



CHANGING & IMPROVING
SOUTH AFRICA'S TRANSPLANT FUTURE

28th SATS & 5th SATiBA
CONGRESS

6 - 8 September 2019

KRYSTAL BEACH HOTEL
GORDONS BAY • CAPE TOWN

Effective tissue bank management

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Definitions and Context



Efficacy describes the technical relationship between the technology and its effects (whether it actually works), whereas

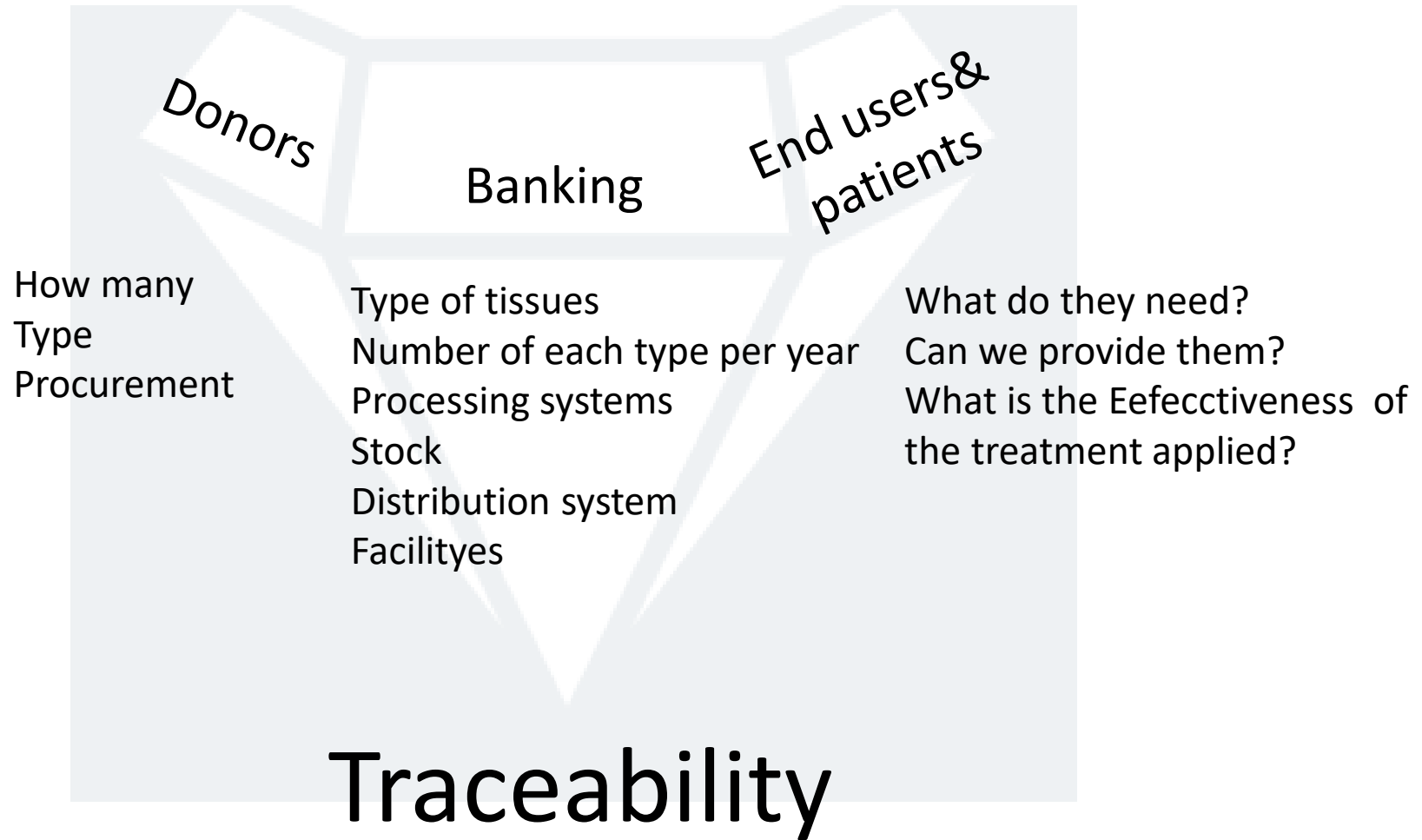
Effectiveness how the application of an efficacious technology brings about desired effects (changes in diagnoses, altered management plans, improvement in health)...

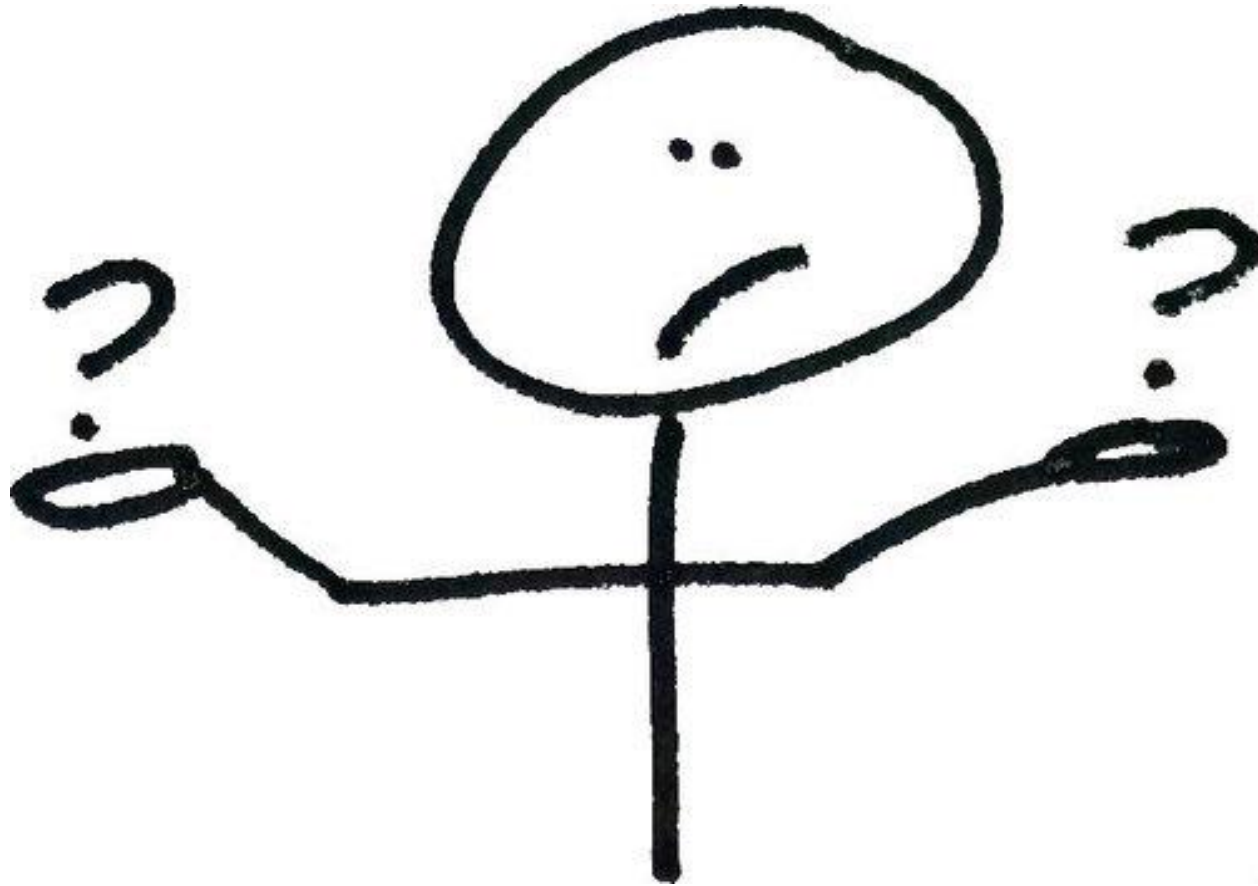
Efficiency is an economic concept which relates efficacy and effectiveness to resource use.

[MacKenzie and Dixon \(1995\).](#)

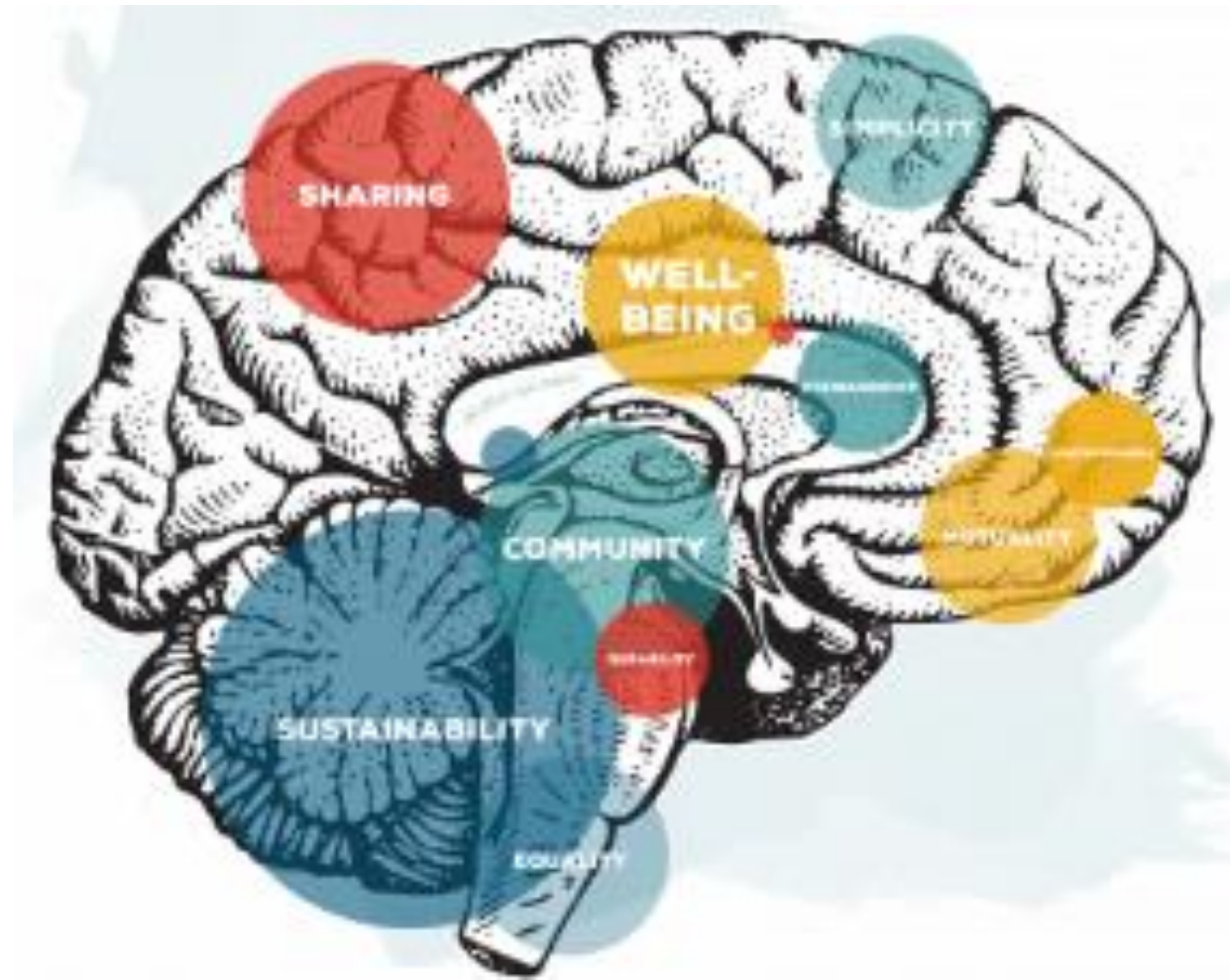
A silhouette of a lion and a cub on a savanna. The lion is in the background, standing on a hill, and the cub is in the foreground, walking towards the left. The background is a solid orange color, and the foreground is a solid brown color. The text "What are our goals?" is written in white, bold, sans-serif font, centered over the lion's body.

What are our goals?





Do we already have a clear idea?



Sufficiency



Picture from oeeurope.org



High performance organization

Meaning

- Better results
- Responsiveness
- Long-term results
- Clinical, teaching/learning, research results
- Applicability

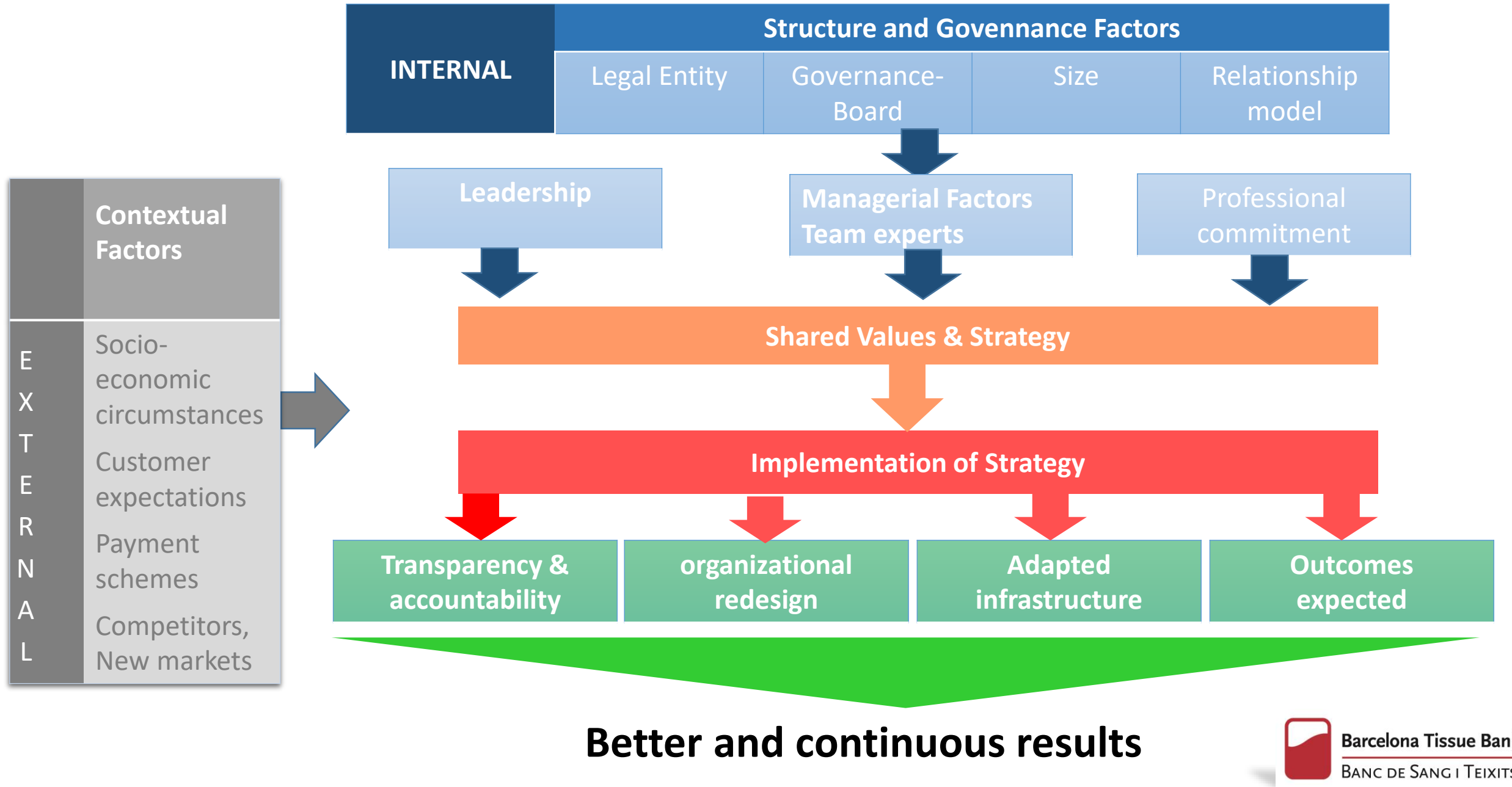
Features

- Alignment
- Coherent/clear objectives
- Commitment & Motivation
- Strategic plan
- Continuous improvement
- Satisfied customers
- Skilled professionals
- Adequate facilities & equipment
- Dependent organization

Requirements

- Training
- Measure & Comparison
- Incentivize
- Continuous improvement
- Compensation/Retribution
- Communication
- Professional management

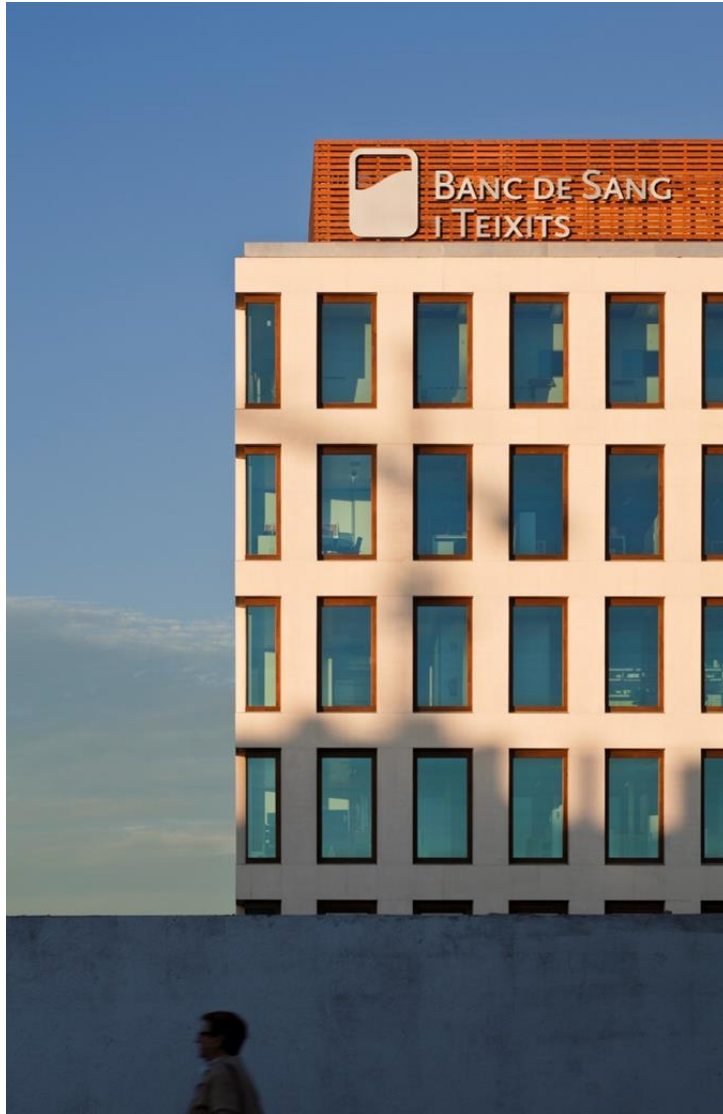
Framework for determining factors of successful



Our Example BST

- Activities & Organization
- The Catalan Model
- Indicators & KPI's for TE's Activities

Activities & Organization



• The BST will display the annual objectives according to the new defined lines:

- 1 Sustainable growth aimed at achieving sufficiency and promoting good use
- 2 Develop the cell therapy platform of Catalonia
- 3 Promote the development of people
- 4 Do a search aimed at developing new therapies and solutions for the sick

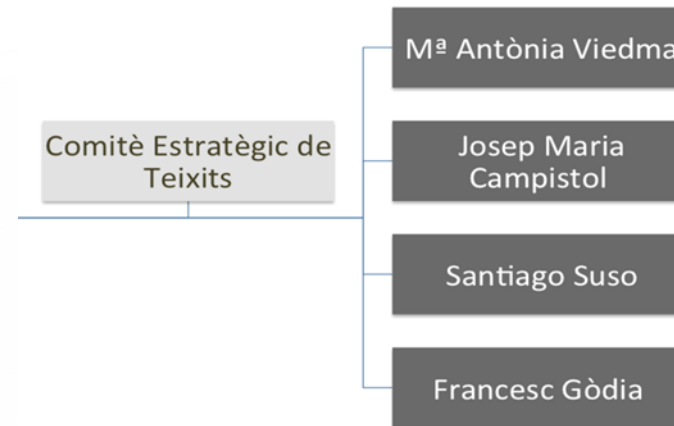
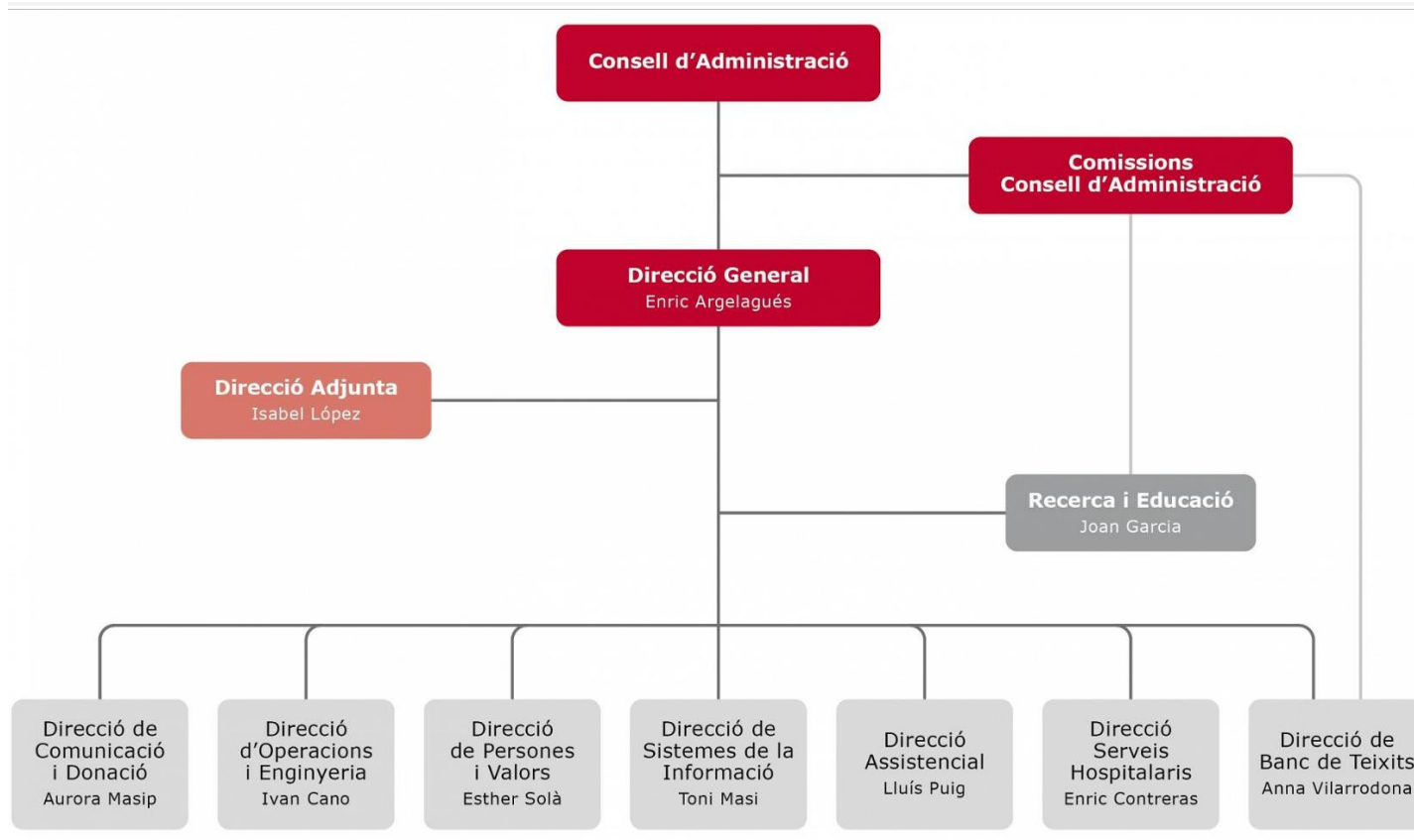
Turning vision and strategy into objectives and indicators



• In accordance with the balanced scorecard method, each year these four main strategic lines are converted into company goals, measurable through indicators and linked to action plans. This helps align everyone in the organisation towards obtaining specific results and strategic behaviours.

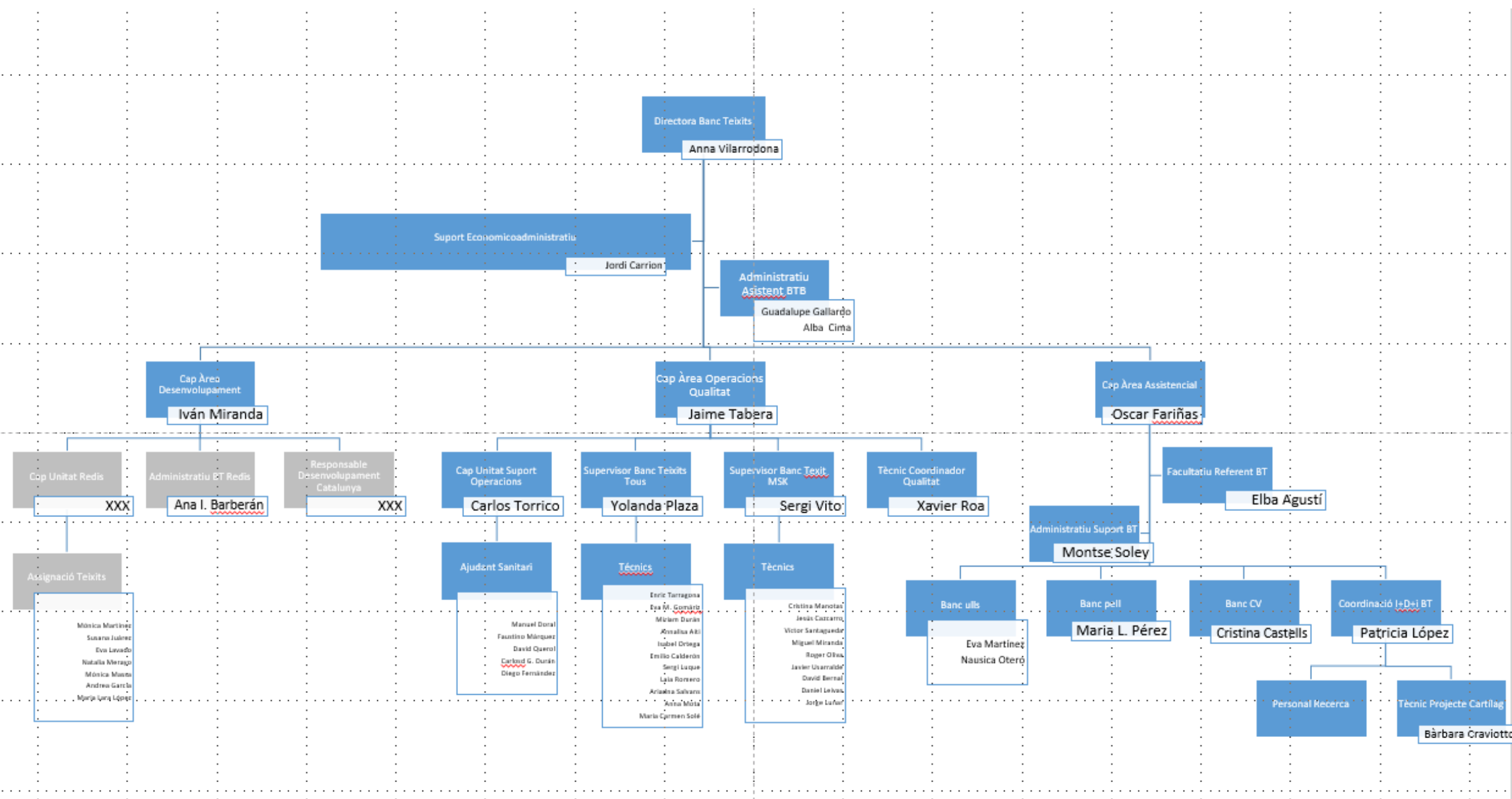
• The combination of strategic lines, business goals and perspectives for action provides a **strategic map**

Governance

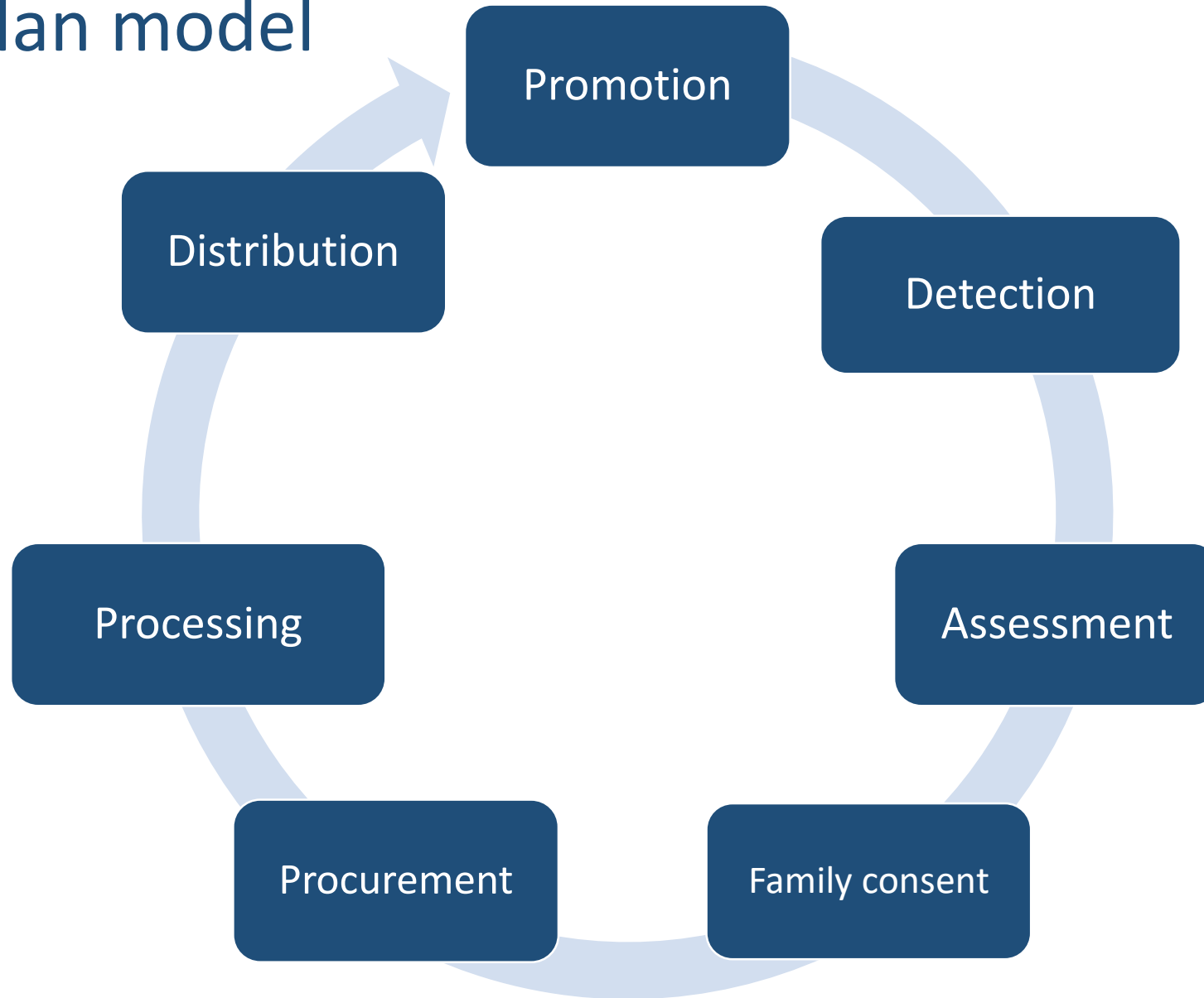


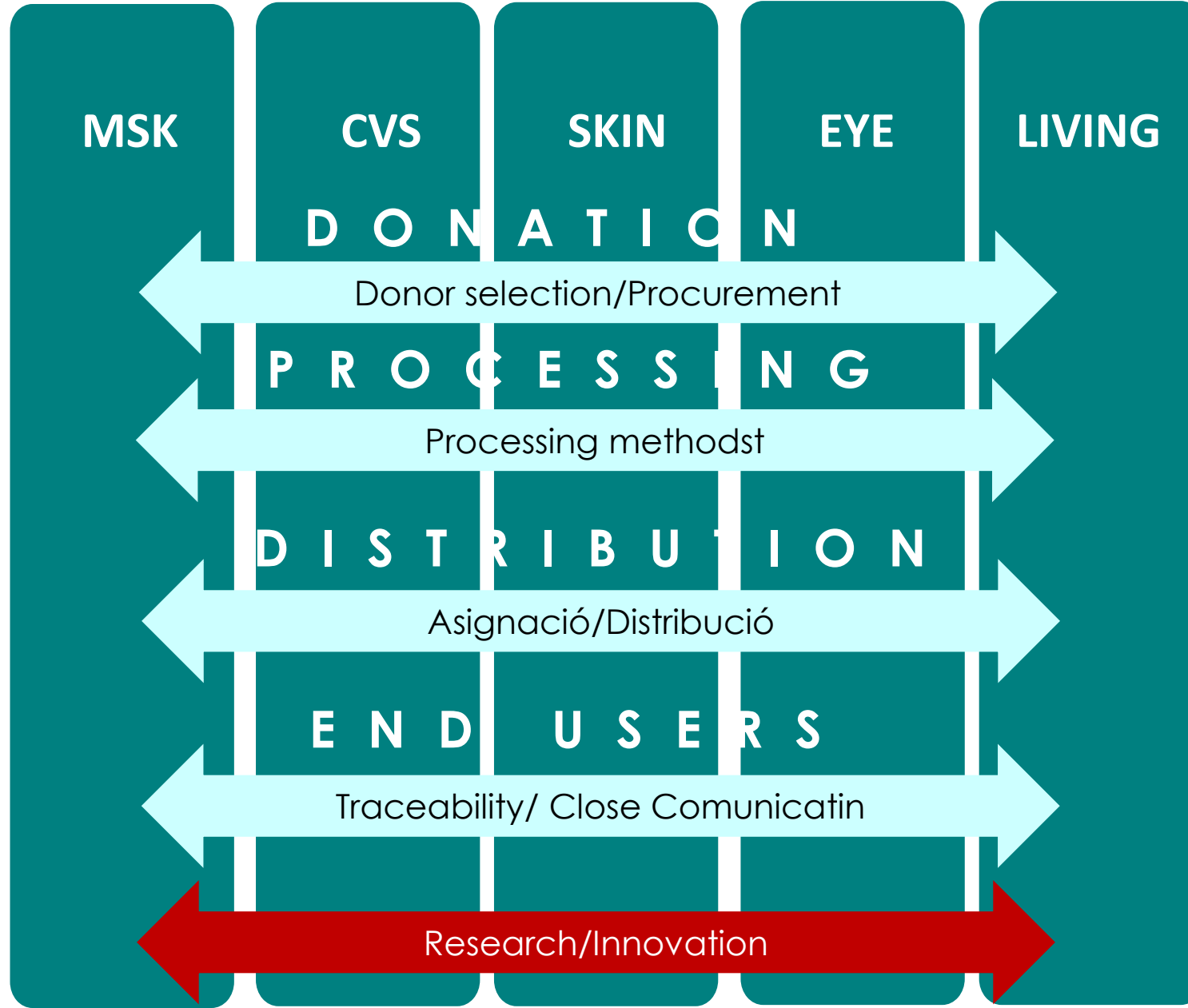
Main





The Catalan model





Indicators & KPI's for TE's Activities



Donation

- Donation and procurement
 - Indicators
 - Key Performance Indicators (KPI) follow-up
 - Objectives follow-up
- New opportunities
- Basic and continuous training
- Actions for improvement

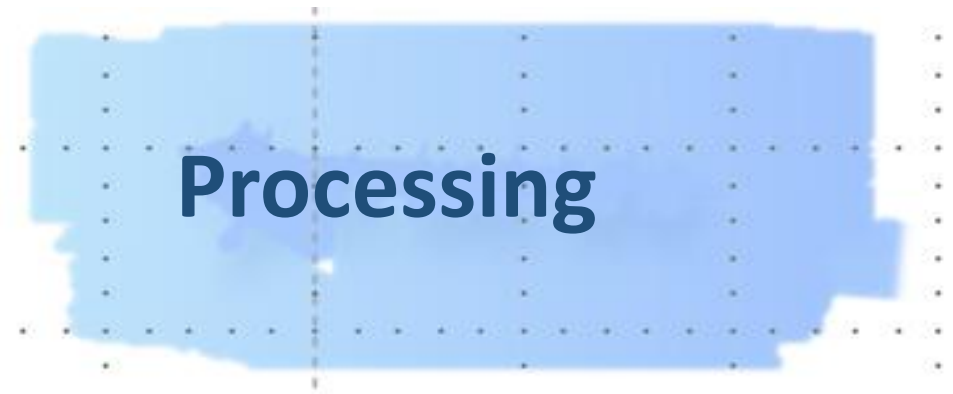
		Gener		Febrer		Març		Abril		Maig		Juny		Juliol			Agost				Totals període				Totals anuals			
T. Ocular	Objec	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Teòr	Real	Ass	Teòr	T	Real	Ass	Teòr	T	Real	%	Teòr	Real	Dif	%
Total	1900	135	84%	129	89%	143	89%	118	76%	146	90%	141	90%	161	184	114%	161	31	115	71%	1265	243	1111	88%	1900	1111	-789	58%
Diari	5,2	135	84%	129	89%	143	89%	118	76%	146	90%	141	90%	161	184	114%	161	31	115	71%	1265	243	1111	88%				
		Gener		Febrer		Març		Abril		Maig		Juny		Juliol			Agost				Totals període				Totals anuals			
Tendons	Objec	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Teòr	Real	Ass	Teòr	T	Real	Ass	Teòr	T	Real	%	Teòr	Real	Dif	%
Total	390	33	100%	31	104%	40	121%	22	69%	28	85%	31	97%	33	36	109%	33	31	27	82%	260	243	248	96%	390	248	-142	64%
Diari	1,1	33	100%	31	104%	40	121%	22	69%	28	85%	31	97%	33	36	109%	33	31	27	82%	260	243	248	96%				
		Gener		Febrer		Març		Abril		Maig		Juny		Juliol			Agost				Totals període				Totals anuals			
Cartílag	Objec	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Teòr	Real	Ass	Teòr	T	Real	Ass	Teòr	T	Real	%	Teòr	Real	Dif	%
Total	75	5	78%	4	70%	6	94%	1	16%	5	78%	3	49%	6,4	5	78%	6,4	31	4	63%	50	243	33	66%	75	33	-42	44%
Diari	0,2	5	78%	4	70%	6	94%	1	16%	5	78%	3	49%	6,4	5	78%	6,4	31	4	63%	50	243	33	66%				
		Gener		Febrer		Març		Abril		Maig		Juny		Juliol			Agost				Totals període				Totals anuals			
Pell	Objec	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Teòr	Real	Ass	Teòr	T	Real	Ass	Teòr	T	Real	%	Teòr	Real	Dif	%
Total	250	25	118%	25	130%	37	174%	19	92%	22	104%	26	127%	21	32	151%	21	31	26	122%	166	243	212	127%	250	212	-38	85%
Diari	0,7	25	118%	25	130%	37	174%	19	92%	22	104%	26	127%	21	32	151%	21	31	26	122%	166	243	212	127%				
		Gener		Febrer		Març		Abril		Maig		Juny		Juliol			Agost				Totals període				Totals anuals			
Vàlvules	Objec	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Teòr	Real	Ass	Teòr	T	Real	Ass	Teòr	T	Real	%	Teòr	Real	Dif	%
Total	232	20	102%	17	96%	27	137%	9	47%	10	51%	19	100%	20	19	96%	20	31	19	96%	154	243	140	91%	232	140	-92	60%
Diari	0,6	20	102%	17	96%	27	137%	9	47%	10	51%	19	100%	20	19	96%	20	31	19	96%	154	243	140	91%				
		Gener		Febrer		Març		Abril		Maig		Juny		Juliol			Agost				Totals període				Totals anuals			
Artèries	Objec	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Teòr	Real	Ass	Teòr	T	Real	Ass	Teòr	T	Real	%	Teòr	Real	Dif	%
Total	155	17	129%	12	101%	22	167%	12	94%	13	99%	19	149%	13	19	144%	13	31	14	106%	103	243	128	124%	155	128	-27	83%
Diari	0,4	17	129%	12	101%	22	167%	12	94%	13	99%	19	149%	13	19	144%	13	31	14	106%	103	243	128	124%				
		Gener		Febrer		Març		Abril		Maig		Juny		Juliol			Agost				Totals període				Totals anuals			
M Amniòt	Objec	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Real	Ass	Teòr	Real	Ass	Teòr	T	Real	Ass	Teòr	T	Real	%	Teòr	Real	Dif	%
Total	230	4	20%	4	23%	7	36%	9	48%	7	36%	8	42%	20	6	31%	20	31	0	0%	153	243	45	29%	230	45	-185	20%
Objectiu final	400	4	12%	4	13%	7	21%	9	27%	7	21%	8	24%	34	6	18%	34	31	0	0%	266	243	45	17%	400	45	-355	11%
Diari	0,6	4	20%	4	23%	7	36%	9	48%	7	36%	8	42%	20	6	31%	20	31	0	0%	153	243	45	29%				

02/09/2019 09:30h

Multiteixits

			1er Trimestre						2on Trimestre						3er Trimestre						243	387	32%	32	13%	8	8,4%
CENTRES		C	O	T	V	A	P	CART	O	T	V	A	P	CART	O	T	V	A	P	CART	OT	Objec	%Ass	CART	%CART	Reb	%NV
Hospital Clínic de Barcelona			23	22	12	10	21	3	13	13	8	4	0	0	13	13	8	8	11	4	48	55	87%	7	15%	5	10%
H. Vall d'Hebron		1	17	15	11	6	12	2	16	15	12	9	14	3	3	3	5	4	4	0	33	52	63%	5	15%	2	6%
H. Sant Pau			4	3	3	1	2	2	1	1	1	1	1	1						0	4	37	11%	3	75%	0	0%
H. Mútua de Terrassa			3	3	2		3		2	2	1	1	2		1	1		1	1		6	17	35%	0	0%	0	0%
H. Germans Trias i Pujol			14	14	9	9	12	1	6	6	3	2	7	0	11	11	8	7	13	3	31	30	103%	4	13%	1	3%
H. Bellvitge			12	11	8	5	10	1	11	11	4	7	8	1	11	11	9	5	11	0	33	45	73%	2	6%	2	6%
H. Josep Trueta (Girona)			1	1	1	1	1		1	1	0	0	1		2	2	2	1	2		4	15	27%	0	0%	0	0%
H. Arnau de Vilanova (Lleida)			1	1		1	1		2	2	1	1	2		1	1			1		4	10	40%	0	0%	0	0%
H. Joan XXIII (Tarragona)			3	2	1			0	6	6	2	3	0	1	3	3	2	1		0	11	10	110%	1	9%	3	27%
H. Verge de la Cinta (Tortosa)									1	1			1		1	1	1		2		2	4	50%	0	0%	0	0%
Hospital del Mar			3	2	1	1	2	1	1	1	1	1	1	0			1	1		0	3	11	27%	1	33%	1	33%
Consorci Hospitalari Parc Taulí			1	1	1		2	0	1	1			1	0	2	2	1	1	1	1	4	10	40%	1	25%	0	0%
Consorci Hospitalari de Mataró			2	2	1	1	2	1						0						0	2	3	67%	1	50%	0	0%
Hospital General de Catalunya																					0	4	0%				
Hospital General de Granollers			1	1	1		1														1	4	25%	0	0%	1	100%
Hospital General de Manresa			4	4	3		3	0	2	2	1	1	3	1						0	6	5	120%	1	17%	1	17%
IMLC FC			21	20	1	8	13	3	17	17	1	8	12	2	14	14		3	10	1	51	75	68%	6	12%	0	0%
			1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	2	3	67%	1	50%	1	50%





- Indicators
- Key Performance Indicators (KPI) follow-up
- Stocks monitoring
- Processing plans
- Quality controls
 - Define
 - Improvement and analysis
- Identify strengths and areas for improvement, set goals and deadlines
- Basic and continuous training

MSK	MSK1	% recovery errors	= Grafts discarded due to recovery errors / Total number of recovered grafts
	MSK2	% processing errors	= Grafts discarded due to processing errors / (Total number of obtained grafts after processing + Grafts discarded due to processing errors)
	MSK3	% discarded tissues due to tissue characteristics	= Grafts discarded due to tissue characteristics / (Total number of obtained grafts after processing + Grafts discarded due to tissue characteristics)
	MSK4	% discarded tissues due to recovery microbiology	= Recovered grafts discarded due to recovery microbiological results / Total number of recovered grafts
	MSK5	% MSK bank viability	= Total number of suitable grafts / (Total number of suitable grafts + Grafts discarded due to processing errors + grafts discarded due to tissue characteristics + grafts discarded after processing due to processing microbiological controls)
	MSK9	n third-parties processing	= Total number of donors processing for third-parties
CV	CV1	% aortic valves viability	= Total number of suitable aortic valves / Total number of processed aortic valves
-	CV3	n valvular expired grafts	
-	CV4	n vascular expired grafts	



- Indicators
- Key Performance Indicators (KPI) follow-up
- Objectives monitoring
- Identify areas for improvement
- Technical support personnel of distribution area in order to assure the best services for our surgeons
- Basic and continuous training





Research & Innovation

Research transforms resources into knowledge through scientific talent (with management support)

Innovation turns knowledge (scientific, healthcare, organisational) into health and social value, and generates resources through the organisation's talent

Key Performance Indicators

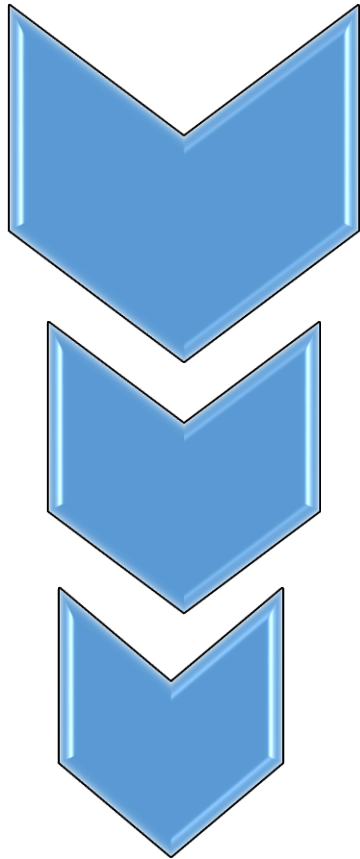
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Abril

N	Objectiu Estratègic 2018	Indicador	Gr	Fb	Mr	Ab	Acum Gr-Ab 2019	Acum Gr-Ab 2018	Var. abs 19 vs 18	Var. % 19 vs 18	Fita Acum 19	% Assoliment fita 2019	Fita 2019
		N. Donants de teixit osteotendinós	40	33	43	22	138	134	4	3%	130	106%	390
		N. Donants de teixit ocular	135	129	143	118	525	509	16	3%	633	83%	1.900
		N. Còrnies subministrades	176	164	177	144	661	668	-7	-1%	702	94%	2.107
		N. Peces de teixit osteotend. subministrades	536	894	709	698	2.837	2.950	-113	-4%	3.432	83%	10.296
1.3	Facilitar l'accessibilitat dels pacients al trasplantament de teixits, liderant la xarxa europea de bancs	Import facturació de Teixits en Europa (productes i serveis per 3rs)	69.674	104.838	156.908	167.531	498.951	388.945	110.006	28%	735.543	68%	2.206.630
3.2	Alinear l'estil i l'ús de les eines de lideratge per fomentar el desenvolupament de les persones	N. Professionals amb plans de desenvolupament individual					0	24	-24	-	64		192
		Execució del pla de formació 2019	8.897	13.636	12.399	6.383	41.314	50.523	-9.209	-18%	65.000	64%	195.000
4.1	Promoure la innovació i el desenvolupament de nous productes, d'acord amb PFR	Índex d'innovació	1,2%	3,0%	2,6%	2,2%	2,3%	2,3%	0%	-2%	2,5%	90%	2,5%
5.1	Sostenibilitat econòmica	Resultat econòmic (EBT)	669.849	196.706	866.414	416.004	2.148.973	2.925.089	-776.116	-27%	978.000	220%	2.933.999
		Volum d'ingressos per facturació	7.744.436	6.799.242	7.621.820	6.517.860	28.683.358	28.336.513	346.845	1%	28.992.768	99%	86.978.304
		Volum de despesa total	6.586.355	7.146.294	6.656.076	6.720.136	27.108.862	26.681.396	427.466	2%	28.224.423	96%	84.673.269
		Volum de despesa de personal	2.460.572	2.491.920	2.580.353	2.694.376	10.227.221	9.963.034	264.187	3%	10.572.940	97%	31.718.821
		Índex de productivitat	315%	273%	296%	242%	282%	285%	-3%	-	279,0%	100,9%	279,0%
		Rendiment per campanya EM	33,6	32,3	41,9	39,6	36,8	36,5	0,3	1%	39,3	93,8%	39,3
		Execució pla d'inversions 2019 (compromès)	0,0	0,0	0,0	109.735,6	109.736	279.492	-169.756	-61%	848.276,0	13%	2.544.828



Which is the impact of eye donor age change?



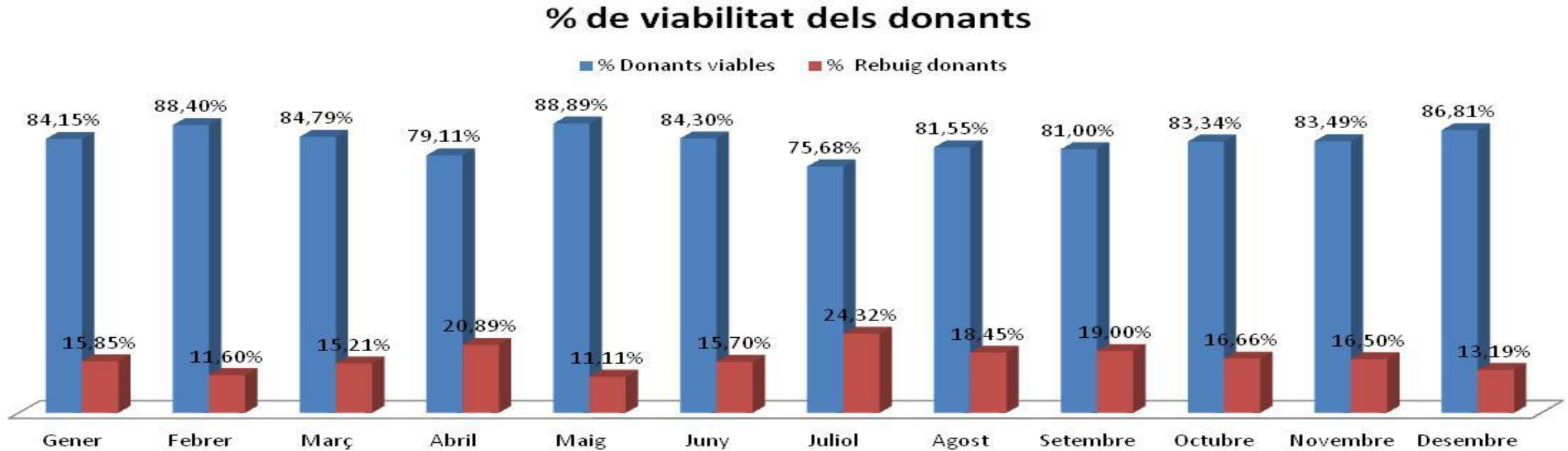
- Donation

- Eye Bank Activity

- Allocation



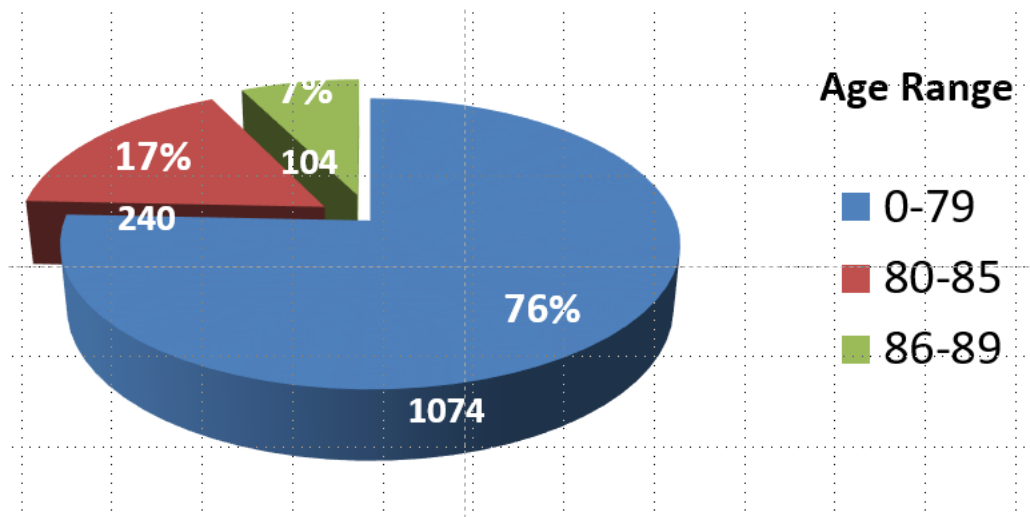
EYE DONATION ACTIVITY 2016



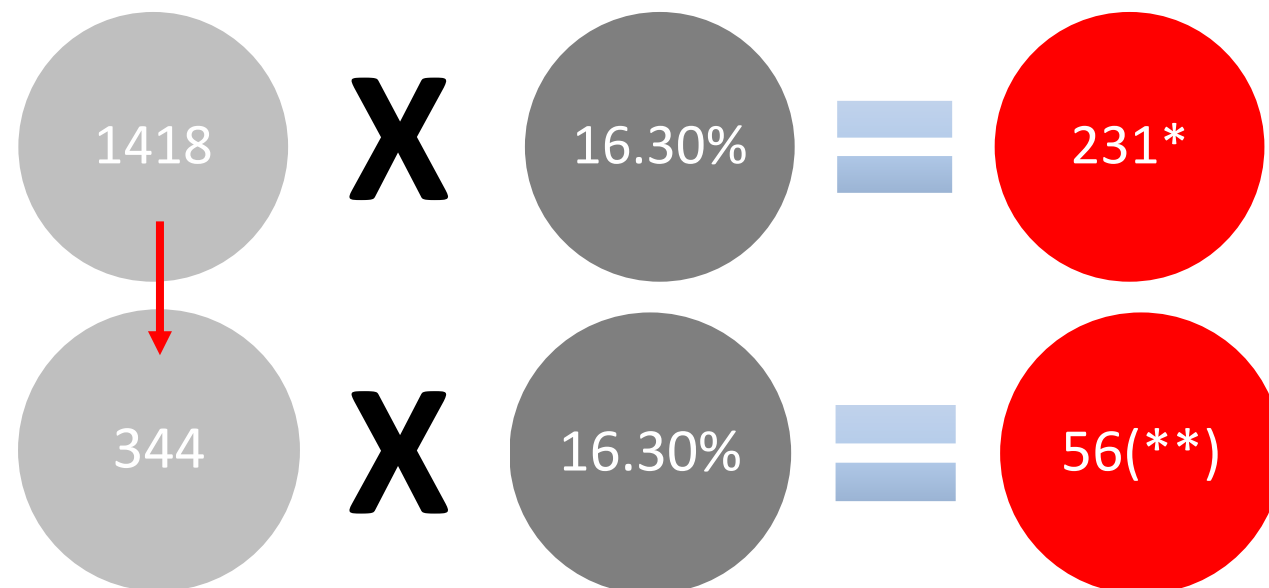
1418 donors

Arithmetic Median of non suitable donors NS = 16.30%

EYE DONATION ACTIVITY 2016



Non suitable donors (e.g due to clinical Chart or Serological results)



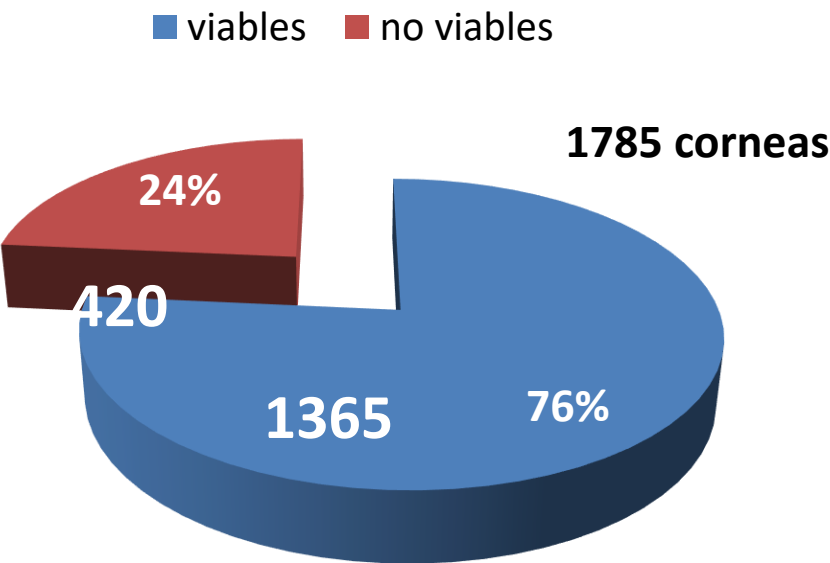
$$1418 - 231 = 1187 \rightarrow 344 - 56 = 288$$

(*) 1 donor gave one cornea

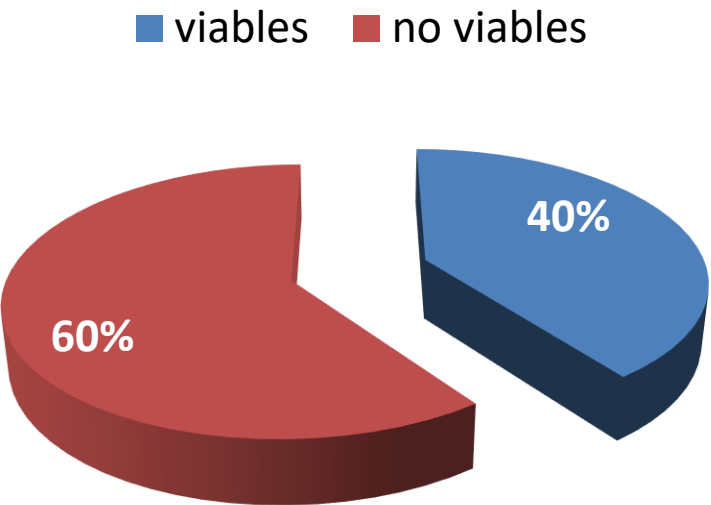
(**) 2 donors gave one cornea

EYE BANK ACTIVITY 2016

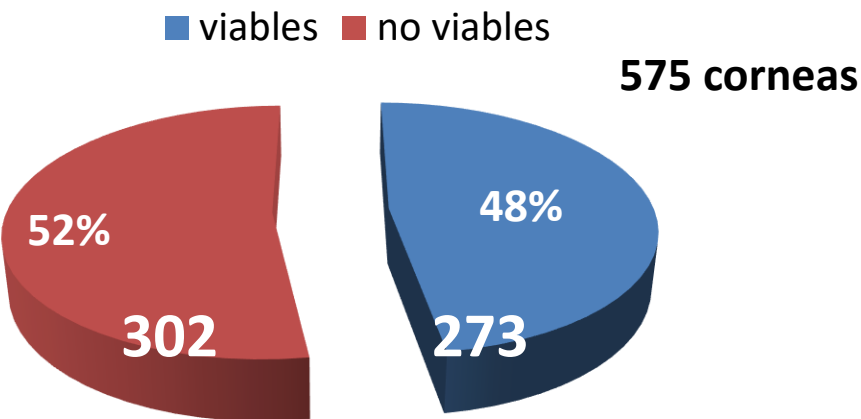
Cornea 79 yo



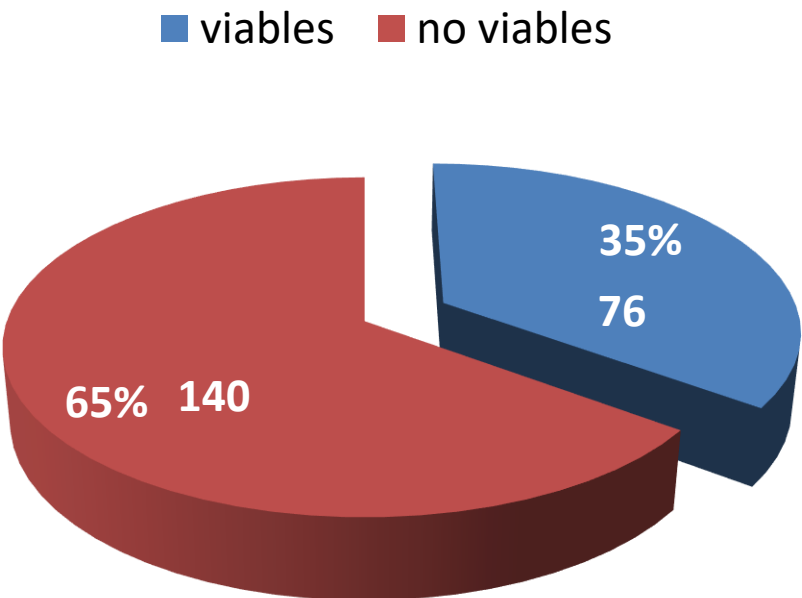
Cornea 80-85 yo



Cornea 80-89 yo



Cornea 86-89 yo



The conclusions of the study were

If we had procured eye donor

- until 79, the amount of suitable cornea for transplantation had been **1365**
- **Until 85 the amount of suitable cornea for transplantation had been 1562**

Efficiency Eye Bank

- Increase the global % of v tissue availability
- Decrease direct & indirect expenses

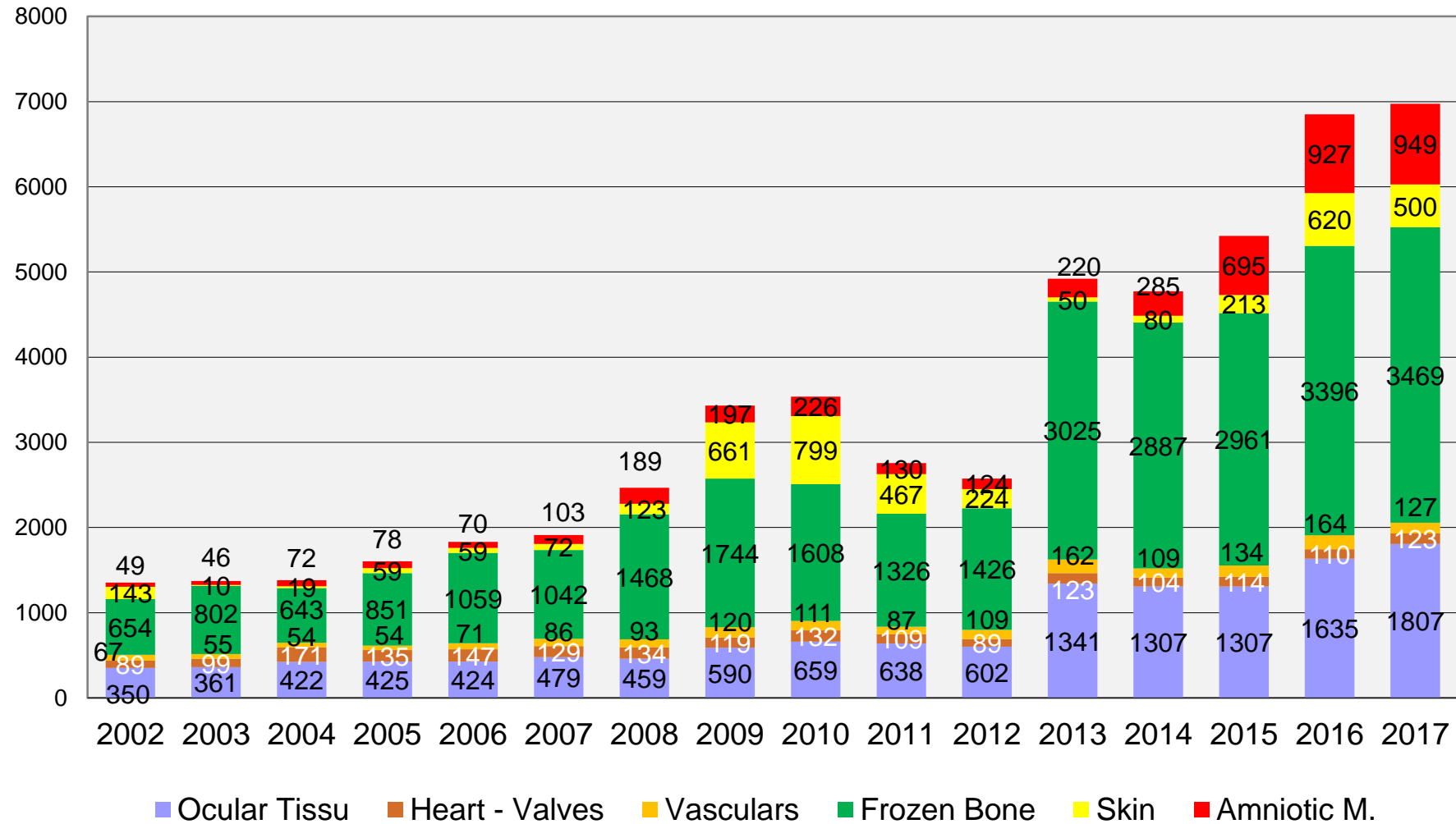
Self-sufficiency

- We delivered **1468** cornea during 2016 so if we want to guarantee sufficiency of this type of tissue we must accept donors until 85

BTB achievements

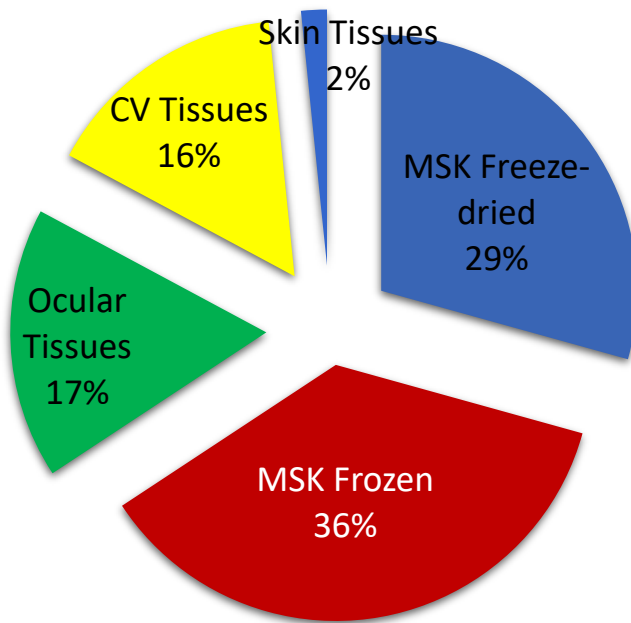


Distribution

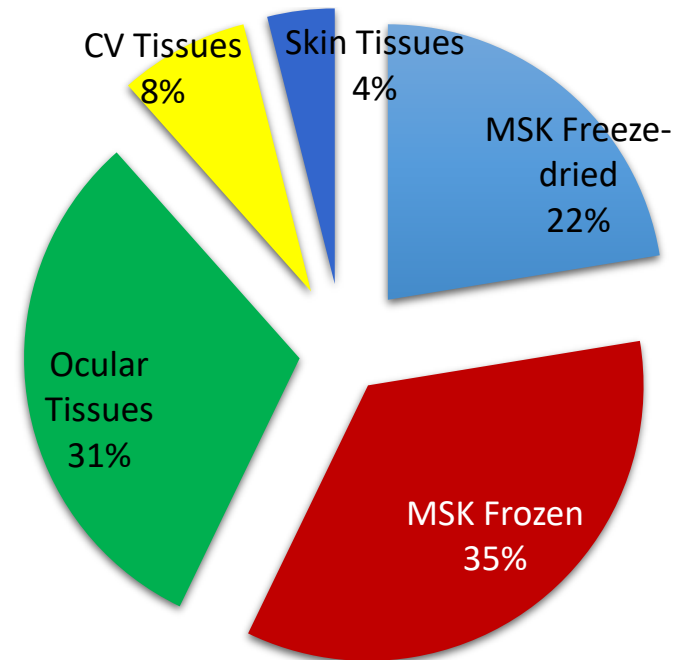


Distribution

2008



2017



Distribution

