



## Value Based Procurement



Hans Bax

*laboratorio*  
**SANITÀ 20/30**  
6 LUGLIO 2023 **CAMPANIA**  
NAPOLI - CITTÀ DELLA SCIENZA

### Hans Bax, MBA



bax00391@gmail.com

Over 25 years international experience in procurement and supply chain management in healthcare

Former:

- Procurement Director - **University Medical Center**, Groningen (NL)
- Country Lead – **GDEKK GPO**, Cologne (GER)

Today:

- Senior Advisor Market Access – **MedTech Europe**, Brussels (B)
- Manager- **Value Based Procurement Community of Practice**, Brussels (B)
- Lecturer Public Procurement & Tender Management - **NEVI**, Utrecht (NL)



### Healthcare systems across the world face major challenges

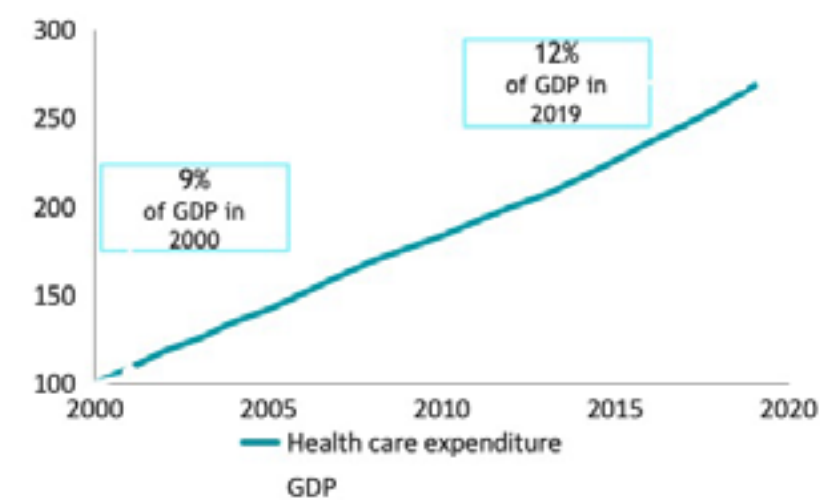
- **Increased demand** because of ageing populations and chronic diseases
- **Backlog of treatment cases** caused by COVID-19
- Healthcare professionals **shortage and workload**
- **Access to healthcare services and longer waiting times**
- **Patient outcomes variations** between healthcare providers
- Healthcare providers also performing activities that add **little to no value** to patients

3

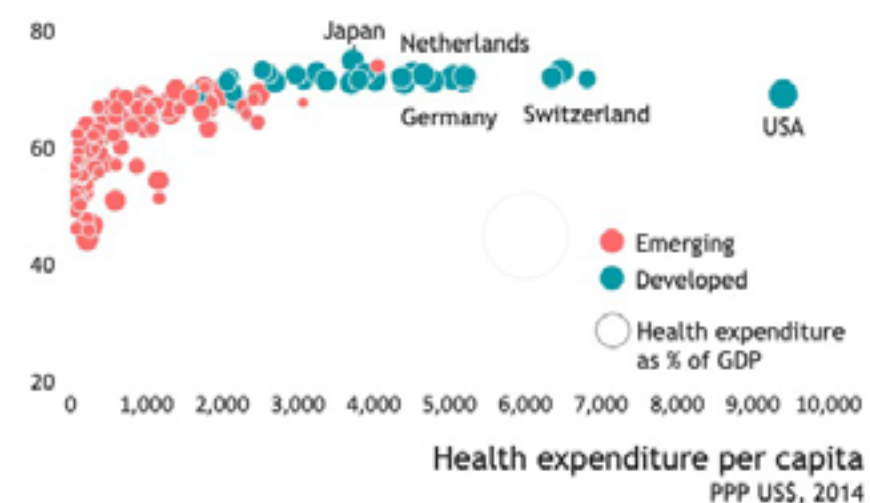


### Healthcare costs are rising with diminishing returns in outcomes

HC costs across OECD<sup>1</sup>; Indexed value (2000=100)



Health-adjusted life expectancy<sup>2</sup>  
 Years, 2015



WHO and OECD have estimated that 20-40% of HC spend is wasted

1. Based on 36 OECD countries providing data 2000-2019. 2. Health-adjusted life expectancy: Estimates the number of years in full health an individual is expected to live at birth by subtracting the years of ill health (weighted according to severity) from overall life expectancy  
 Source: OECD Health expenditures and GDP, 2022; WHO, BCG analysis



## Health- and patient outcome drivers

### 1. Patient/population

What *patient characteristics* might influence outcomes?

- Gender
- Age
- Education
- ...

### 2. Co-morbidities

What *co-morbidities* might drive outcomes and cost of care?

- E.g., hypertension
- E.g., diabetes
- E.g., neurological disorder
- ...

### 3. HC system

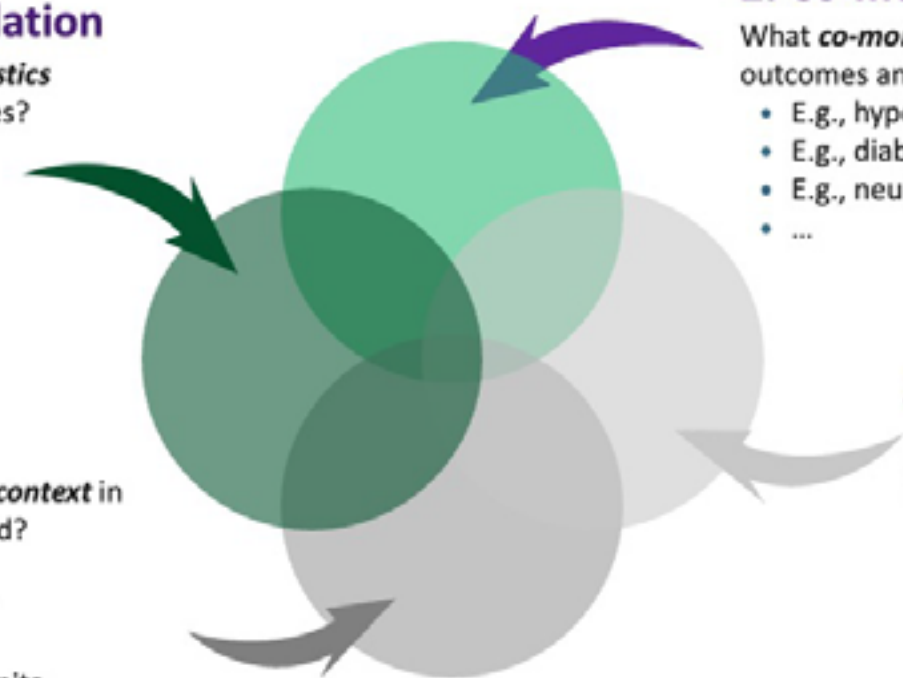
What is the *provider context* in which care is delivered?

- Size of provider
- Focus of provider
- Teaching hospital
- Discharges per capita
- ...

### 4. Care practice

What care *practice variation* between physicians and hospitals?

- Individual skills and experience
- Medical training
- **Medical technologies used**



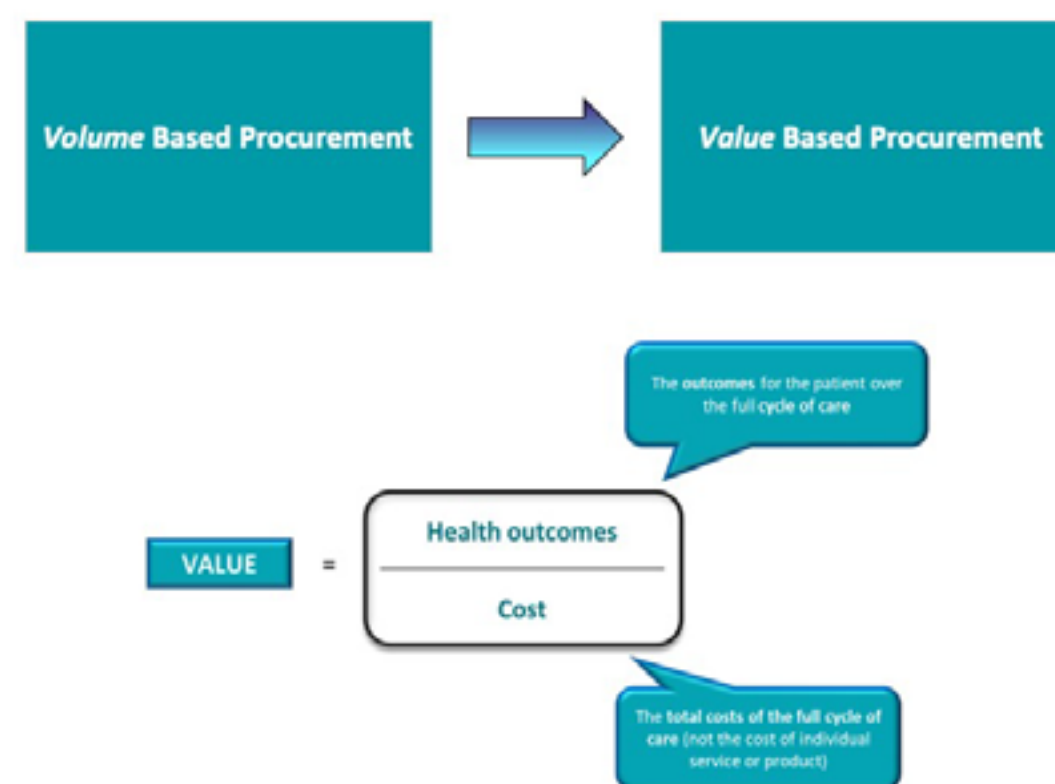
Source: BCG

5

www.sanita2030.it



### Value Based Procurement unlocks Value Based Healthcare



6



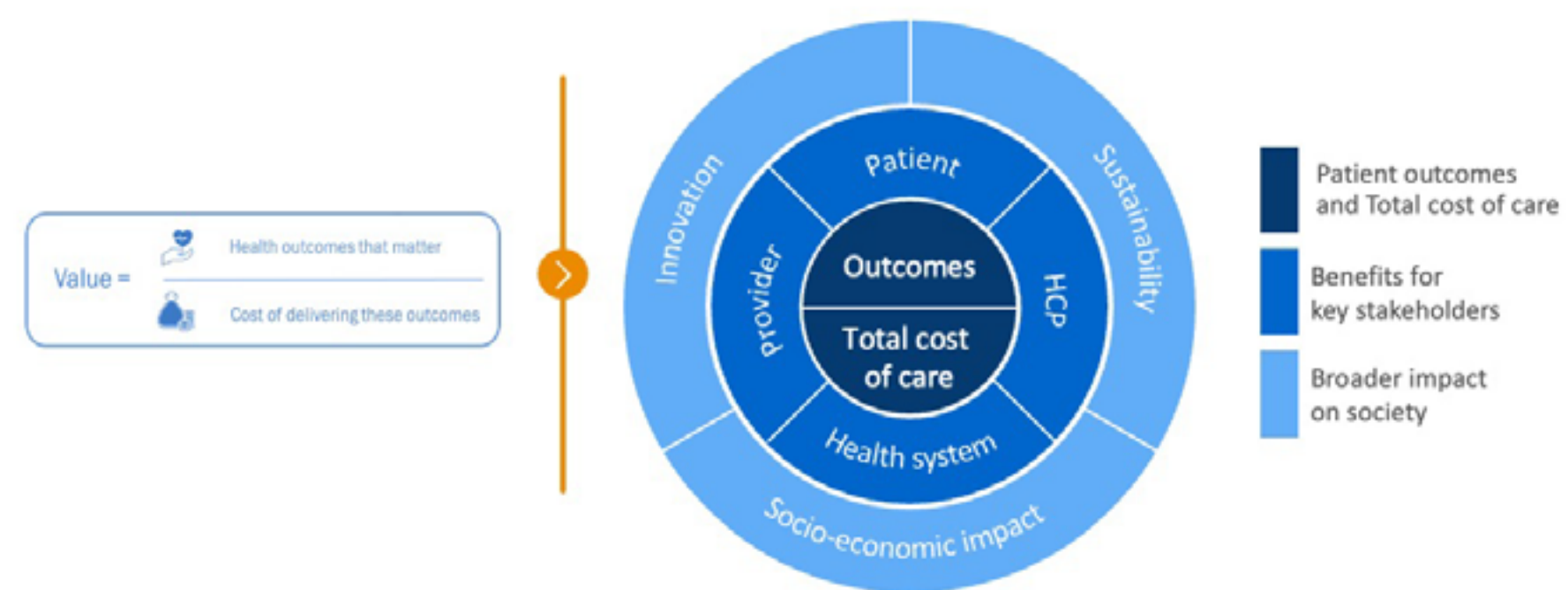
## Value Based Procurement

Identifying and contracting those medical technologies having the *most impact on (patient-) outcomes, quality of care and total cost of care*

- Procuring medtech to *create an impact* on improving of efficiency & effectiveness of healthcare delivery
- Procuring that specific medical technology (brand) demonstrating the *greatest level of impact*



### Value-Based Procurement framework - define the impact on outcomes to make

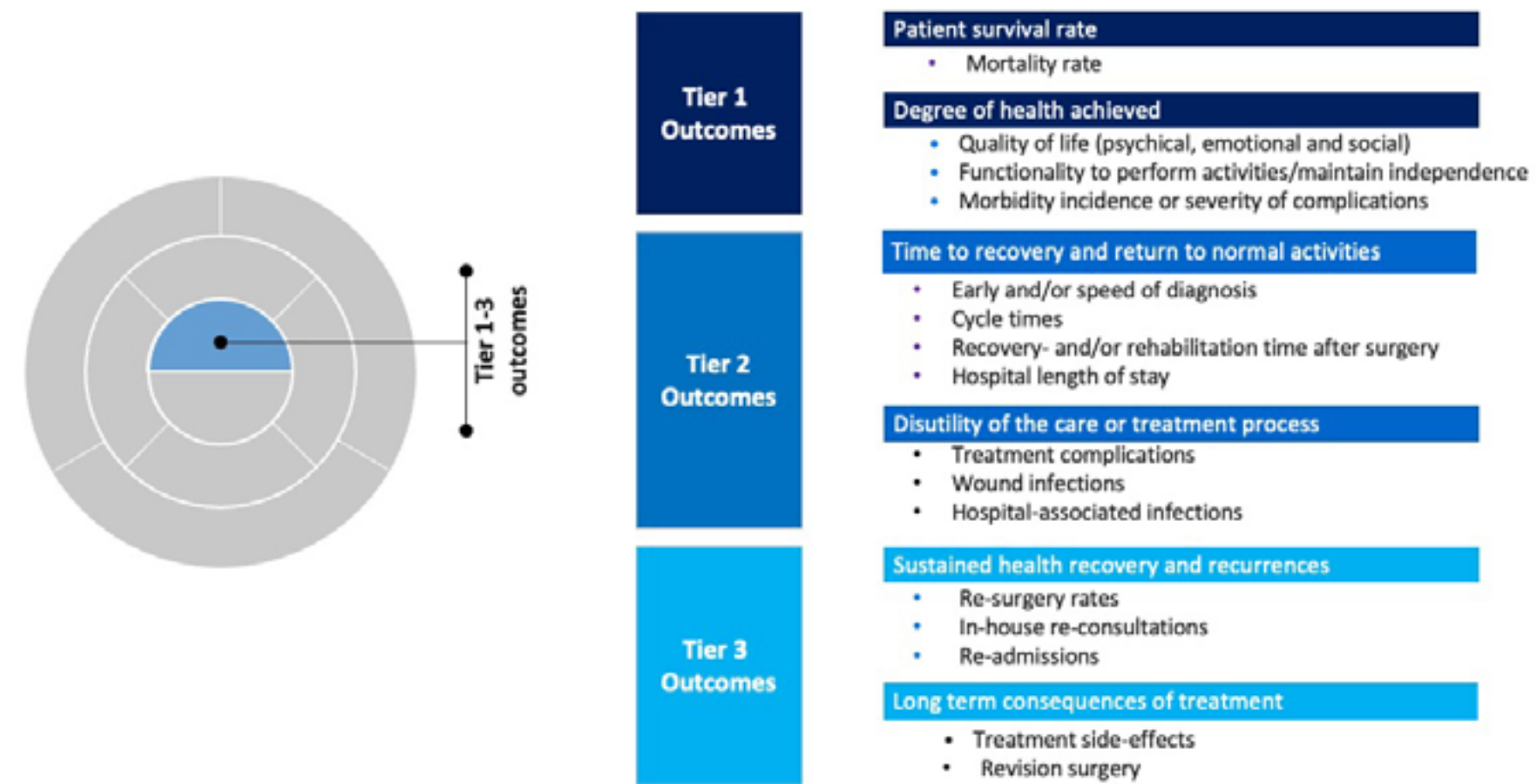


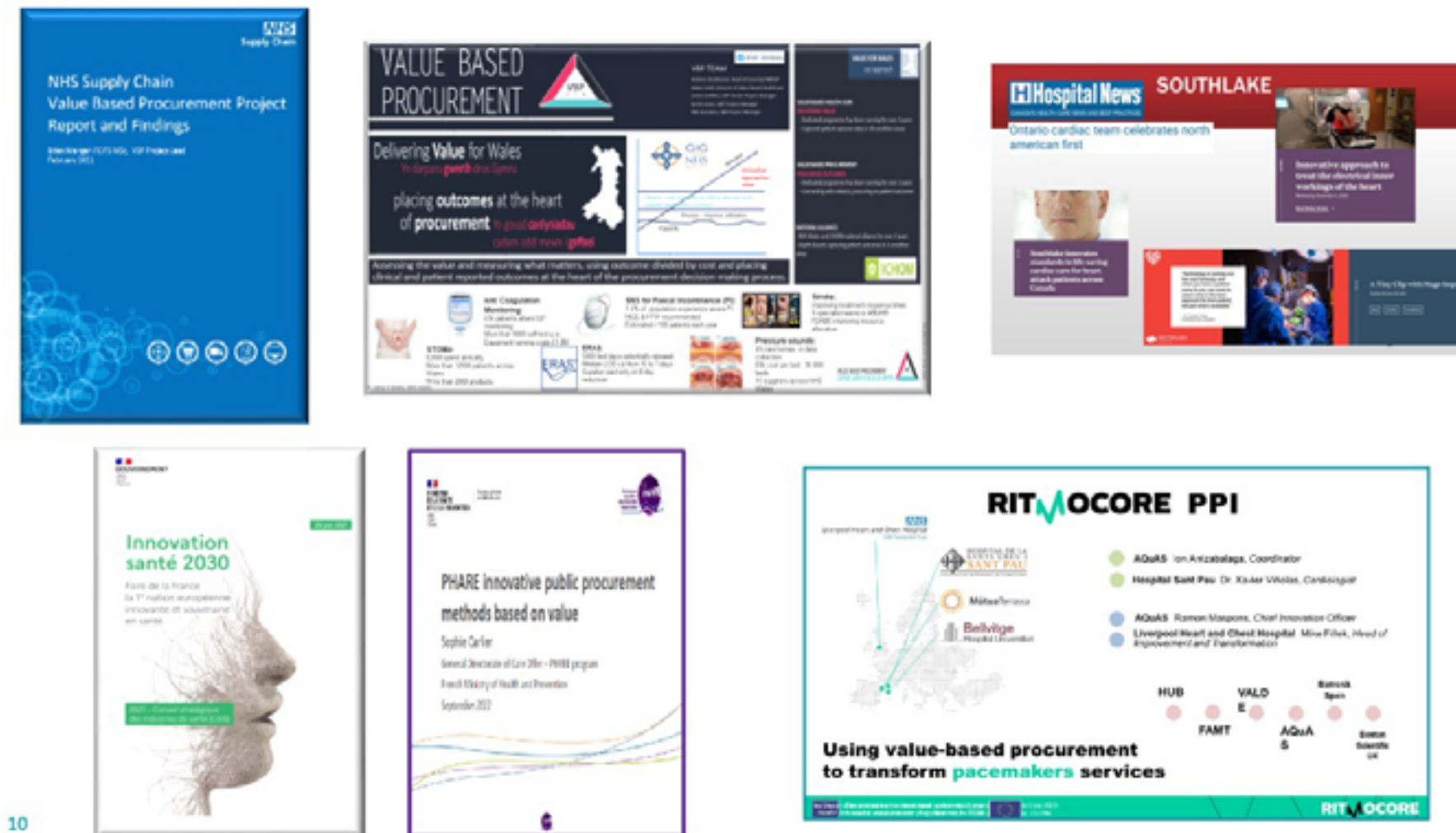
Disclaimer  
 The criteria listed in this document provided herein are non-exhaustive and are solely intended as examples for users, including but not limited to buyers and suppliers. These criteria do not encompass all possible factors that may be considered in evaluating awards or decisions, and their inclusion does not guarantee any specific outcome or result. The information provided should not be construed as legal, financial, or professional advice.





### Core layer - Patient outcome





10



## Denmark - Knee implants (1)



### Key procurement elements

- Knee replacement regarded **strategic service**
- Improvement of **patient outcomes**
- Support and ownership of **clinical management**
- Engaging into a **collaborative supplier relationship**

### Key contractual elements

- **8 year contract period**
- **VBA risk sharing agreement**
- Collaboration on **solutions to improve patient outcomes**
- Collaboration on **streamlining surgery & patient care process**

### Category Management

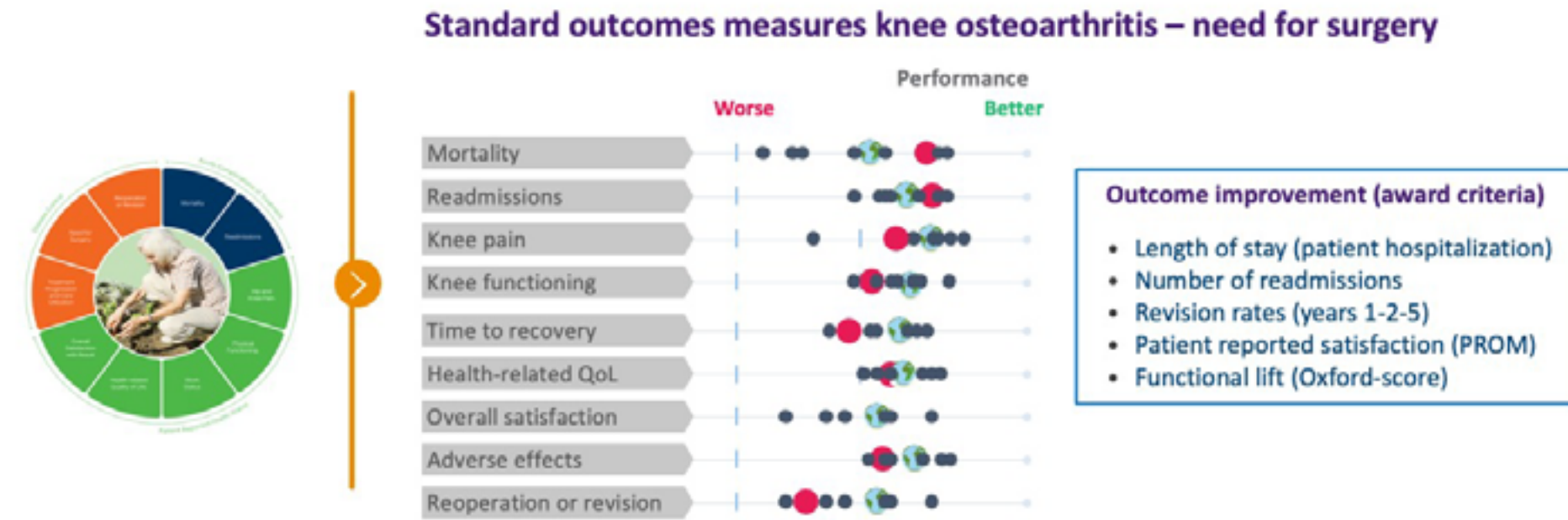
Volume goods and services	High goods and services
<p>High volume goods and services are those that are purchased in large quantities and are essential to the organization's operations. They are typically characterized by high competition and low margins.</p>	<p>High goods and services are those that are purchased in smaller quantities but are critical to the organization's operations. They are typically characterized by high margins and low competition.</p>
<p>High volume goods and services are typically purchased through a strategic sourcing process, which involves identifying key suppliers, negotiating contracts, and managing the supply chain.</p>	<p>High goods and services are typically purchased through a direct purchasing process, which involves identifying key suppliers, negotiating contracts, and managing the supply chain.</p>

### Tender process

- Category strategy Pre-study → Dialogue with market → User group process → Consultation
- **Individual dialogue meetings** with the 6 suppliers adjusted and shaped the patient outputs, development, risk sharing and payment parameters.
  - A **consultation of the draft tender documents** with written responses from 5 suppliers further sharpened the risk sharing and payment parameters.
  - **Open public tender**



## ICHOM Patient Centered Outcome Measures (2)





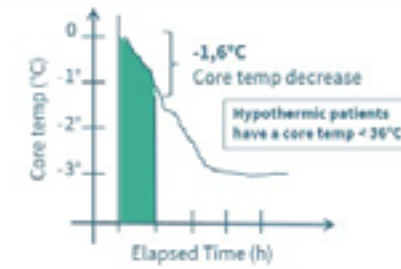
### Denmark - Knee implants (3)

Outcome award criteria	Total knee arthroplasty	
Clinical patient outcome	Baseline	Results yr 1
Average patient hospitalization time (in hours)	51.6	46.8
Average patient re-admission rate 30 days after discharge	5.0%	2.4%
Average patient revision rate after 1 <sup>st</sup> postoperative year	1.7%	N.A.
Average patient revision rate after 2 <sup>nd</sup> postoperative year	2.0%	N.A.
Average patient revision rate after 5 <sup>th</sup> postoperative year	4.1%	N.A.
Patient reported outcomes	Baseline	Results yr 1
Very satisfied reported total outcome 1 year after surgery	65%	66%
Satisfied or better reported total outcome 1 year after surgery	85%	96%
Very satisfied reported functional lift 1 year after surgery	65%	60%
Satisfied or better reported functional lift 1 year after surgery	85%	95%



## France: Hypothermia Management

### Patient core temperature drop during anesthesia



Stoohs R, Perioperative Fluid Balance, Anesth. 9(2) 2010

### Complications



14 Source: uniha.org

### Problem identification at HC Lyon (pilot site)



**60%**  
 Patients hypothermic on arrival in the recovery room

### Objective

**IMPROVE PATIENT NORMOTHERMIA RATE**

Comprehensive solution to keep patient core temperature above 36.5°C along the peri-/post-operative process



### UK: NHS Supply Chain (1)



NHS Provider	Care pathway	Product	Impact
Manchester University	Parotid surgery	Tissue glue	<i>Replacing stapling/sutures and wound drain:</i> Reduction length of stay (2,5 days -> day case) Improving patient flow Reducing patient discomfort Total cost reduction (UKP 75k)
Oxford University Hospitals	Intravenous antibiotic therapy	Elastomeric pump	<i>From hospitalisation to home antibiotic treatment:</i> Reduction length of stay (1.143 bed days; 360k) Increased patient satisfaction
North Midlands University Hospitals (*)	Urethral catheterisation practice	Urinary catheter closed-system insertion	CAUTI reduction (100%) Nurse time savings (83hrs on 1.000 procedures) Total cost reduction (UKP 100k on pilot site) Waste reduction



### UK: NHS Supply Chain (2)

North Midlands  
 University  
 Hospitals

Urinary catheter  
 closed-system  
 insertion

- CAUTI rate reduced to **zero**
- **Savings** of over **£47,000** per annum
- Reduction in **patient stay**
- Reduction in **complaints**
- 78kg of **clinical waste** saved
- 11kg **plastic waste** avoided
- 5 minute per catheterisation **time saving**



Potential Trust Benefits



80% infection  
 reduction



£415,200 cost  
 avoidance



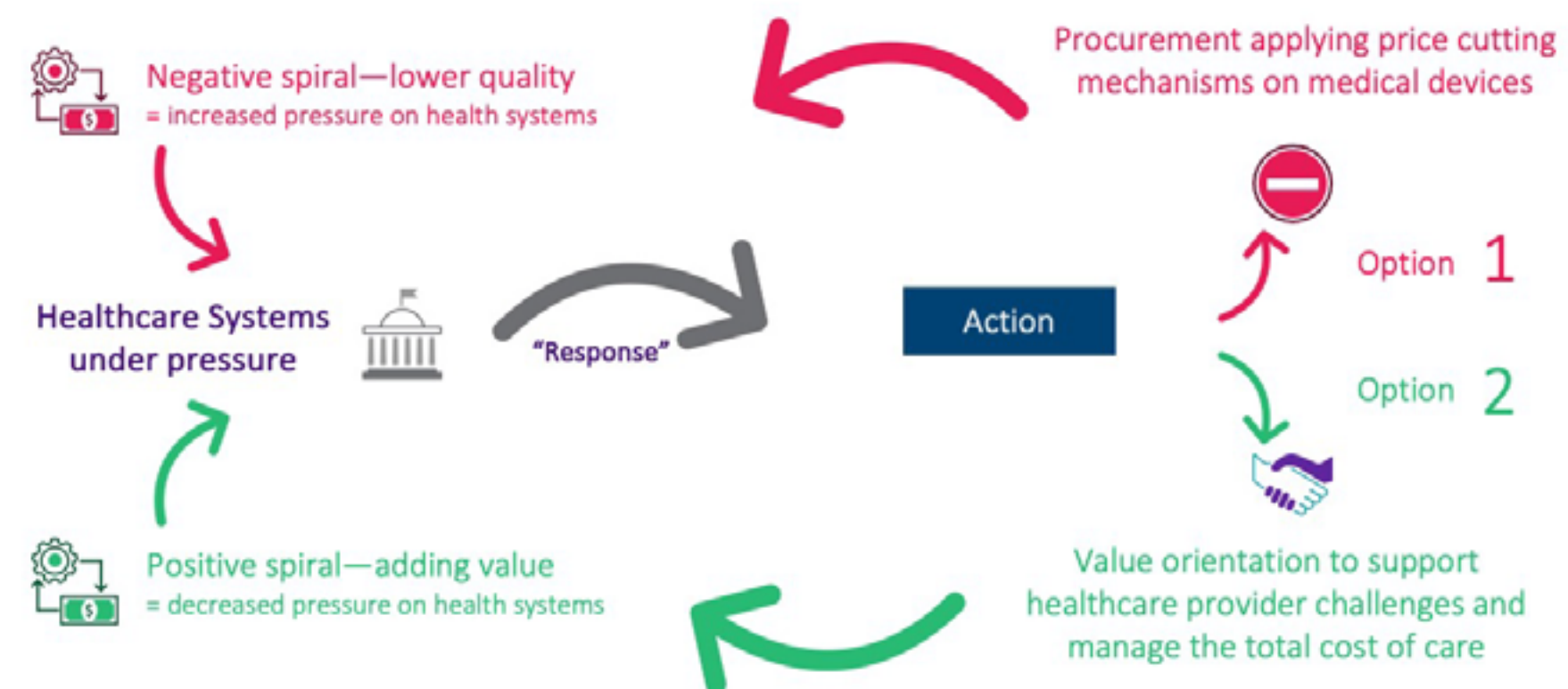
1,200 additional  
 bed day capacity

\* Based on an average of 200 CAUTIs per year





### We need a new Procurement paradigm



17

### **Delitti in materia di violazione del diritto d'autore (Art. 25-novies, D.Lgs. n. 231/2001) [articolo aggiunto dalla L. n. 99/2009]**

- Messa a disposizione del pubblico, in un sistema di reti telematiche, mediante connessioni di qualsiasi genere, di un'opera dell'ingegno protetta, o di parte di essa (art. 171, legge n.633/1941 comma 1 lett. a) bis)
- Reati di cui al punto precedente commessi su opere altrui non destinate alla pubblicazione qualora ne risulti offeso l'onore o la reputazione (art. 171, legge n.633/1941 comma 3)
- Abusiva duplicazione, per trarne profitto, di programmi per elaboratore; importazione, distribuzione, vendita o detenzione a scopo commerciale o imprenditoriale o concessione in locazione di programmi contenuti in supporti non contrassegnati dalla SIAE; predisposizione di mezzi per rimuovere o eludere i dispositivi di protezione di programmi per elaboratori (art. 171-bis legge n.633/1941 comma 1)
- Riproduzione, trasferimento su altro supporto, distribuzione, comunicazione, presentazione o dimostrazione in pubblico, del contenuto di una banca dati; estrazione o reimpiego della banca dati; distribuzione, vendita o concessione in locazione di banche di dati (art. 171-bis legge n.633/1941 comma 2)
- Abusiva duplicazione, riproduzione, trasmissione o diffusione in pubblico con qualsiasi procedimento, in tutto o in parte, di opere dell'ingegno destinate al circuito televisivo, cinematografico, della vendita o del noleggio di dischi, nastri o supporti analoghi o ogni altro supporto contenente fonogrammi o videogrammi di opere musicali, cinematografiche o audiovisive assimilate o sequenze di immagini in movimento; opere letterarie, drammatiche, scientifiche o didattiche, musicali o drammatico musicali, multimediali, anche se inserite in opere collettive o composite o banche dati; riproduzione, duplicazione, trasmissione o diffusione abusiva, vendita o commercio, cessione a qualsiasi titolo o importazione abusiva di oltre cinquanta copie o esemplari di opere tutelate dal diritto d'autore e da diritti connessi; immissione in un sistema di reti telematiche, mediante connessioni di qualsiasi genere, di un'opera dell'ingegno protetta dal diritto d'autore, o parte di essa (art. 171-ter legge n.633/1941)
- Mancata comunicazione alla SIAE dei dati di identificazione dei supporti non soggetti al contrassegno o falsa dichiarazione (art. 171-septies legge n.633/1941)
- Fraudolenta produzione, vendita, importazione, promozione, installazione, modifica, utilizzo per uso pubblico e privato di apparati o parti di apparati atti alla decodificazione di trasmissioni audiovisive ad accesso condizionato effettuate via etere, via satellite, via cavo, in forma sia analogica sia digitale (art. 171-octies legge n.633/1941).

**[Torna all'inizio](#)**