

# MEAT Pilot Test at Hospital Clínic Barcelona: *Final revision*

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# 2014 EU Directive puts emphasis on quality vs. price and opens the door to applying VBHC<sup>1</sup> concepts in procurement

## EU Directive on public procurement from 2014



**Article 67**

**Contract award criteria**

2. The most economically advantageous tender from the point of view of the contracting authority shall be identified on the basis of the 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. Such criteria may comprise, for instance:

**MEAT: Most economically advantageous tender**

**Art. 68: [excerpt] Life-cycle costs, incl.**

- costs relating to acquisition,
- costs of use, such as consumption of energy and other resources,
- maintenance costs,
- end of life costs, such as collection and recycling costs.
- costs imputed to environmental externalities linked to the product, service or works during its life cycle

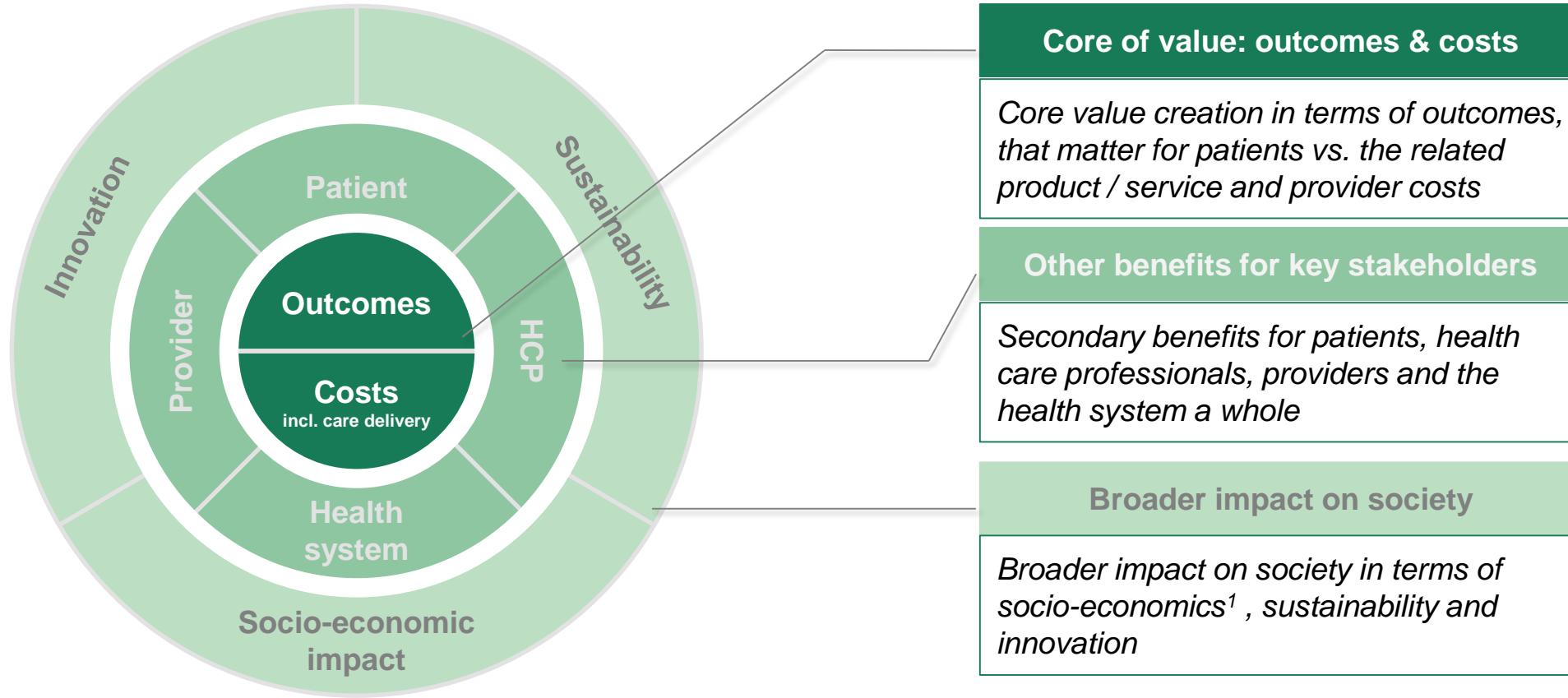
**Point. (96): [excerpt]**  
**Common methodologies should be developed at Union level for the calculation of life-cycle costs for specific categories of supplies or services.** Where such common methodologies are developed, their use should be made compulsory.

Furthermore, the feasibility of establishing a common methodology on social life cycle costing should be examined, taking into account existing methodologies such as the Guidelines for Social Life Cycle Assessment of Products adopted within the framework of the United Nations Environment Program

1. Source: EUR-Lex, MedTech Europe, BCG

# Proposed framework in 3 layers

**Holistic definition of value, starting with the patient outcomes and cost to achieve them**



**Each layer contains several categories of criteria, with importance of criteria decreasing from core outwards**

Source: [THE BOSTON CONSULTING GROUP](#)

1. E.g. impact on non-professional care-givers, or economic impact of patients being out of the workforce for health reasons

MedTech Europe together with BCG and different key actors\* in Europe established a common framework to align all stakeholders on MEAT VBP tendering

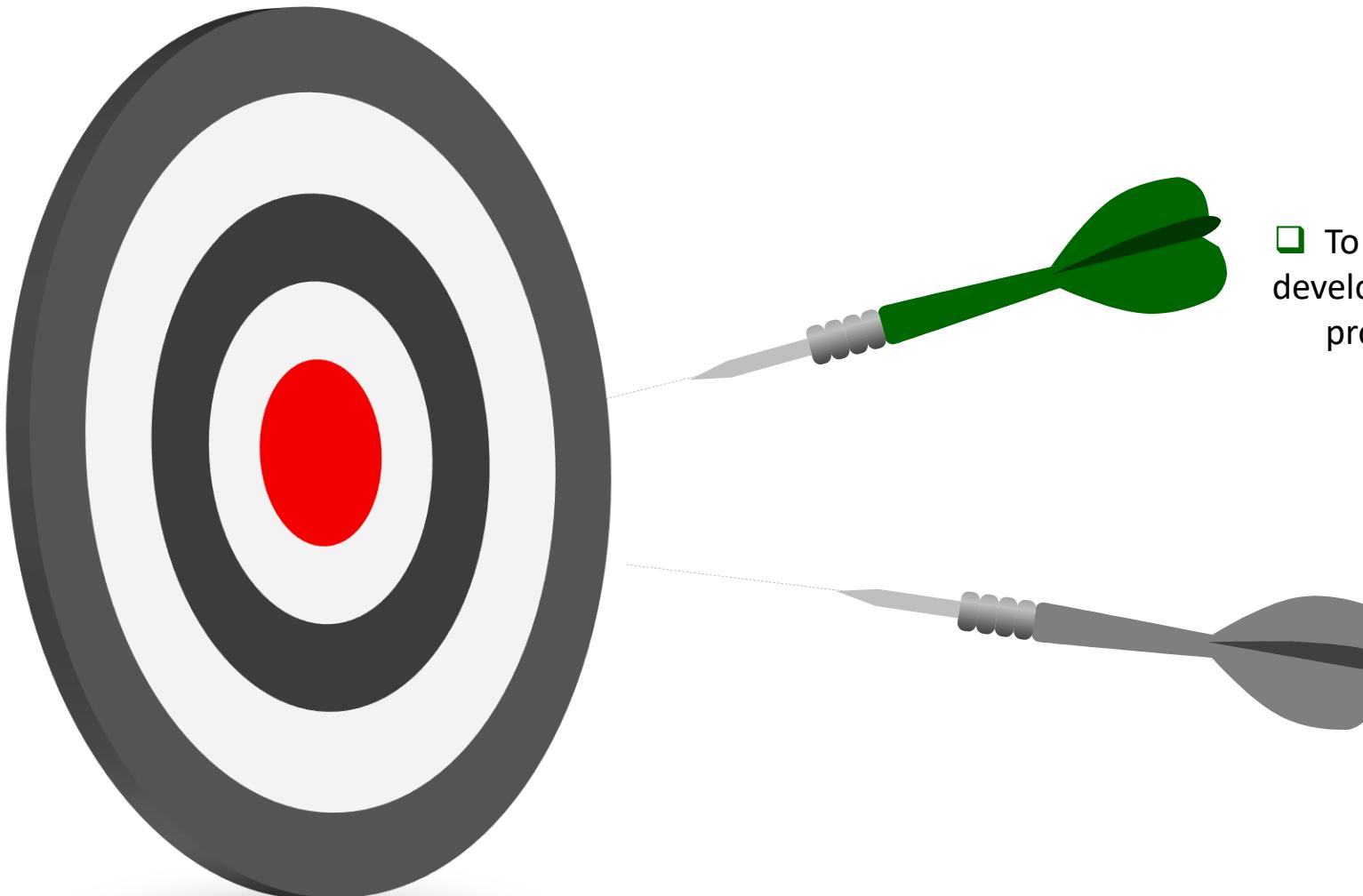
Layer	Category	Criteria	Layer	Category	Criteria	
Outcomes	Outcomes & evidence	(1) Evidence of relevant outcomes improvement (2) Existence of high quality outcomes data	Other benefits for key stakeholders	Patients' secondary benefits	(20) Patient and/or relative comfort and convenience (21) Patient flexibility & mobility (22) Impact on treatment adherence	
	Outcomes focus	(3) Support in measuring and reporting on outcomes (4) Willingness to offer outcomes-dep. risk-sharing		HCP benefits	(23) Secure usage for care providers (24) Ease-of-use / handling & functionality (25) Training and access to education	
	Purchasing	(5) Price of purchasing / renting product (6) Compatibility: required upgrades to infrastructure (7) Conversion: staff training for new product (8) Compatibility: upgrades to systems / infrastructure		Provider benefits	(26) Maintainability, warranty & tech. service support (27) Support improving efficiency along patient pathway (28) Alignment and support with reimburse. structure (29) Support on admin., storage or logistics (30) Strategic fit for provider and support of strategy	
		(9) Spare parts		Health system benefits	(31) Reduced long term costs of treatment <sup>1</sup> (32) Reduction of rehospitalization / # of treatments	
	Maintenance	(10) Technical staff time (11) Service contract		Innovation	(33) Develop. of new and substantially improved tech. (34) Contribution to development of health care	
	Disposal	(12) Disposal / decommissioning		Sustainability	(35) Environmental impact (36) Socially responsible product value chain	
	Care delivery	(13) Medical staff time using device (14) Ongoing staff training (15) Cost of consumables (16) Unplanned usage: failure rate (17) Infrastructure usage (18) Power/gas usage (19) Reprocessing costs		Socio-economic impact	(37) Impact of people not in the workforce (38) Burden carried by non professional care providers (39) Impact on competition in MedTech sector	
		1. e.g. from disease progression Source: MedTech Europe, BCG		Criteria which might be included in supplier selection		

Source: THE BOSTON CONSULTING GROUP

This is a descriptive framework not prescriptive, the relevant criteria should be identified in each Hospital, but ...  
...Not all - less is more

\*from procurement and HTA fields

# The HCB was invited to participate in a MEAT Pilot Test



## → **Main Objective**

- To test the **viability** and **feasibility** of the MEAT Tool developed by MedTech & Boston Consulting Group, for procurement of health technologies to comply with the 2014/24/EU Directive

## → **Secondary objectives**

- To test the **hypothesis**: The most cheap product (as per offer price) is not necessary the MEAT

# Hospital Clinic Barcelona Pilot Test Process

00

## HCB team preparation

Selection of technologies.  
Health care professionals:  
identification & information

01

## Identification

Inform companies on project  
and selected technologies

02

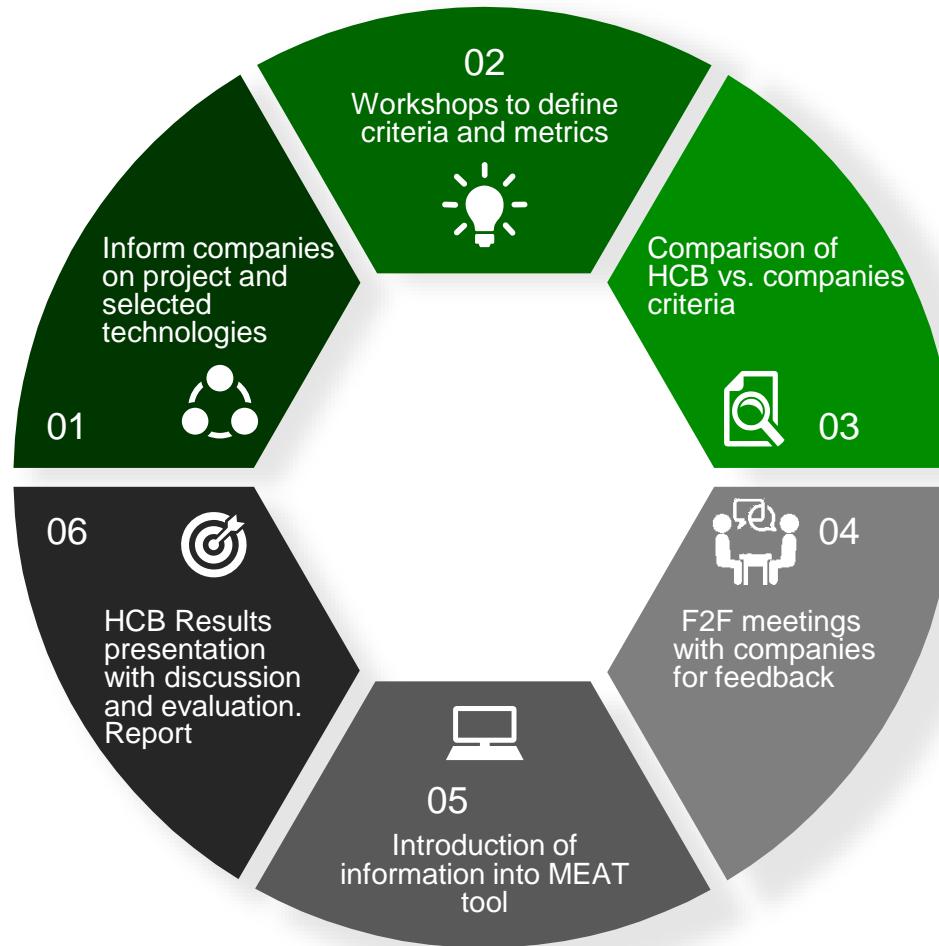
## HCB Workshops

Internal working meetings with  
multidisciplinary groups to  
define criteria and metrics

03

## Criteria Match

Each company provides its data  
/ criteria and are compared with  
those of HCB. Final criteria sent



04

## Gathering Info & Feedback

Face-to-face meetings with  
companies to receive  
feedback on the process and  
criteria

05

## MEAT tool

Using the tool to asses the  
MEAT

06

## Diffusion

“Internal” Report and results  
presentation ton, discussion  
and evaluation

# 00 Preparing the Grounds for the Project at the HCB

## Creating the HCB core Team

- Procurement
- Equipment, technology and procurement Unit (Infrastructures)
- Assessment of Innovations and New Technologies

## Identifying and selecting technologies

- TAVI
- Diapers
- Underpads

**MEAT**

## Looking for external advise and support

- FENIN & MedTech.

1

2

3

4

- **TAVI:** cardiologist, manager of cardiology Institute
- **Diapers and underpads:** nurses, purchasing manager

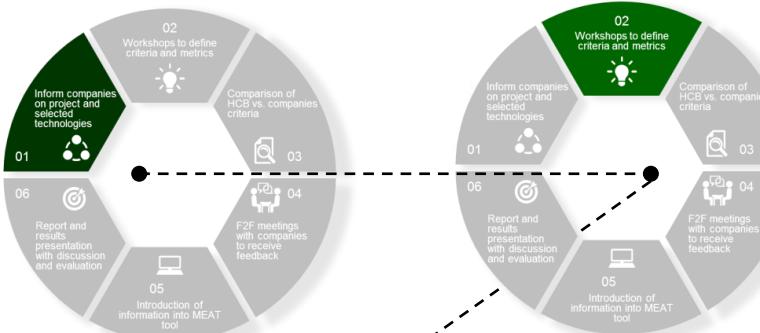
## Identifying the key health care professionals

TAVI: Transcatheter aortic valve implantation

# Key steps by phases

## 1. IDENTIFICATION

- To meet legal "processes" to carry out the pilot

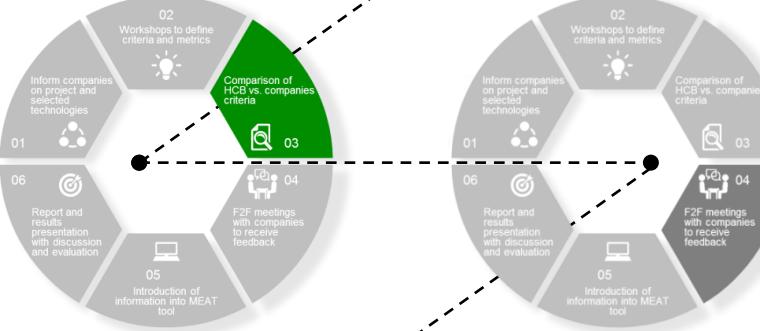


## 2. HCB WORKSHOPS

- To define the role of each person involved before to develop the internal meeting
- To define before who will do this work to be able to have efficient meetings

## 3. MATCH

- The materials to be sent to companies must to be very clear

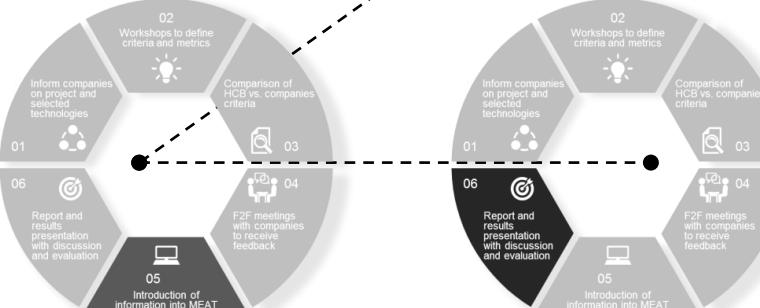


## 4. FEEDBACK

- To have all the information provided by the companies reviewed before the meetings,
- To have well planned the activities to give time between phases for analyzing the information received

## 5. MEAT TOOL

- To selected the most feasible WTP method
- To use an explicit, transparent and evidence-based method helps health professionals to understand and trust the whole process, bringing robustness to the final results obtained



## 6. REPORT

- MS Excel tool from MedTech&BCG was useful defining the categories, criteria/ sub-criteria and units of measure; as well as for elaborating the "performance matrix"
- To test the background hypothesis

# 03 Criteria Match – HCB compared with Companies ones

Final List example - Results Layer / Criteria, sub criteria, unit of measure and scores *Illustrative*

Importancia relativa	Capa	Importancia relativa	Categoría	Importancia relativa	Criteria	Importancia relativa	Subcriterios	Importancia relativa	Definición	Importancia relativa	Unidad de Medida	Score
45%	Resultados	80%	Resultados & Evidencia	70%	Evidencia de mejora de resultados relevantes	75%	Grado de absorcion	33,33%	Mínimo cada 3 horas cambio	6,30%	Tiempo de cambio en horas	Menor que 3 es cero puntos, el que tiene 3 tiene 10 puntos, el que mas ofrece maxima puntuacion y los otros proporcional
						33,33%	Capacidad de absorción mìnima 1200 ml	6,30%	Mililitros			Menor que 1200 es cero puntos, el que tiene 1200 tiene 10 puntos, el que mas ofrece maxima puntuacion y los otros proporcional
						33,33%	Nucleo absorbente 700 ml	6,30%	Mililitros			Menor que 700 es cero puntos, el que tiene 700 tiene 10 puntos, el que mas ofrece maxima puntuacion y los otros proporcional
						10%	Barrera anti escape	80%	Barrera que exista	2,02%	Existe No existe	no 0 puntos Si 100 puntos
						15%		15%	Barrera que sea atraumatica	0,38%	Existe No existe	no 0 puntos Si 100 puntos
						5%		5%	Doble Barrera que exista	0,13%	Si/No	no 0 puntos Si 100 puntos
						1%	Indicador de humeda (nivel de saturació	30%	Indicador de humedad que exista	0,08%	Existe No existe	no 0 puntos Si 100 puntos
						70%		70%	Cambio de color al llegar al tope y mantenido	0,18%	Alta moderada baja no existe	No tiene 0 puntos, baja 10 puntos, moderada 50 puntos, alta 100
						1%	Sistema anti olor			0,25%	Existe No existe	no 0 puntos Si 100 puntos
								5%	Existencia de elementos de protección	0,05%	Si/No	no 0 puntos Si 100 puntos
							4% Ausencia de lesiones en el paciente	60%	Transpirabilidad	0,60%	Si/No	no 0 puntos Si 100 puntos
								20%	Libre de látex	0,20%	Si/No	no 0 puntos Si 100 puntos
								15%	Libre de ftalatos (DEPH)	0,15%	Si/No	no 0 puntos Si 100 puntos
								2%	Sistema de cierra	0,35%	Si/No	no 0 puntos Si 100 puntos
								30%	Bandas anchas	0,15%	Si/No	no 0 puntos Si 100 puntos
								33,33%	Anatómico	0,42%	Si/No	no 0 puntos Si 100 puntos
								33,33%	Cintura elástica	0,42%	Si/No	no 0 puntos Si 100 puntos
								33,33%	Bandas elasticas en piernas	0,42%	Si/No	no 0 puntos Si 100 puntos
								2%	Confort del paciente	0,50%	Alta moderada baja	Baja 10 puntos, moderada 50 puntos, alta 100
								40%	Existencia de datos de resultados de alta calidad - Nivel de evidencia	4,3%	A: Datos procedentes de	Alta 100; Nivel B y C 50 puntos, si no tienen 0 puntos
								60%	Aportacion de muestras para valoración	6,5%	Si/No	no 0 puntos Si 100 puntos
						20%	Enfocado a resultados	80%	Voluntad de ofrecer riesgo compartido dependiendo	100%	Voluntad de ofrecer riesgo compartido dependiendo	no 0 puntos Si 100 puntos
						20%			Apoyo en la medición y reporte de resultados	100%	Apoyo en la medición y reporte de resultados	no 0 puntos Si 100 puntos

# 05 MEAT Tool – Quantitative analysis to assess the MEAT

Final List example - Criteria and sub-criteria, relative weight, unit of measure and score ~~Illustrative~~

Importancia Relativa	Subcriterios	Tipo de variable	Importancia Relativa	Unidad de medida
20%	Otras complicaciones	% de incidencia de otras complicaciones neurológicas definidos como all stroke a los 30 días	5,8%	(>6% 0; 6-4% 50; <4% 100)

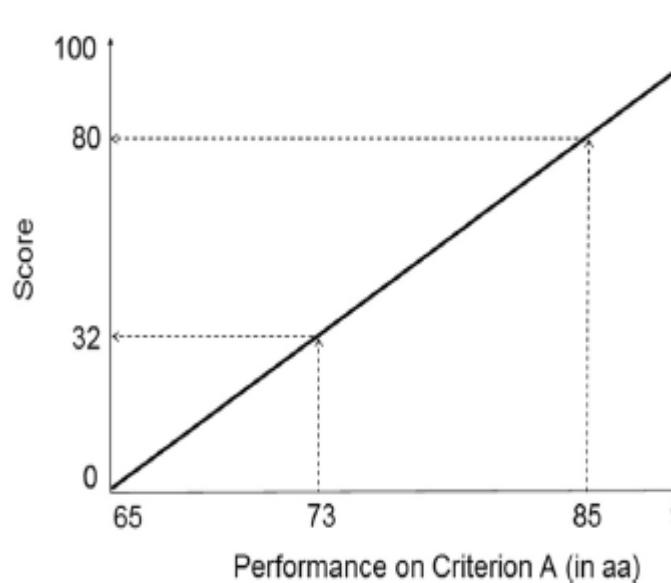
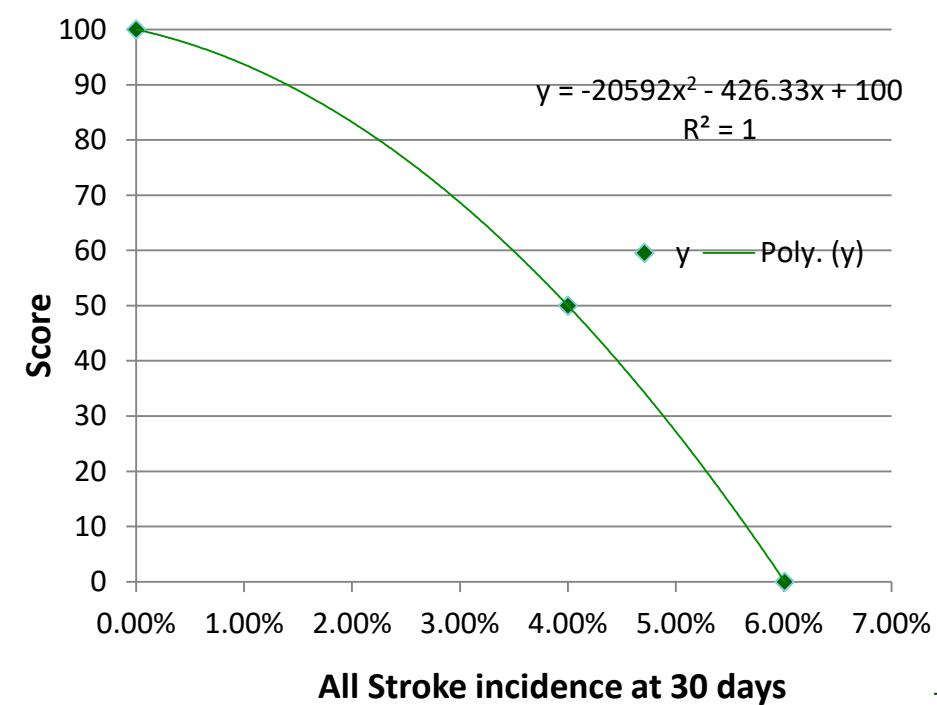


Fig. A1 – Linear partial value function for criterion A.

Source: Thokala P, VALUE IN HEALTH 19(2016)1 – 13



Incidencia complicaciones neurológicas (all stroke 30 días)	Score	Evidencia A	Evidencia B	Evidencia C
		Score	Score	Score
0,00%	100,0	100,0	100,0	80,0
0,01%	100,0	100,0	100,0	80,0
0,02%	100,0	100,0	100,0	80,0
0,03%	99,9	99,9	99,9	79,9
0,04%	99,9	99,9	99,9	79,9
0,05%	99,8	99,8	99,8	79,9
0,06%	99,8	99,8	99,8	79,8
0,07%	99,7	99,7	99,7	79,8
0,08%	99,7	99,7	99,7	79,8
0,09%	99,6	99,6	99,6	79,7
0,10%	99,6	99,6	99,6	79,7
...	...	...	...	...
5,87%	4,3	4,3	4,3	3,4
5,88%	4,0	4,0	4,0	3,2
5,89%	3,7	3,7	3,7	3,0
5,90%	3,5	3,5	3,5	2,8
5,91%	3,2	3,2	3,2	2,5
5,92%	2,9	2,9	2,9	2,3
5,93%	2,6	2,6	2,6	2,1
5,94%	2,3	2,3	2,3	1,8
5,95%	2,0	2,0	2,0	1,6
5,96%	1,7	1,7	1,7	1,4
5,97%	1,4	1,4	1,4	1,2
5,98%	1,2	1,2	1,2	0,9
5,99%	0,9	0,9	0,9	0,7
6,00%	0,6	0,6	0,6	0,5
6,01%	0,3	0,3	0,3	0,2
6,02%	0,0	0,0	0,0	0,0

# 05 MEAT Tool – Quantitative analysis to assess the MEAT

Estimating the WTP: Cost Layer example - monetary base to determine the MEAT based on HCB's ideals /expectations of criteria's performance

34%	Coste	97% Producto	99% Compra	99% Precio de compra	+ 18,000€ by Health Product
					Compatibilidad: se requieren actualizaciones de infraestructura
					0%
					1% Transformación: formación del personal para el producto nuevo
				0% Compatibilidad: actualización de sistemas / Infraestructuras	
				1% Mantenimiento	- 600€ by Health Product (18,000€/annual for 30 Health Products)
					100% Piezas de mantenimiento
					0% Tiempo del personal técnico
					0% Contrato de servicios
				0% Eliminación Beneficios secundarios para los pacientes / familiares	- 1.500 € by Health Product ( 45,000€ Max. annual contribution for 30 Health Products)
					0% Comodidad y bienestar de paciente y / o Flexibilidad y movilidad del paciente
					0% Impacto en la adhesión al tratamiento
					0% Utilización segura por el proveedor del
					40% Beneficios para los P. Sanitarios
				10% Facilidad de uso / funcionalidad y manejo	- 2,222 € by Health Product ( 200,000€ Max. contribution in the next 3 year for 90 Health Product )
				90% Formación y acceso a la educación	
				59% Beneficios para el proveedor	- 2,000 € by T Health Product
					10% Duración, garantía y soporte técnico
					0% Apoyo a la mejora de la eficiencia del flujo del paciente
					0% Alineación y apoyo con la estructura de reembolso
					0% Apoyo en asuntos administrativos, almacenamiento o logística
					90% Ajuste estratégico para el prestador y apoyo a la estrategia
			1% Beneficios para el Sistema sanitario	100% Costes menores de tratamiento a largo plazo	
				0% Reducción de re-hospitalizaciones / número de tratamientos	

$\Sigma$  Variables expressed directly in unitary money = 18,000 € - 600 € - 1,500 € - 2,222 € - 2000 € = 11,678 €

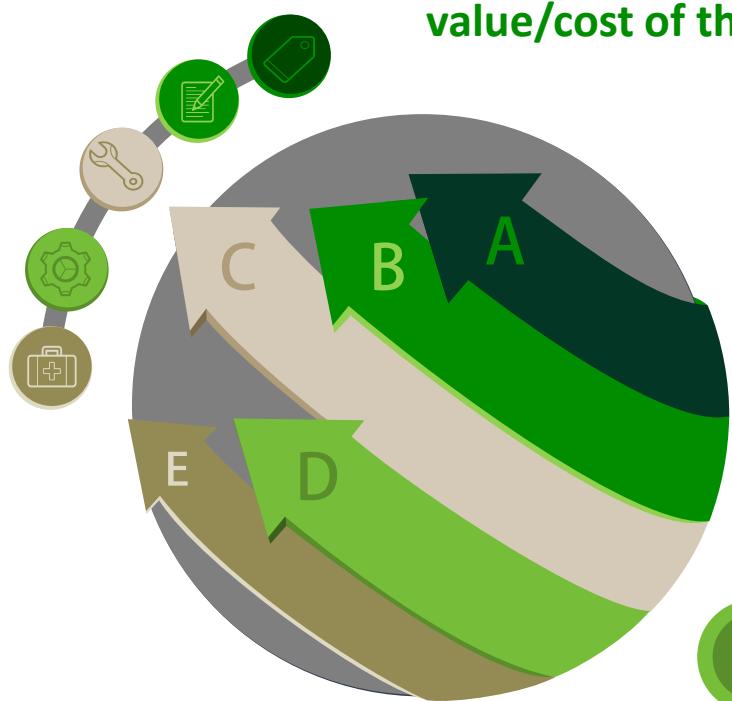
$\Sigma$  Variables expressed directly in unitary money = 54,9% of the total relative weight

Variable	Relative Weight	WTP
Incidencia Complicaciones Neurologicas (%)	1,45%	307,4 €
Incidencia complicaciones vasculares (%)	1,45%	307,4 €
Insuficiencia aortica (%)	5,78%	1.229,7 €
Incidencia marcapasos (%)	5,78%	1.229,7 €
Supervivencia (%)	4,91%	1.045,3 €
Nivel de Evidencia en QoL	4,77%	1.014,5 €
RCEI por AVAC vs cirugía	4,77%	1.014,5 €
Esquema RSA	5,10%	1.085,1 €
Precio TAVI	32,32%	18.000,0 €
Formacion personal	0,33%	69,5 €
Fungibles	0,02%	3,5 €
Otra Válvula	0,31%	600 €
Formación continua personal	1,02%	217,0 €
Facilidad de Uso	1,20%	255,3 €
Aporte ecc	10,80%	1.500 €
Coste custodia	1,77%	376,6 €
Soporte estrategia (€)	11,15%	2.222 €
Aportar muestra	2,39%	508,4 €
Dcto volumen por aumento TAVI al HCB	2,39%	508,4 €
Ahorro incremental	0,30%	2.000,0 €
Desarrollo Nvas Tecnologías	1,80%	383,0 €
Impacto medioambiental	0,05%	10,6 €
RSC	0,05%	10,6 €
Impacto en la competitividad del sector de tecnología sanitaria	0,10%	21,3 €

Illustrative

# 05 MEAT Tool – Qualitative analysis to assess the MEAT

Estimating the WTP: Sweden example - Estimating the value/cost expected



The project group has to agree on the expected total value/cost of the procurement, which could be based on

- A Total investment of equipment
- B Education
- C Maintenance and support
- D Consumables that has to be bought from the same supplier
- E Total cost of care

The project group decides

- The total monetary value of all criteria after recommendation from purchaser, based on estimated total cost
- The monetary value of each criterion
- The monetary value of outcomes for each criterion depending on how many outcomes there is

# 05 MEAT Tool – Estimating the MEAT for TAVIs

Companies	$\Sigma$ Outcomes & Costs Layer	$\Sigma$ Other benefit for key stakeholder layer	$\Sigma$ Broader impact on society layer	Total monetary value
Ideal	16,038 €	-5,577 €	-515 €	9,947 €
Company A	2nd	Best	3rd	18,456 €
Company B	Best	3rd	4th	16,939 €
Company C	4th	4th	2nd	37,661 €
Company D	3rd	2nd	Best	23,046 €

MEAT

# 05 MEAT Tool – Estimating the MEAT for Diapers

Companies	$\Sigma$ Outcomes & Costs Layer	$\Sigma$ Other benefit for key stakeholder layer	$\Sigma$ Broader impact on society layer	Total monetary value
Ideal	0.006 €	-0.134 €	-0.045 €	<b>-0.172 €</b>
Company E	4th	4th	2nd	<b>0.693 €</b>
Company F	Best	3rd	4th	<b>0.002 €</b>
Company G	3rd	2nd	3rd	<b>0.613 €</b>
Company H	2nd	Best	Best	<b>0.571 €</b>

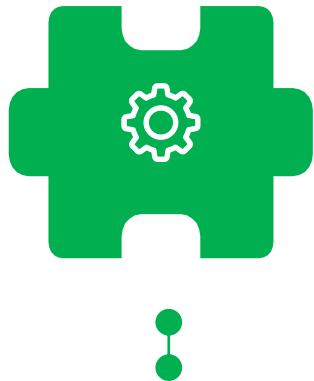
MEAT

## 05 MEAT Tool – Estimating the MEAT for Underpads

Companies	Σ Outcomes & Costs Layer	Σ Other benefit for key stakeholder layer	Σ Broader impact on society layer	Total monetary value
Ideal	-0.0121 €	-0.0277 €	-0.0105 €	<b>-0.050 €</b>
Company F	2nd	2nd	Best	<b>0.052 €</b>
Company H	Best	Best	Best	<b>-0.015 €</b>
Company I	3rd	3rd	3rd	<b>0.075 €</b>

MEAT

# Conclusions



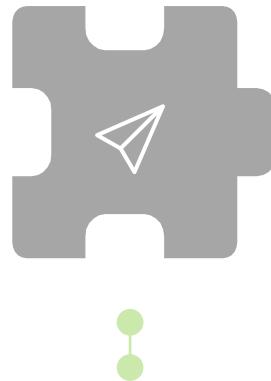
## The Procedure

- Introduces **transparency** in the procurement process and help to **assess** the **value** beyond price for public procurement granting
- Is a **multidisciplinary approach** requiring a significant **investment in time, learning curve** and an **open dialogue**. This limits the opportunity of implementation and necessary rethinking is needed (e.g.. increased pre-tender dialogue, increased professionalization, etc.)



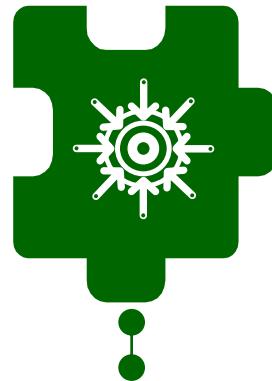
## The Framework

- The **criteria/sub-criteria** defined need to be **clearly explained**
- **Some criteria** included (e.g. risk sharing) are considered to need a completely **separate approach**
- **Specific information** required to be presented **not always exists** or is **easy available** by all companies
- **MEAT implementation** might require a **change** in the **clinical pathways** and/or **protocols**



## The Tool

- The MedTech&BCG tool is **useful** for the **beginning** of the process as a guide to elicit the criteria/sub-criteria.
- It is also useful for the **data collection** of the products' **performance** based on the information provided by the companies
- Needs improvements to estimate the quantitative part of the process



## The Results

- The **hypothesis** that boosted this pilot has been **confirmed**
- **Results** from the **intermediate** step (scores) for the different companies' offers **did not match** the **initial hypothesis**;
- When **WTP calculations** were applied, the **MEAT** **was not** the one that offered the **cheapest price**

