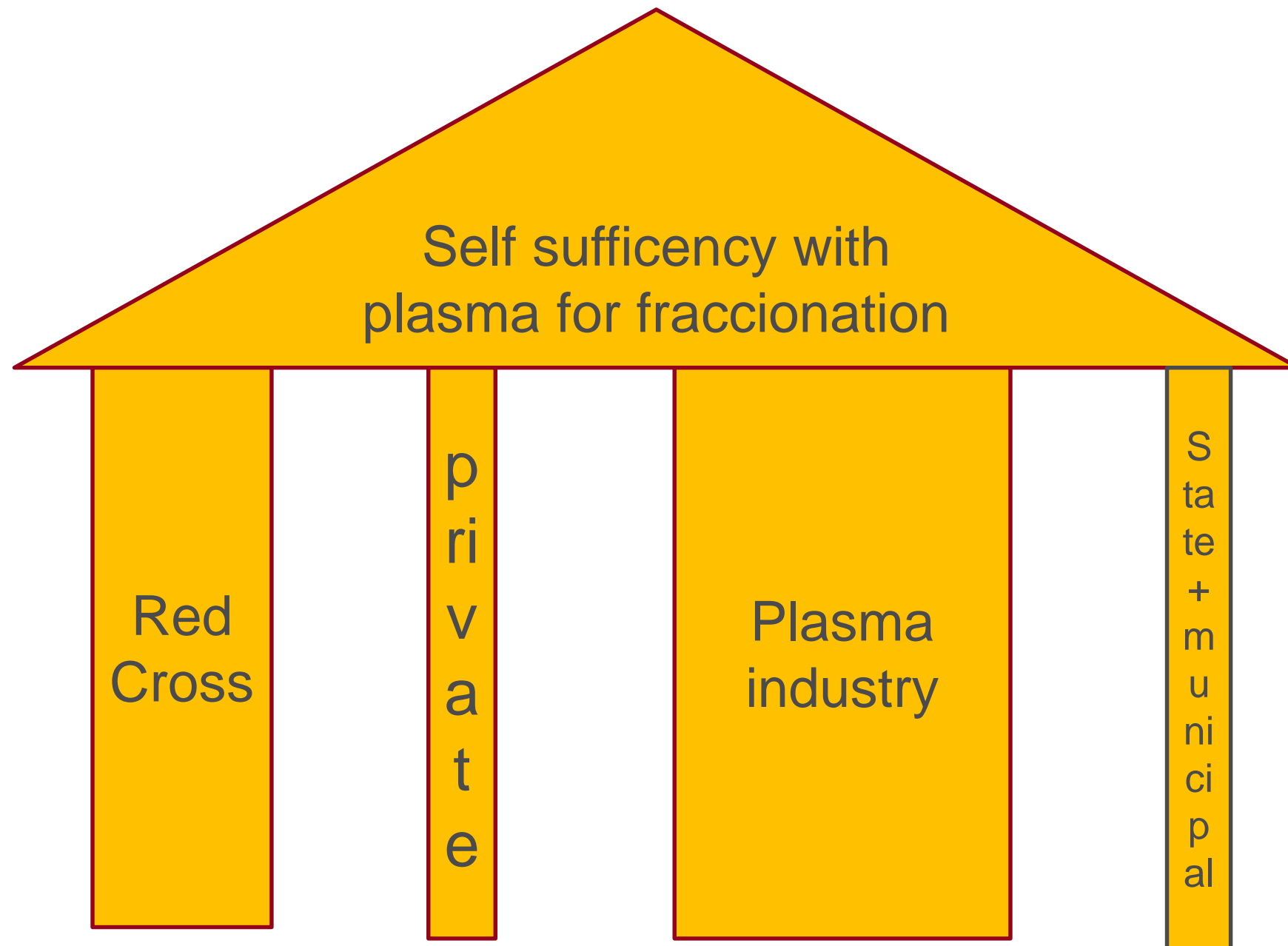


Plasma collection Facilities and logistics – international experiences- Germany

Dr. Franz Weinauer



Plasma collection facilities in Germany



ARGE Plasma

(German plasma working group)

- 20 Members (institutions) out of all 4 groups participating,
- Board consists of one member of each group
- representing at the moment 92 plasma centers





Paul Ehrlich Institute- Statistics: Reports 2018 of the manufacturer

(collection, production,....)

(09.09.2019)

Group

State/municipal, non for profit blood establishments (BE's)	67
Red Cross (5 non for profit Ltds, partially reports from institutes)	12
Plasma centers owned by fraccionators	19
Private BE's	27
Armed forces	1
Total	126



PEI statistic 2018

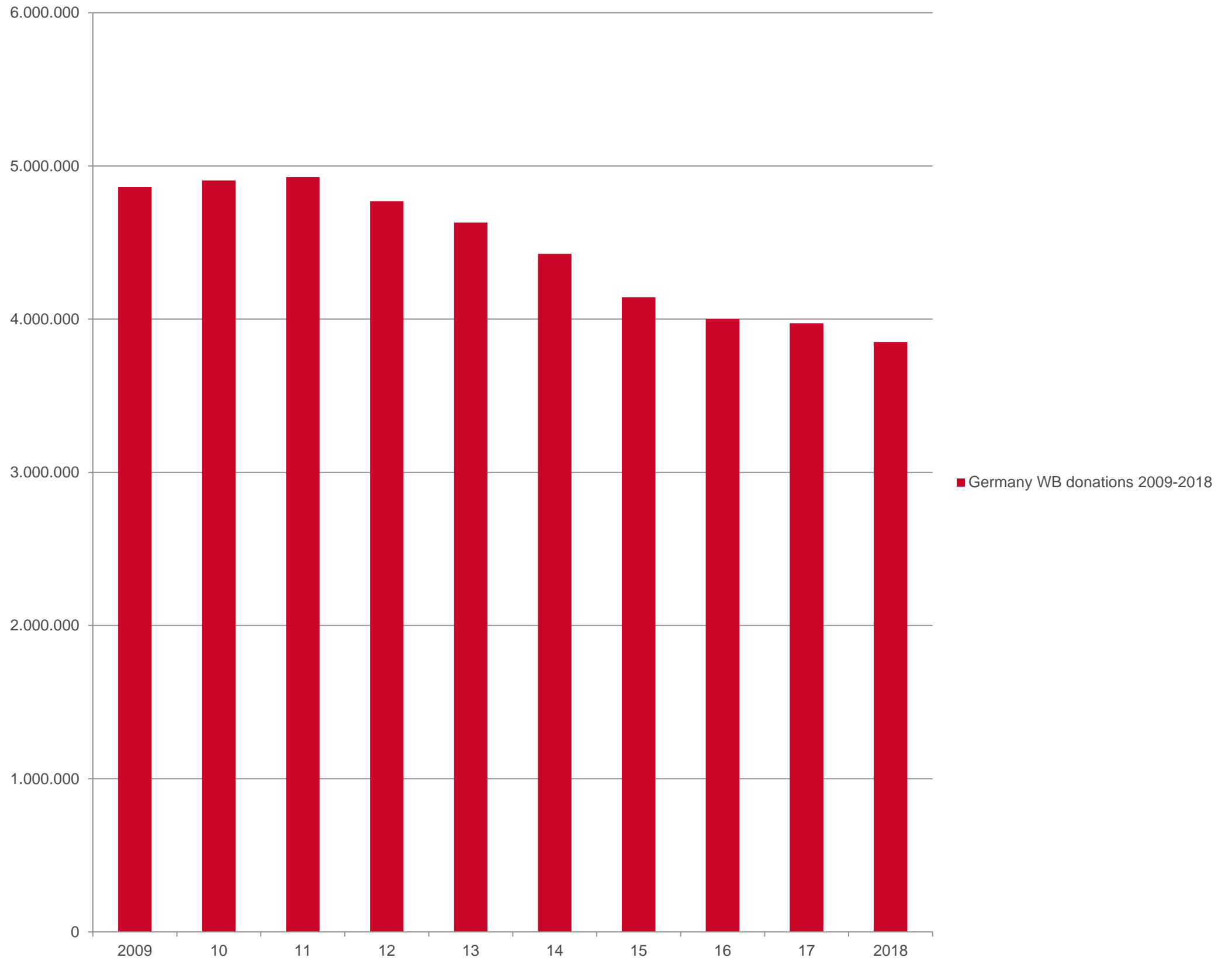
reports of the manufacturers

■ Plasma for transfusion from Whole Blood (WB) TE	498.141
■ Plasma for transfusion from apheresis TE	232.300
Total Plasma for Transfusion (TE)	730.441

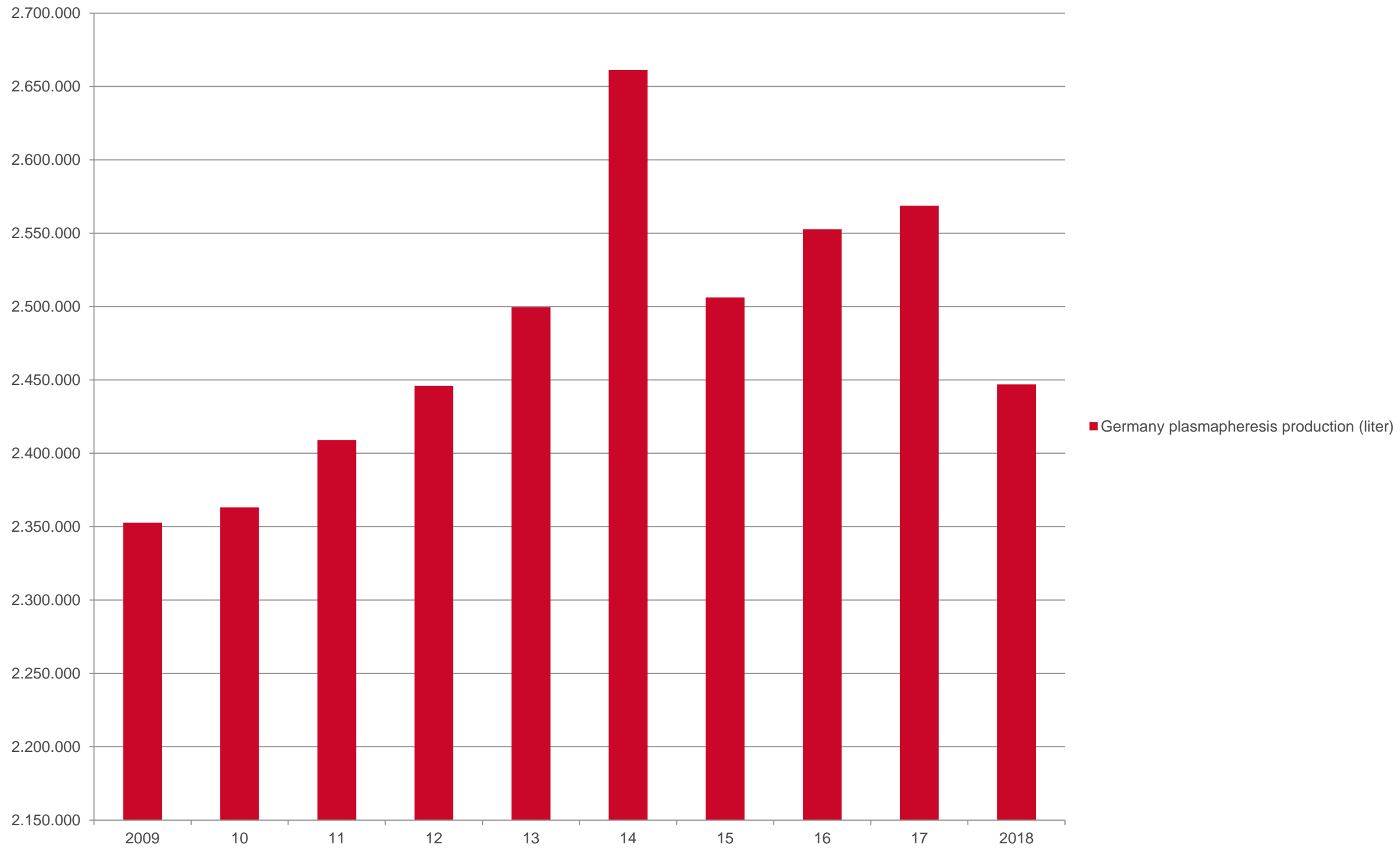
Plasma for derived from WB (recovered)	1.244.354 L
Plasma for fractionation from apheresis (source)	1.946.174 L
Total Plasma for fractionation	3.190.528 L



Germany WB donations 2009-2018



Germany: plasmapheresis production (donations, PEI data)



Reasons for the recent decline of the plasma volumes in Germany

- Demographic change (especially in the eastern part of the country)
 - Low unemployment rate → Less plasmapheresis donors?
 - Difficulties in finding employees (Competition for skilled workers)
 - patient blood management (PBM): less need for red cells → less WB/recovered plasma
- Even opening more centers the output of plasma is declining

Logical consequences

- Transforming whole blood drawing sites into plasma centers
- Increased promotion of plasma donation
 - Initiated not only by the centers but also by the state (BzGA) to get rid of the negative image of the plasma donation
- Acceptance of compensation also by RC-plasma centers as long as the needs of the patients are not met ?



Is there a need to compensate? Donor „burden“ is different

WB donation: no

- Bavarian RC Blood service comes to place where the donor lives
- Donation time is short
- self sufficiency guaranteed without compensation (or major gifts)
- Needs of the patients are met

Plasma donation: currently: yes

- Donor is required to come to the center (has travel expenses, needs time)
- Donation takes more time (30min)
- Self sufficiency currently only achieved in countries where compensation is introduced
- Ethical principles of donation ?
- From an ethical point of view the needs of the patients have also to be considered (but: what is the real need: is off label use a cause for shortage ?)



Plasma for Fractionation by Country in Europe			
(Thousand Liters)			
06. Feb 19			
Country	2017		
	Recovered	Apheresis	Total
Austria	100	522	622
Belarus	10	-	10
Belgium	120	62	182
Bulgaria	15	-	15
Croatia	25	-	25
Czech Republic	72	572	645
Denmark	45	40	85
Estonia	11	-	11
Finland	42	-	42
France	605	289	895
Georgia	20	-	20
Germany	985	1.977	2.962
Greece	2	-	2
Hungary	79	323	402
Italy	620	216	836
Latvia	8	-	8
Lithuania	11	3	14
Macedonia	5	-	5
Netherlands	92	234	327
Norway	54	10	64
Poland	229	84	314
Portugal	90	-	90
Russia	191	494	685
Serbia	10	-	10
Slovakia	20	-	20
Slovenia	11	-	11
Spain	353	20	373
Sweden	98	25	123
Switzerland	70	5	75
Ukraine	70	-	70
Other Europe	30	-	30
Sub-total Europe	4.093	4.877	8.971

Source: The Marleting Research Bureau, Inc.



Consequences: Production of less WB and more plasma

- Transforming whole blood drawing sites into plasma centers
- Increased promotion of plasma donation
 - Initiated not only by the centers but also by the state (BzGA) to get rid of the negative image of the plasma donation
- Acceptance of a (low) compensation as long as the need of the patients are not met ?



Whole blood and Plasma (mixed production) center

or

plasma dedicated center?



Challenges in the transformation of a blood center into a plasma center: difference in donor groups at the Bavarian Red Cross Blood Centers

■ WB

age (average: m 40, f 43)

male 54% female 46%

no (financial) compensation

altruistic

donation as social event

most donors in rural areas

low frequency of donation (2/yr)

■ Plasma

„younger“ (30y)

male 41% female 59%

compensated

„do ut des“, but they see also the need

?

donors predominantly in cities (like PC's are)

„higher“ frequency of donation (10 / y)

What is the conclusion from the difference in the donor groups

- **Positiv view:**

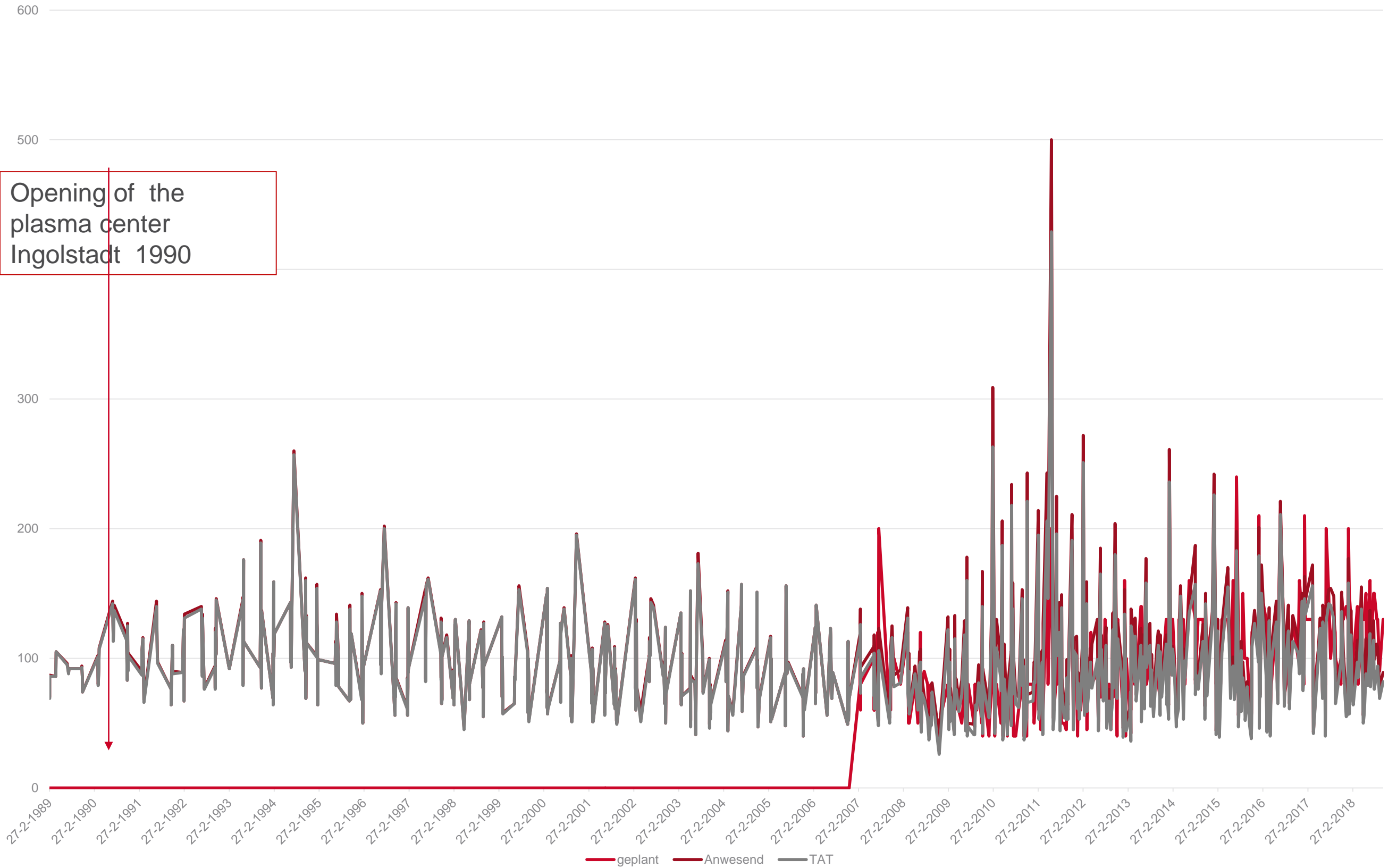
there is no crowding out (of voluntary non remunerated (vnr) blood donors to plasma) in our setting

- **Negativ view:**

the tipical vnr blood donor did not want to become a regular (!) plasma donor

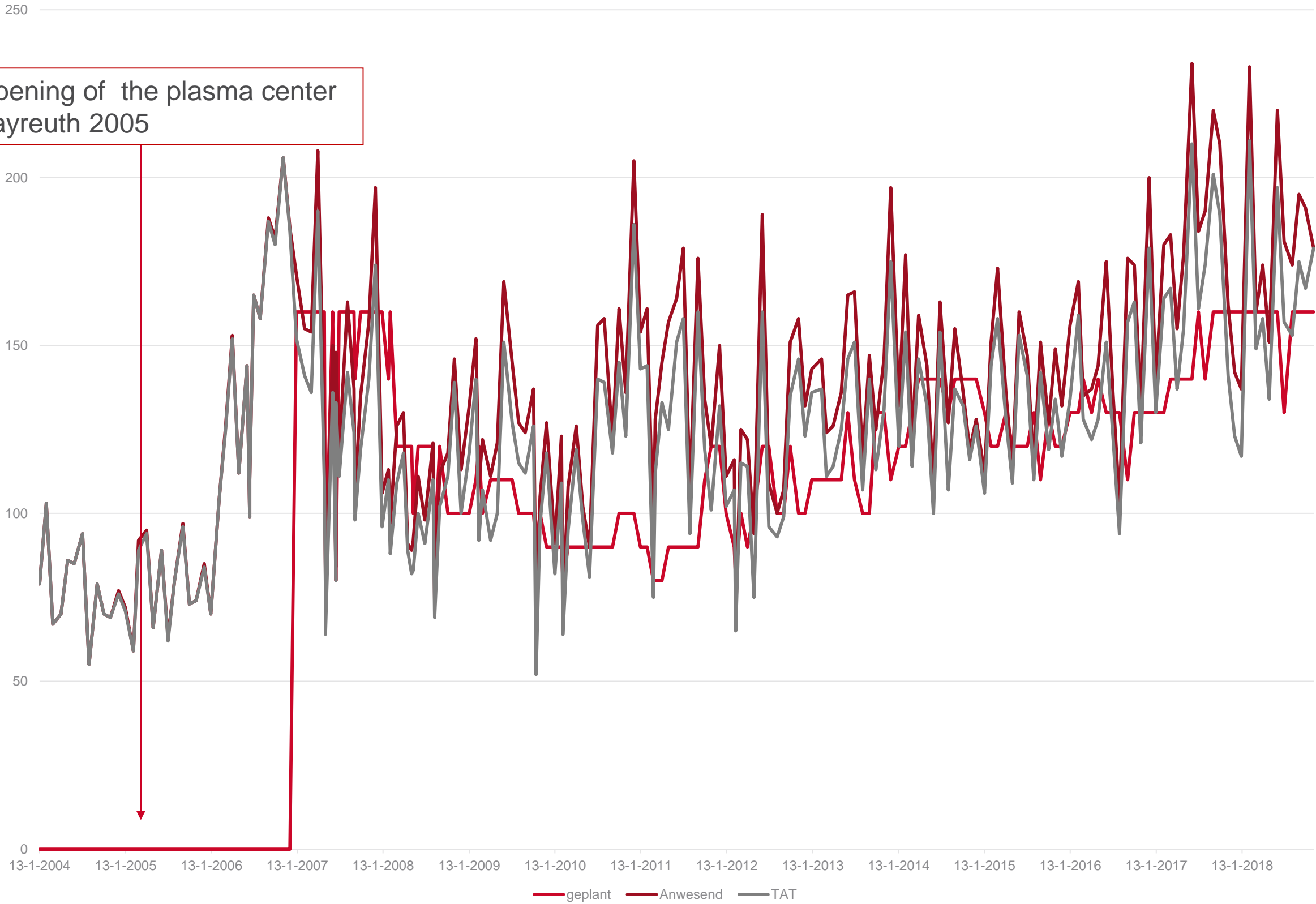
→ **Consequences:** We had to target a different group in donor advertising and concentrate on plasma prodction

Blood donation in the INGOLSTADT area 01/1989 until 10/2018

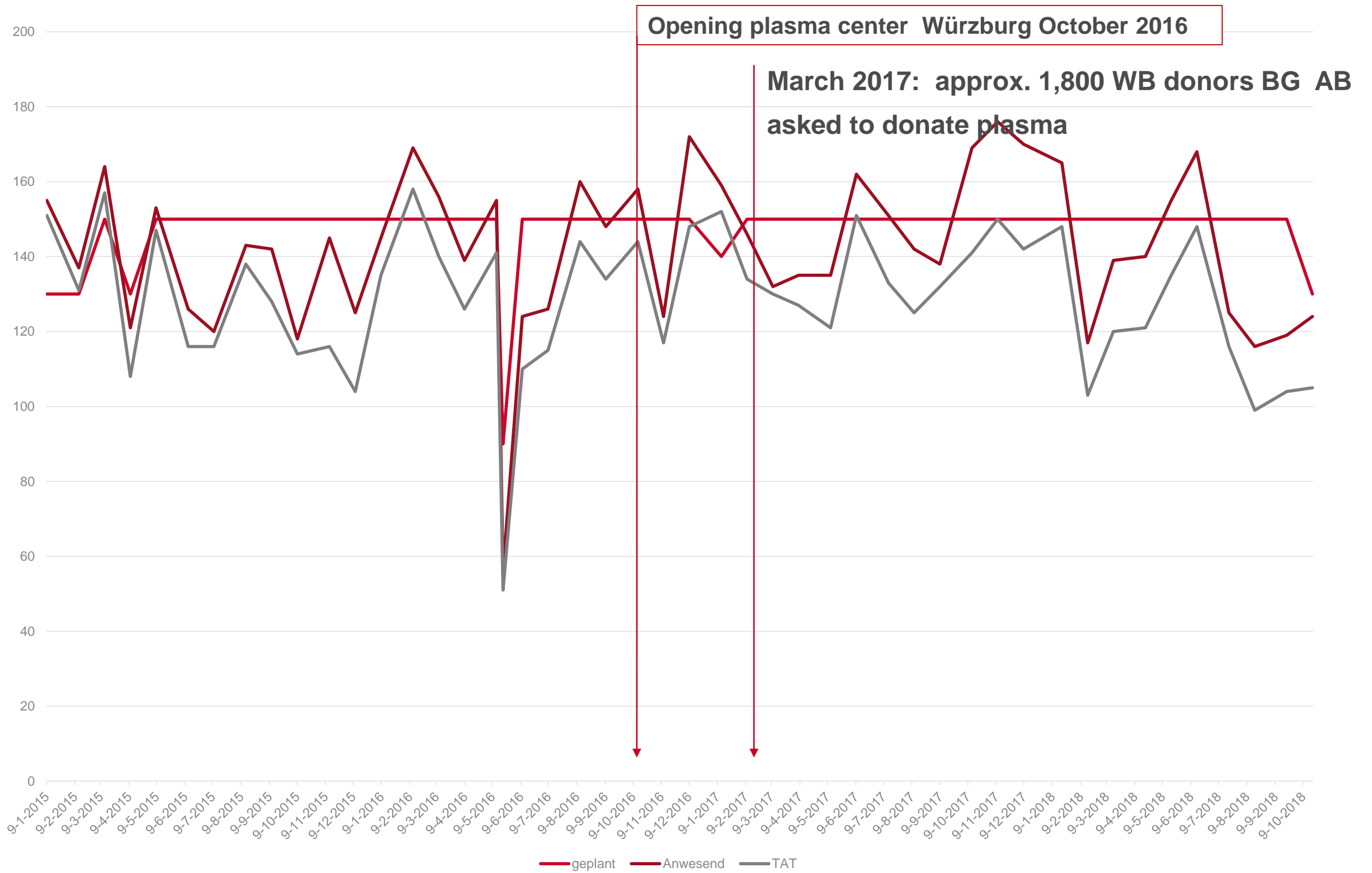


Blood donation in the city of Bayreuth 01/2004 until 11/2018

Opening of the plasma center
Bayreuth 2005



Blood donation in the city of Würzburg 01/2015 until 10/2018



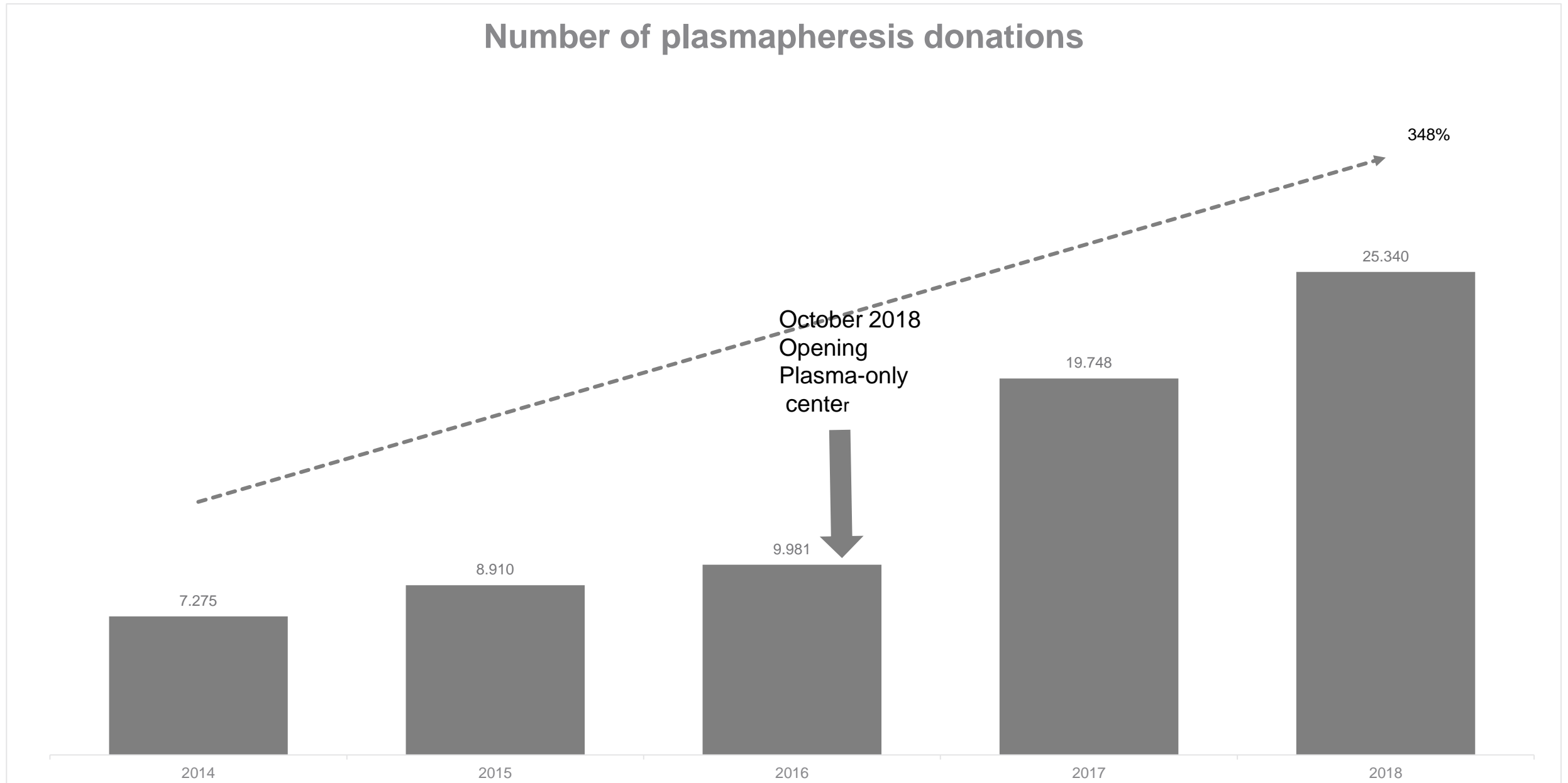
Different donor approach needed:

- New premises in a walking distance to a „university“
- advertising mainly through new media
- Different opening hours (12hrs/day, Wedn+Sat.6hrs)
- Donations with or without appointment
- Compensation



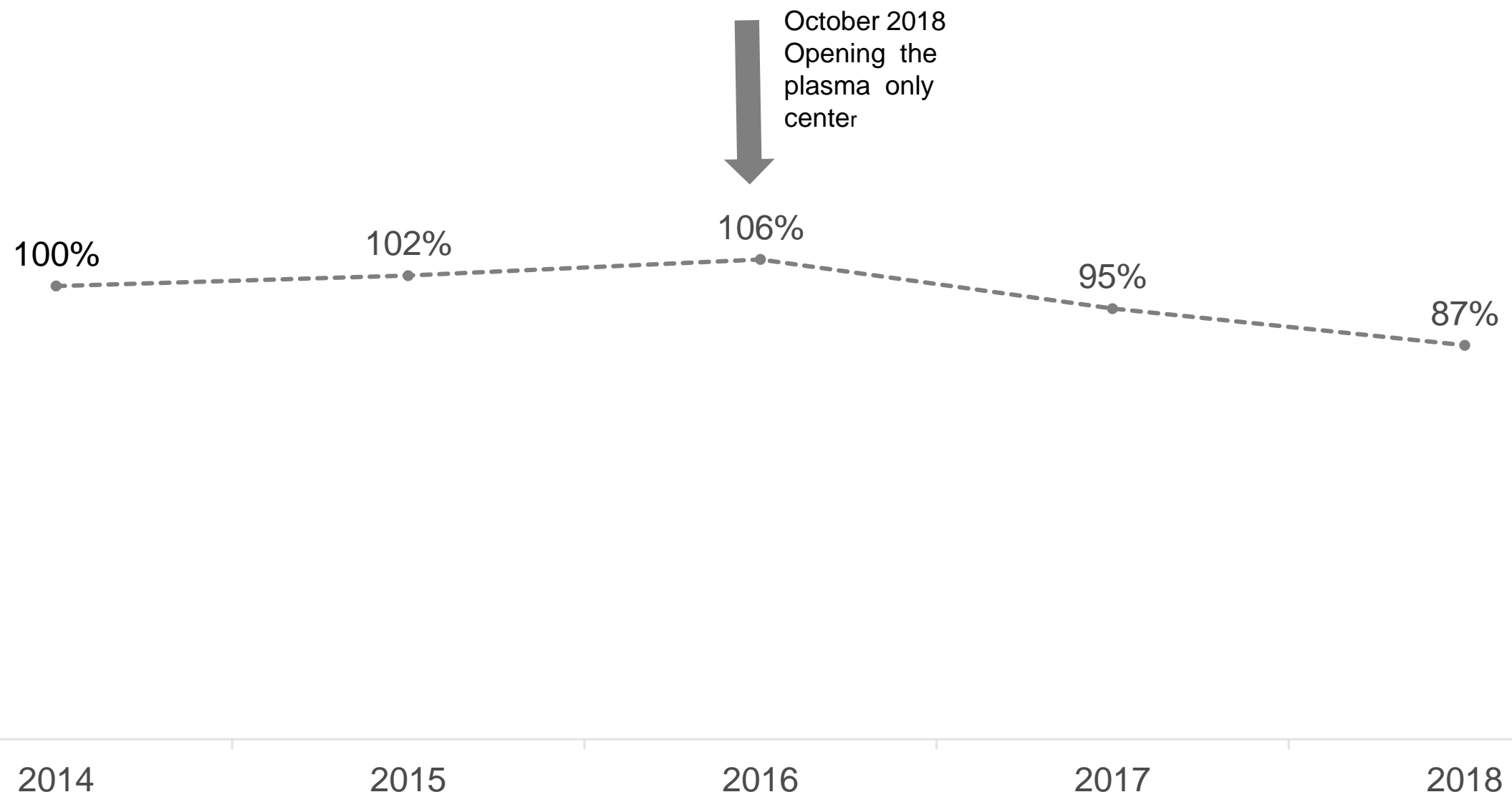
Transforming a mixed WB/Plasma drawing site into a plasma center

Number of plasmapheresis donations



Cost reduction after the change

Primary production cost of FFP per unit in %



Reasons for cost reduction in plasma-only centers:

- efficient use of labour and therefore less personnel required
- reduction of idle times –
- high level of standardization –
- economies of scale due to significant increase in donations by focus on plasma only

Comment: Temporary increase of primary production costs in 2016 due to: - transfer of operations to a new location - dismantling of old operational assets/site - initiation of on-site freezing



Conclusions

- In Germany the self-sufficiency with plasma for fractionation is still reached
- Recent data show a decrease in produced quantities
- Increased advertising for plasma donation is needed
- Currently there is no crowding out of WB- to plasma- donors in Germany
- Plasma only centers are in our setting more efficient than mixed WB/Plasma centers
- Plasma programs intended to reach self sufficiency for plasma for fractionation without compensating the donor are very difficult to achieve (at acceptable costs of production).

