

Creating a Lean and Productive Processing Facility



Amsterdam 31st May 2013



Nick Tandy – ***EBA Flying Squad***
**Operational Improvement Lead,
Filton, until May 2011**

Sarah Raymond
**Head of Operations Filton,
NHS Blood and Transplant**

The Filton Experience



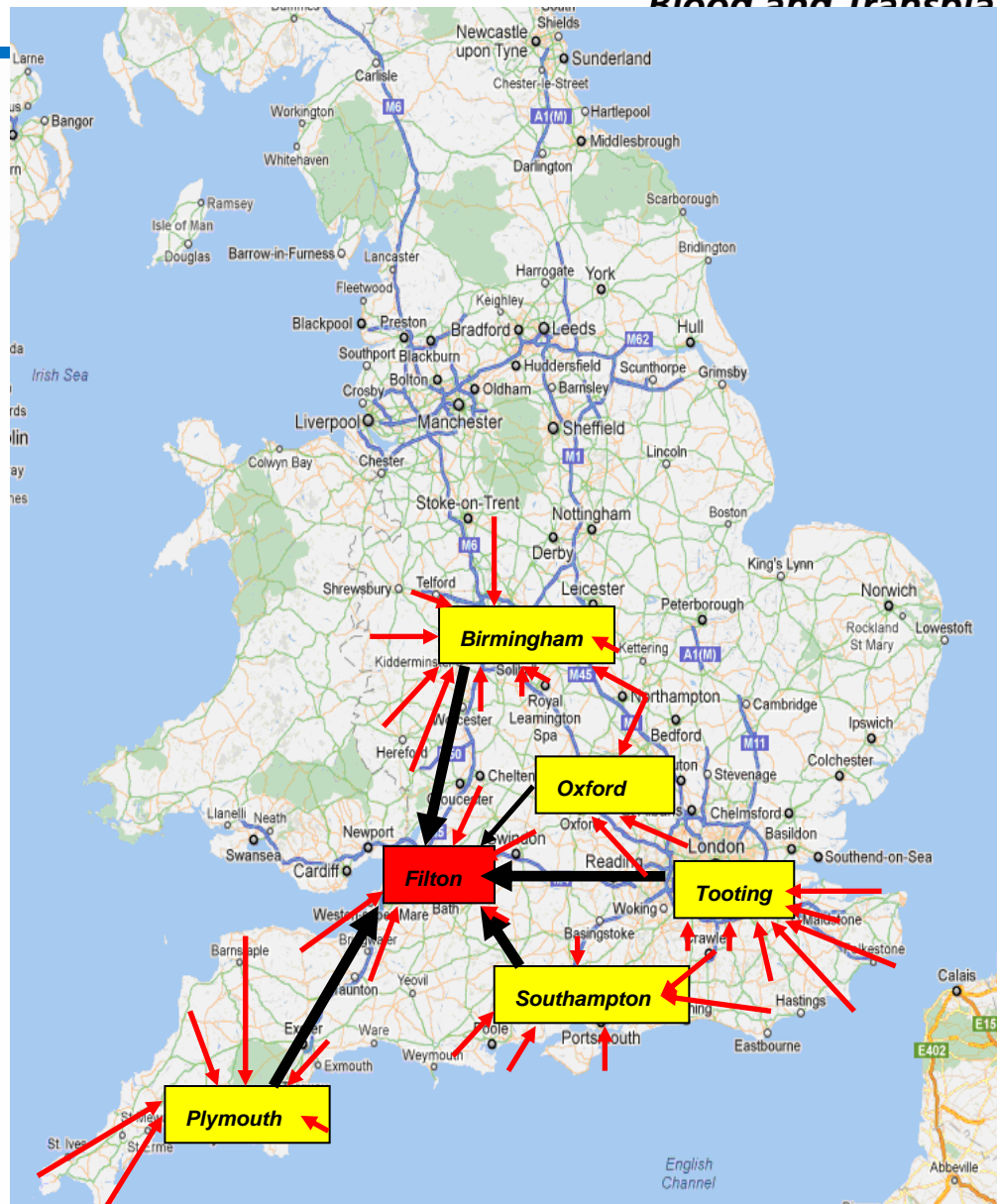
Sarah Raymond
Head of Operations - Filton

Objectives

- Background NHSBT Filton
- Summary of progress 2007-2013
- Key successes
- Update on current lean activities
- Plans for the future

Collection into Filton

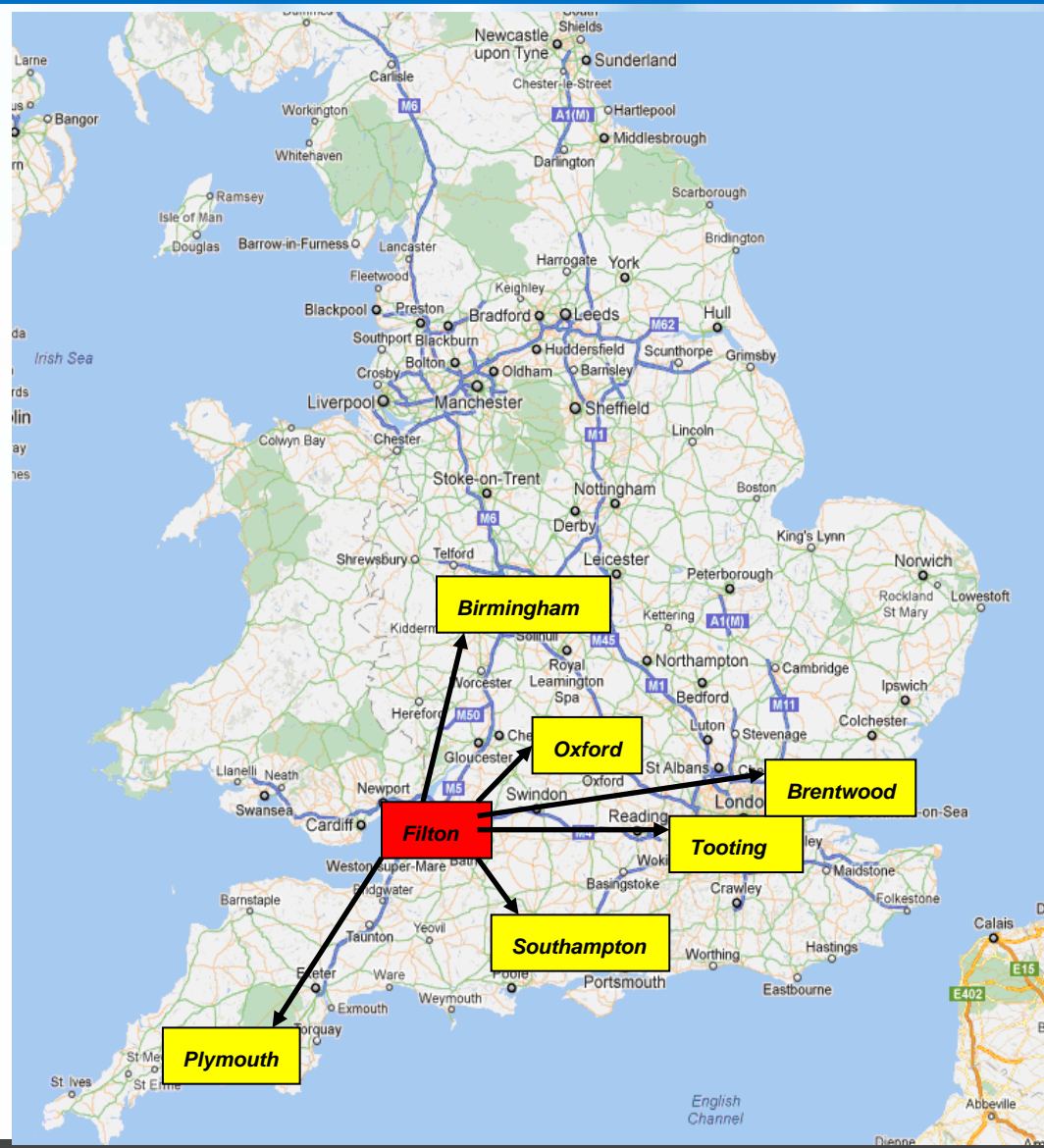
*Collections received
from up to 48 teams*



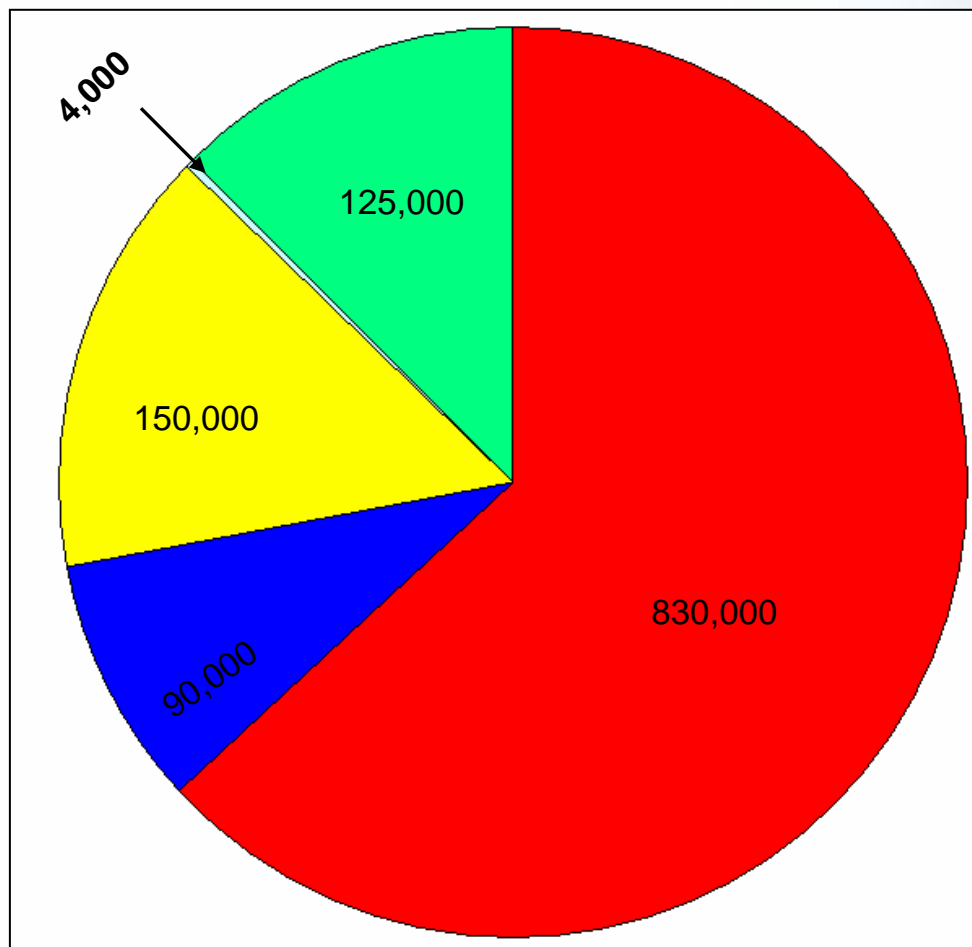
Distribution to and from Filton

Filton Distributes to

- *Brentwood*
- *Birmingham*
- *Bristol*
- *Oxford*
- *Plymouth*
- *Southampton*
- *Tooting*



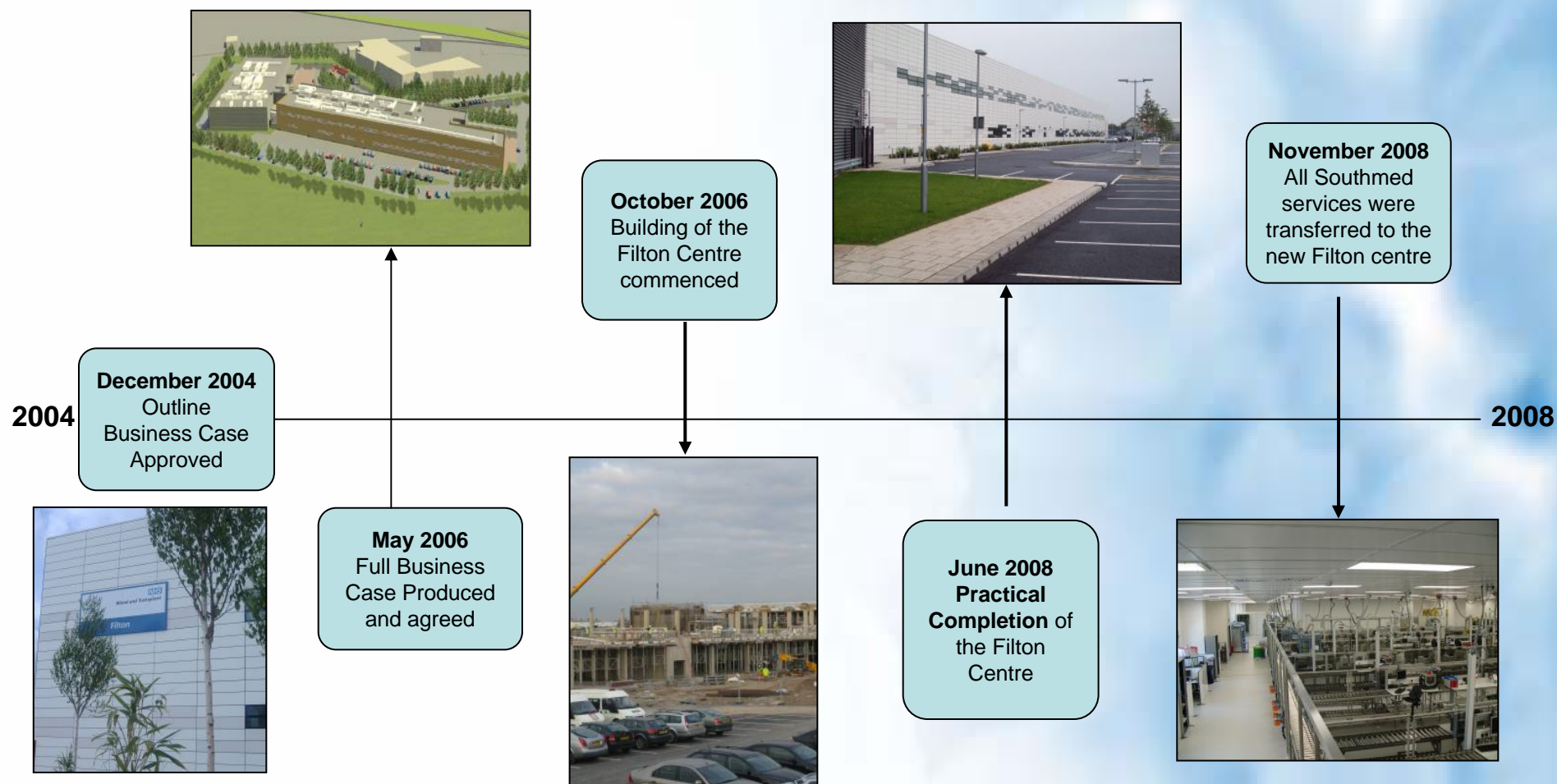
Filton Manufacturing Today



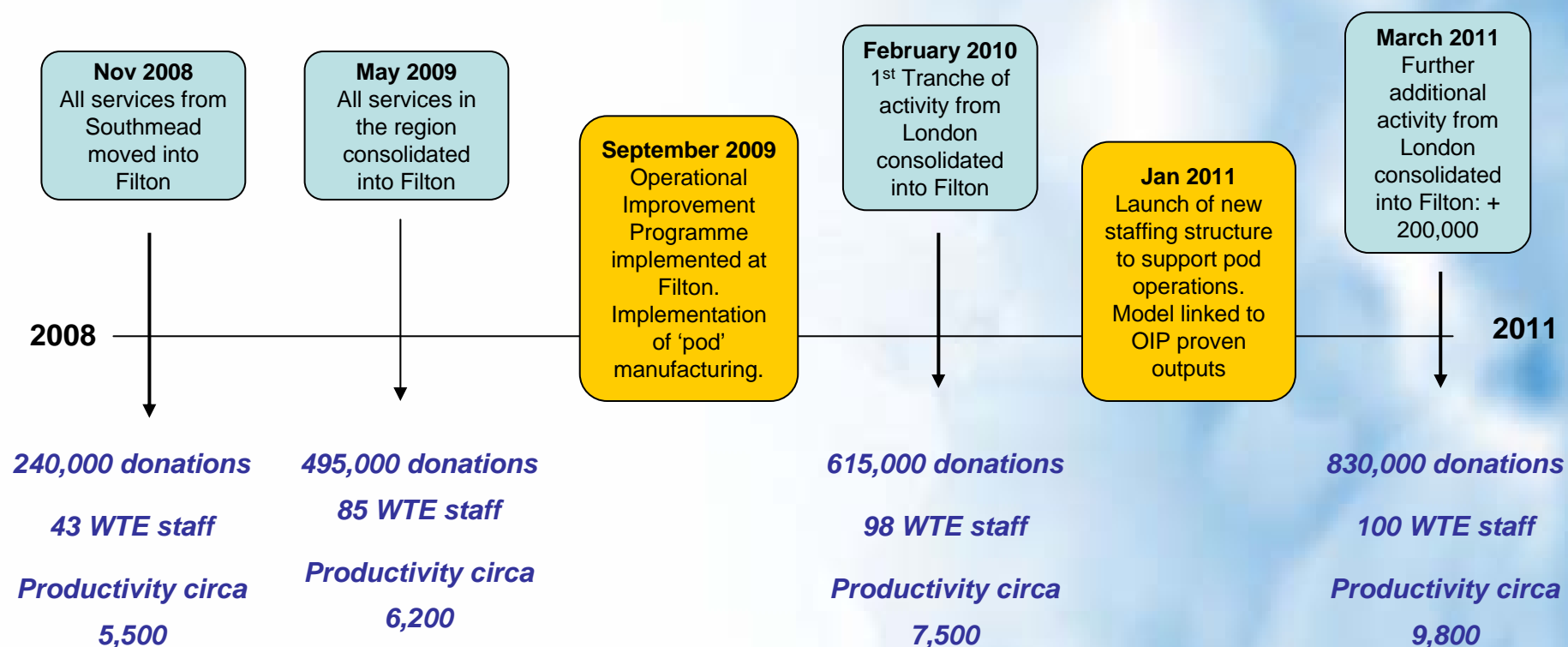
Key

- Red Blood Cells
- Platelet Doses
- Fresh Frozen Plasma and Cryo
- Special Products
- Extended Phenotypes

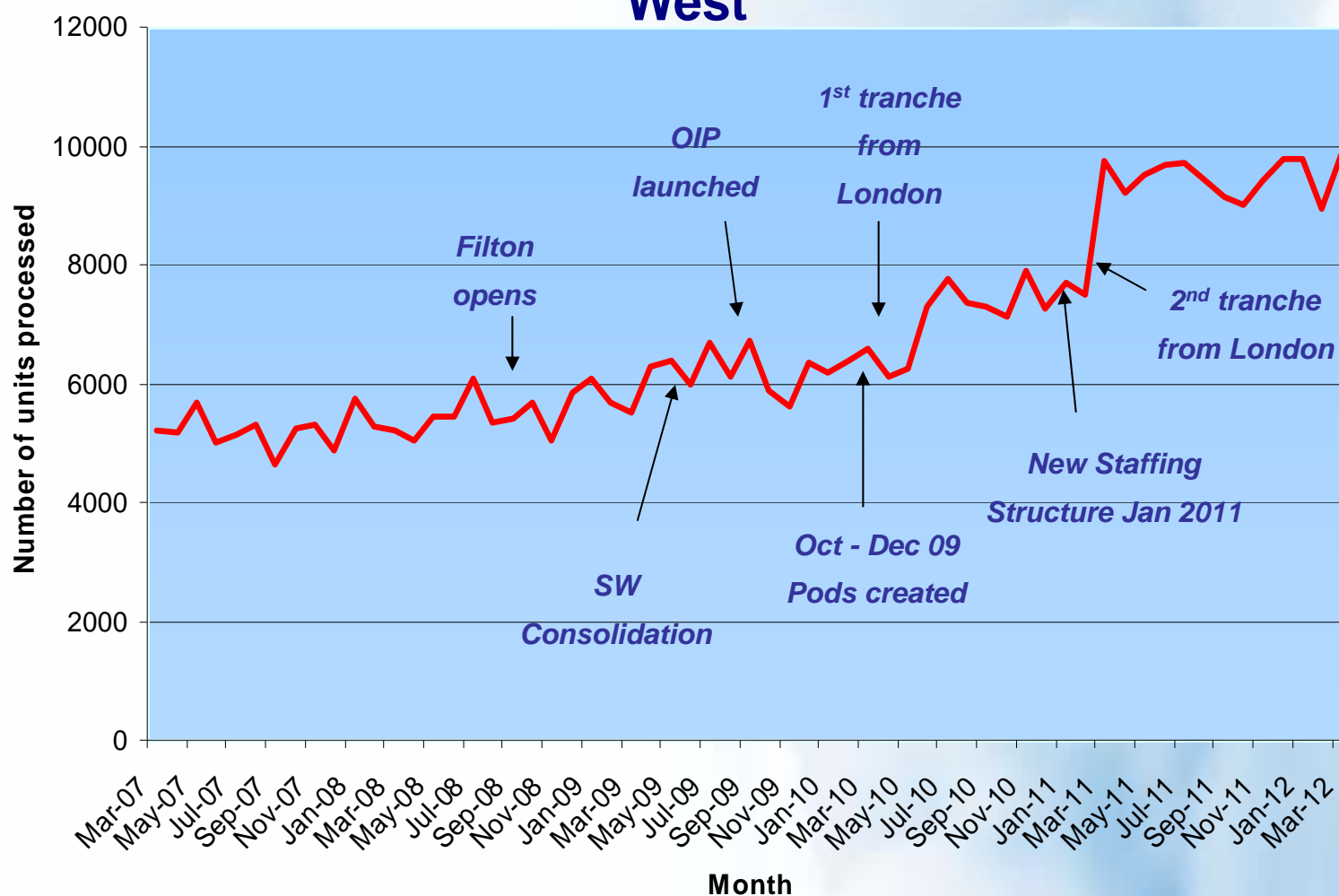
Evolution of a new Filton Centre 2004 - 2008



Consolidation and Evolution 2009 - 2011



Manufacturing Productivity in the South West



**So what have been the key successes
along the way.....**

We went from this in 2007



Southmead Site

240,000 red cell collections per year

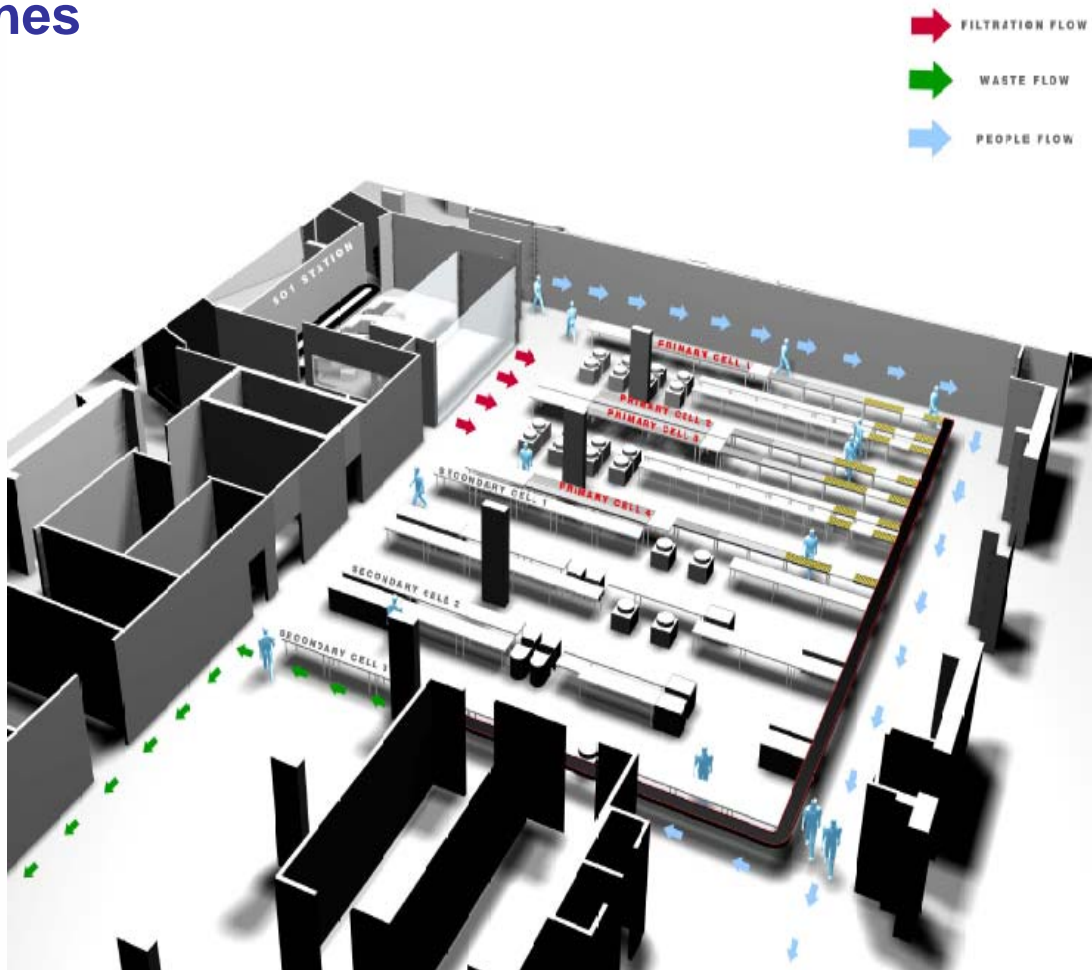
To this in 2008.....



***New Filton centre
495,000 donations
manufactured and tested***



Original Manufacturing Lines



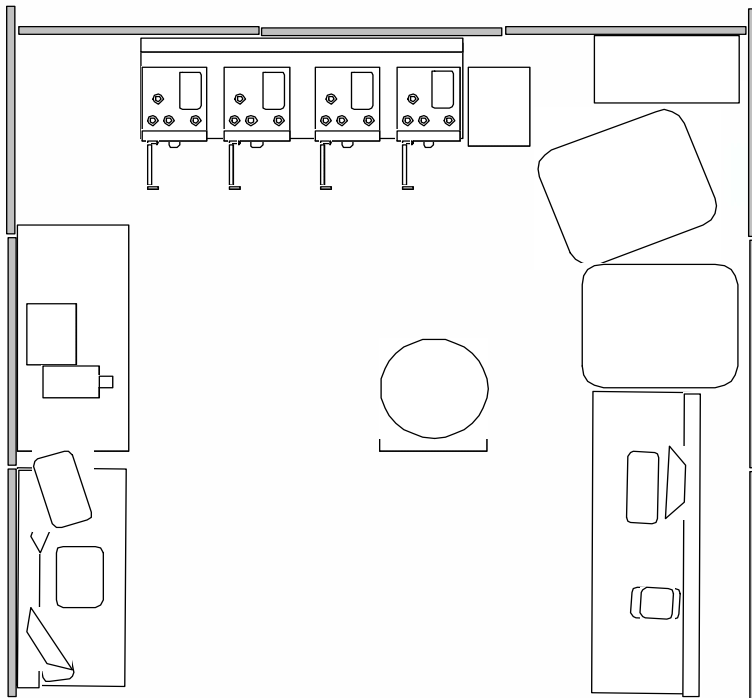
Tended to
Encourage batch
Processing

- Centrifuge all
- Press all
- Label all
- Communication poor

Launch of OIP – national programme in summer 2009

First RIE- revelation!

Lean Manufacturing POD



- Smaller batches
- Less Work in progress
- Units back in fridge quicker
- Greater visibility
- Removal of excess walking
- Flexibility to change product



Despite good progress.....the Burning Platform

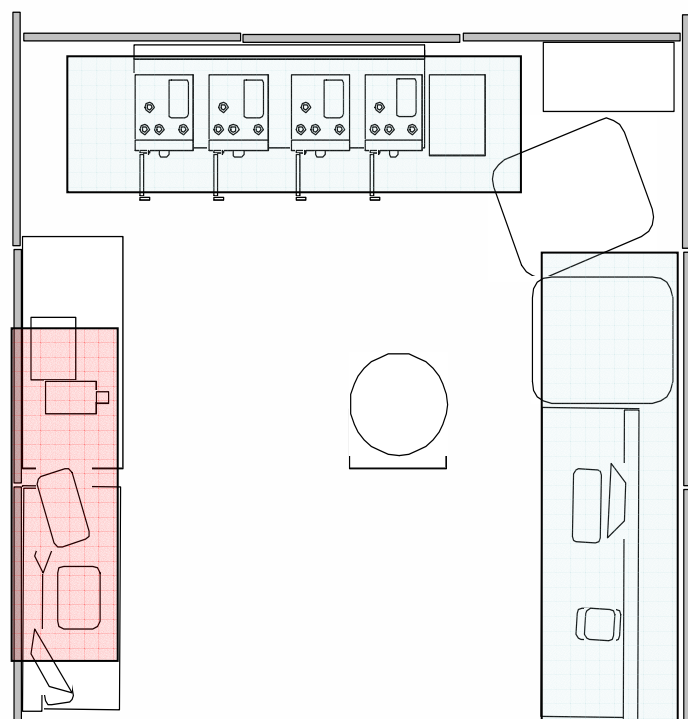
- Closure of Brentwood site meant an additional 200,000 red cell donations per year for Filton but.....
- Productivity not optimised
- Staff not in the right place at the right time
- Lack of formal production scheduling
- Need to drive out further waste from pods



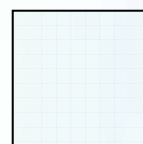
So what did we do.....?

We revisited the pod design and standard work

Removal of waste allowed 2 people to run a Pod



33%
improvement in
Pod
Productivity



Operator 1 – PCS74, Load
centrifuge, Press



Operator 2 – SO7 & Cut
down



Scheduled all activities by hour per pod

8am – 9am

	TAT	CRY O
	TAT	CRY O
	TAT	FFP

9am – 10am

	TAT	CRY O
	TAT	CRY O
	TAT	FFP

10am – 11am

	TAT	CRY O
	TAT	FFP
	TAT	TAT

11am – 12am

	TAT	TAT
	TAT	TAT
	TAT	TAT

12am – 1pm

	TAT	TAT
	TAT	TAT
	TAT	TAT

1pm – 2pm

	TAT	TAT
	TAT	TAT
	TAT	TAT

2pm – 3pm

	TAT	TAT
	TAT	TAT
	TAT	TAT

3pm – 4pm

	TAT	TAT
TAT	TAT	TAT
TAT	TAT	TAT

4pm – 5pm

	TAT	TAT
TAT	TAT	TAT
TAT	TAT	TAT

5pm – 6pm

TAT		
TAT	TAT	

Revised staffing structure

- Using standard work
- With workflow modelling
- Built a staffing structure to support the operation
- Consultation
- New staffing structure launched Jan 2011

Concept - Use of Collection forecast to manage the Lab in a more efficient way



Use the Forecast to plan the number of holiday slots available each day.



Use of Forecast

Date	Day	94% PD
01 April 2012	Sa/Su	631
02 April 2012	Mo	631
03 April 2012	Tu	3303
04 April 2012	We	3109
05 April 2012	Th	2812
06 April 2012	Fr	3314
07 April 2012	Sa	1145
08 April 2012	Sa/Su	680
09 April 2012	Mo	680
10 April 2012	Tu	887
11 April 2012	We	3124
12 April 2012	Th	3251
13 April 2012	Fr	3694
14 April 2012	Sa	3472
15 April 2012	Sa/Su	522

Use the Forecast to Plan Machine Maintenance in advance



Use the Forecast to plan the number of machines we are going to run each day of the following week.



Use the forecast to plan training on low bleed days.

Days between 2500 -
2900 units (Max FFP)

Average units	
TAT	50
FFP & Cryo	43
BAT	36

Target for day

FFP 600	Cryo 200
BAT 360	IP 1725

Days between 2900 -
3300 units (Normal
Day)

Average units	
TAT	50
FFP & Cryo	43
BAT	36

Target for day

FFP 500	Cryo 200
BAT 360	IP 2100

Days between 3300 -
3600 units (Busy
Day)

Average units	
TAT	50
FFP & Cryo	43
BAT	36

Target for day

FFP 330	Cryo 200
BAT 360	IP 2700

Progress tracking in each pod every hour



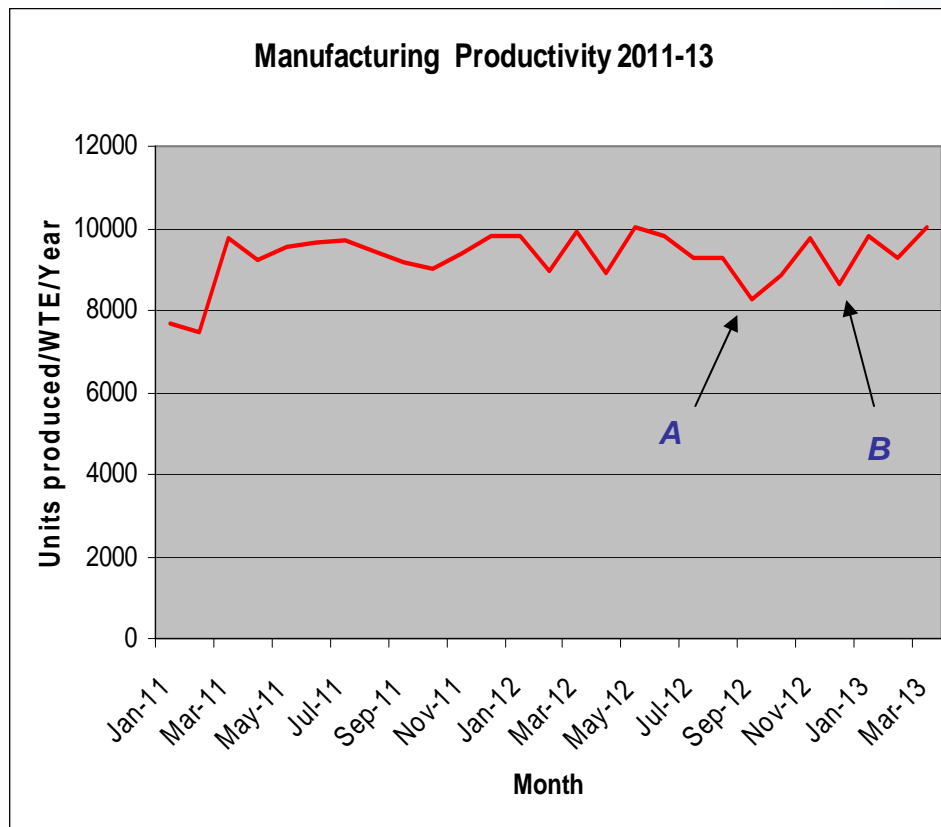
- Staff took ownership of progress
- Confirmation of throughput each hour at pod level
- Problems identified and noted

As a result in February 2011



- Increased production by 200,000 donations
- With a Staffing increase of only 2 whole time equivalents

2011 to nowSustainment and continuous improvement



- Productivity has remained relatively stable – EBA upper quartile
- 2 blips:
 - Flood in Sept 2012 (A)
 - Snow in Dec 2012 (B)

Disaster!



One week later

Staff, contractors and emergency services praised

Normal service is resumed after flooding at blood bank

A FULTON blood bank has started distributing blood to hospitals across the South West for the first time since it was forced to stop operations due to flooding.

It was service as normal at the blood processing centre off the A38 after it flooded following heavy rain last week.

And a banner was unveiled at the centre – which is one of the biggest in the world – to thank staff, contractors and the emergency services to mark their efforts over the last ten days. Crews from Avon Fire and Rescue Service, who helped pump water from the site, and Great Western Ambulance employees based next door to the blood bank who had also helped out were invited to be part of the celebrations.

The centre was forced to close on



● John Kirkwood, head of the emergency blood centre, on the right in black, and staff outside the centre which has reopened after being hit by serious flooding last week

Picture: Barbara Evripidou BRBE20121005C-005

Monday, September 24, after heavy overnight rain and the collapse of a culvert.

Staff had to move between 7,000 and 8,000 pints of blood out of the centre in refrigerated vehicles to ensure that no donations were wasted as a result of the flooding. And blood centre manager John Kirkwood said that staff worked into the evening to ensure that all the blood went out.

While the blood bank was closed to orders hospitals were reminded of the other centres to contact as arranged through contingency plans.

Mr Kirkwood said: "All our staff were magnificent, they stayed on and worked right up to dark."

He said all 600 employees were due to receive a thank-you letter from the chief executive of NHS Blood and Transplant for their commitment.

THE POST 08/10/12

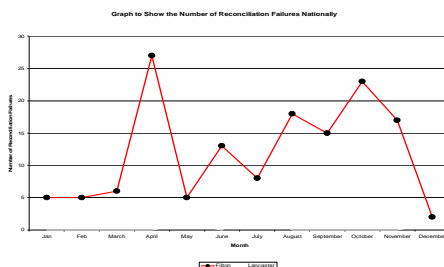


Run regular RIEs
so far have
involved over 500
staff



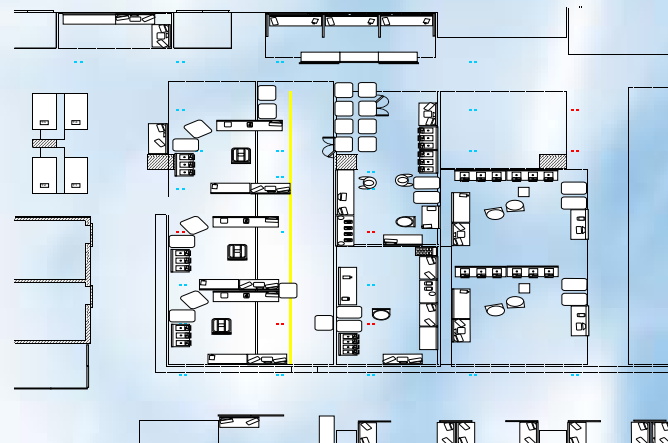
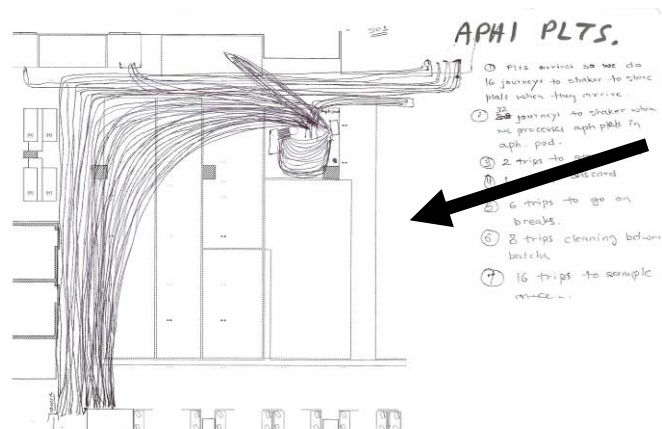
*With much success to
celebrate.....*

RIE - Filton Improvement examples

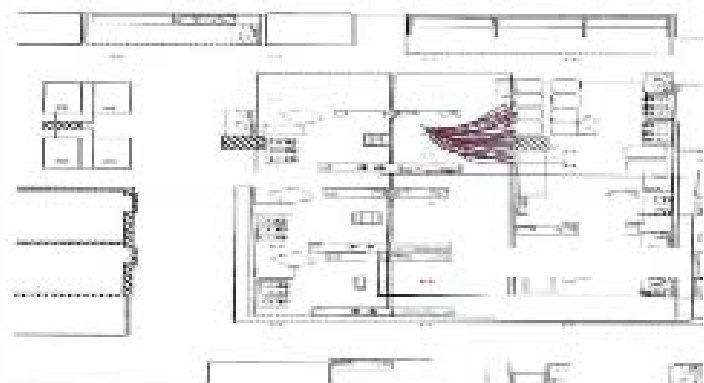
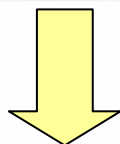


- **70%** Reduction in the number of reconciliation failures (*Following Filton Reconciliation RIE*)
- **£19,984** saving on discard packaging (*Following Filton Discard RIE*)
- **6,000,000** less scans per year (*Following Auto discard RIE*)
- **2 WTE** staffing removed from 2013/14 budget as direct result

Previous Walking



New layout



- *26 KM per week less walking*
- *20% more space available*
- *Extra Pod for new product*

Future

Need to consider

- *Falling demand for RBC*
- *Increase productivity*
- *Reduce cost*

Filton VSA in November 2012

- Audit of lean processes and pods
- Analysis of current state
- Set targets for future state
- Future State map
- Produce 12 month plan of activity

Filton Targets

- ↑ **Productivity**
- ↓ **Staff turnover**
- ↑ **Attendance**
- ↓ **Wastage**
- ↑ **OTIF (On time in full)**
- ↑ **Lean training**

Key Operational Improvement themes for 2013

- Measurement of standard work to improve resource requirements
- A structured programme of 6's improvements
- Improved visual management
- Reduction in product waiting time
- Further targeted RIE's to remove waste from the process
- Staff flexibility between departments

- Support project sustainment through audit
- OIP training (Bronze, Silver, Gold, Platinum)
- OIP training at Induction
- Target 100% staff green (basic) trained by 2013 year end
- Greater Staff involvement - 'create a bottom up approach'
- Continuous Improvement - Business as Usual
- National Standardisation



Thank you

...and to

***All our colleagues in
Filton and NHSBT***

***All the blood services
who helped us!***