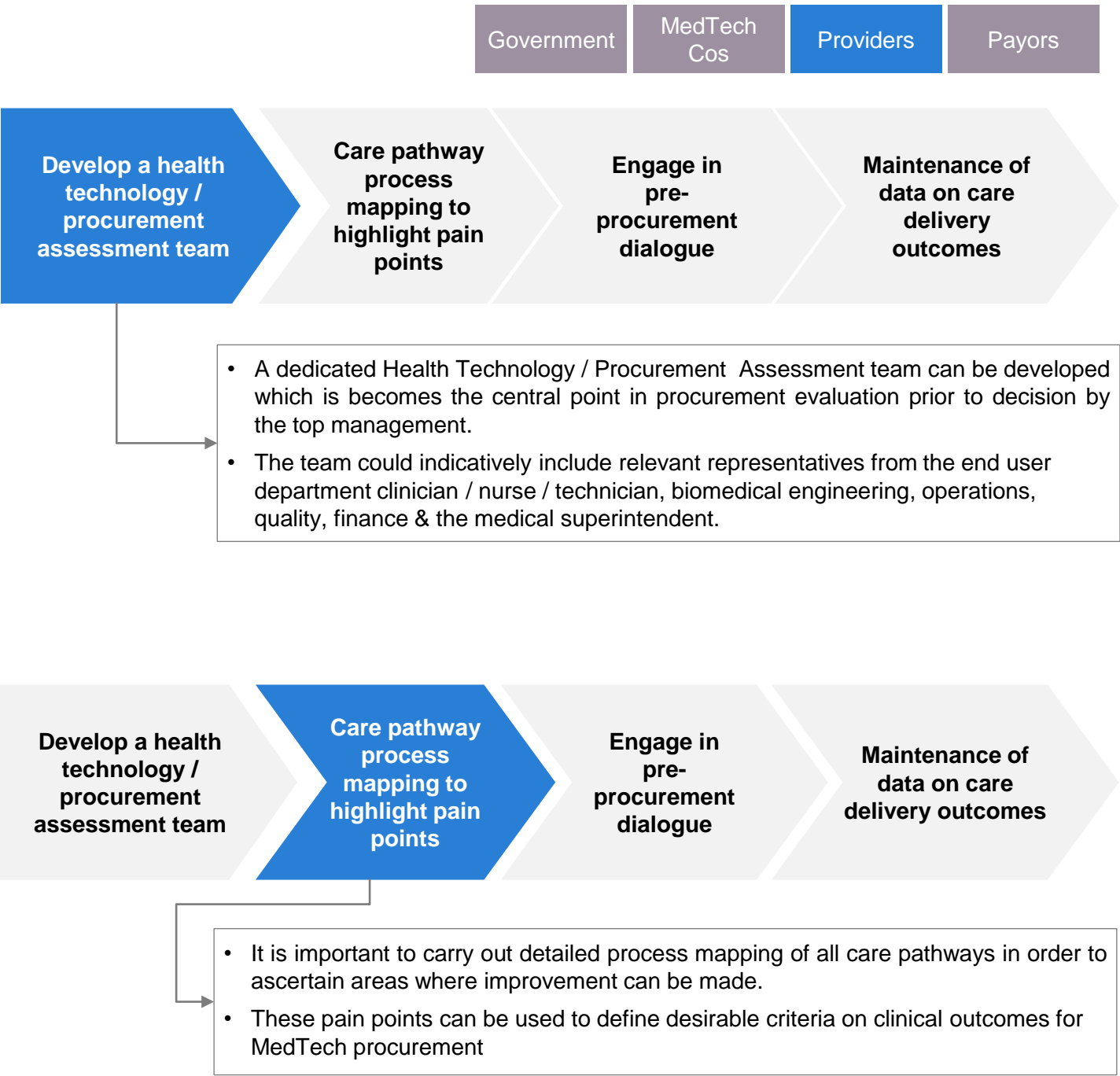
...as well as risk-sharing mechanisms



Sources: Stakeholder discussions, analysis



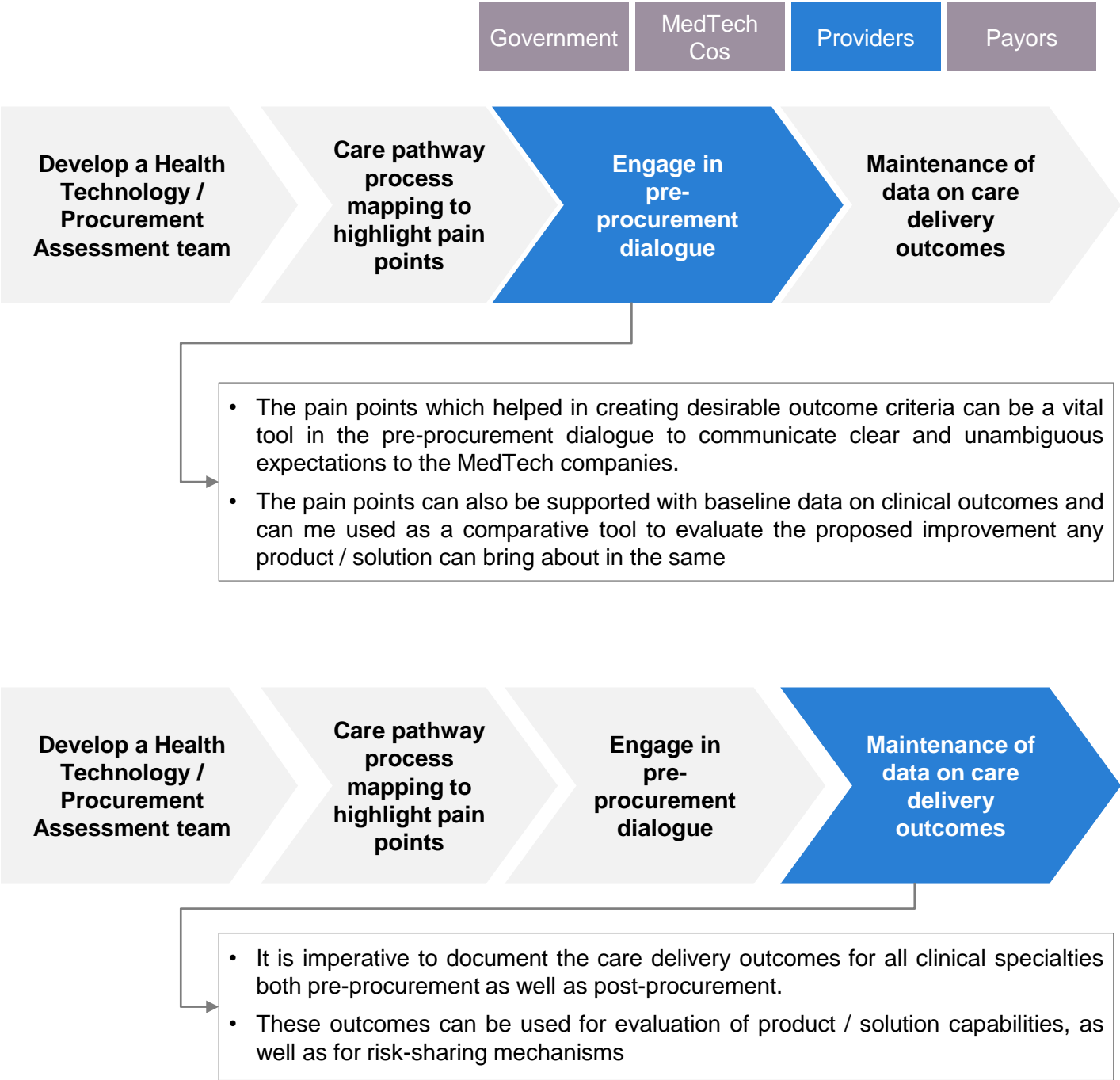
Healthcare providers need to develop stakeholder capabilities to assess MedTech procurement...



Sources: Stakeholder discussions, analysis



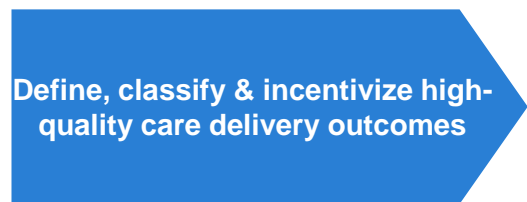
... as well as undertake pre-procurement dialogue with the MedTech companies along with maintaining patient and process specific KPIs regularly



Sources: Stakeholder discussions, analysis



Payors should incentivize high-quality patient outcomes which in turn will aid providers to procure medical equipment under VBP



- Payors need to enhance their outlook on clinical care to include a detailed understanding on clinical outcomes of treatment. They use subject matter experts to set standards of expected results from clinical care delivery which would help to evaluate quality of care.
- This in turn will lead to providers procuring MedTech products which yield high quality outcomes.

Sources: Stakeholder discussions, analysis



Acknowledgements (Key contributors)

Project drivers

**Siddhartha
Bhattacharya**
NATHEALTH

Anirudh Sen
APACMED

Shweta Bhardwaj
Johnson & Johnson

Alicia Chang
APACMED

Ankit Sharma
APACMED

Shreya Bansal
APACMED

Contributing stakeholders

Anil Sahasrabudhe
Wockhardt Hospitals

Bryan Choo
Changi General Hospital

Dafne Schroer
Johnson & Johnson

Dr. Alok Roy
Medica Synergie

**Dr. Ashutosh
Raghuvanshi**
Fortis Healthcare

Hans Bax
MedTech Europe

Joseph Gatewood
ADVAMED

Contributing stakeholders

Lars Dahl Allerup
Rethink Value, Rud
Pedersen Public Affairs

Pavan Choudary
MTAI

Rafael Lopez Forero
Beckett Dickinson

**Air Commodore (Dr.)
Ranjan Kumar
Choudhury**
NHSRC

Ruma Banerjee
Neotia Healthcare

Sachin Patidar
Apollo Hospitals

Silvio Junquiera
Johnson & Johnson

Shweta Bhardwaj
Johnson & Johnson

Sophie Cross
Abbott

Acknowledgements (Key contributors)

Core committee members

Arvind Watts

Johnson & Johnson

Amit Garg

Terumo India Pvt. Ltd.

Gaurav Verma

Becton Dickinson

Jayashree Mapari,
Johnson & Johnson

Monika Pusha

Abbott

Ranjita Sood

Abbott

Sadhana Sheth

Siemens
Healthineers

Sahjogita Kathuria

Terumo India Pvt. Ltd.

Core committee members

Smeet Gala

Becton Dickinson

Vibhav Garg

Boston Scientific

Vijay Kumar

Roche Diagnostics
India Pvt. Ltd.

Vineet Gupta

Varian Medical
Systems

Associations

**Federation of
Indian Chambers
of Commerce &
Industry (FICCI)**

**Advanced Medical
Technology
Association
(ADVAMED)**

**Association of
Nurse Executives
– India (ANEI)**

PwC Healthcare Team

Dr. Rana Mehta

PwC

Dr. Preet Matani

PwC

Ashish Rampuria

PwC

Varun Karwa

PwC

**Samuel
Sunderarajan**

PwC

Thank you