LabPlus Networking the Flow Lab

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Te Kāwanatanga o Aotearoa
New Zealand Government

Health New Zealand
Te Whatu Ora

Systems @ LabPlus

2020

2012

~ 2005

~ 2000

Evolution

Automated Sample Prep

- Labplus flow lab started automation with the BD FACS™ Sample Prep Assistant (SPA) in 2005.
- BD FACSDuet™ supplanted the BD FACS™ SPA in 2022.
- Upgraded to the BD FACSDuet™ Premium in 2024.
- In-built centrifuge and wash station
- Capable of integrating with a BD FACSLyric™ flow cytometer.

BD FACSLink™ Interface

Where to start?

Start

- What is reported
- How it is set up in LIS

Set up assays to export statistics

Select the test results and give it a name in BD FACSLink

	Keywords & Expressions	BD FACSLink Result Name
☐	Lymphs Abs Cnt	LYMPHSABS
☑	CD3 %Lymphs	PCD3
☑	CD3+ Abs Cnt	CD3ABS
☑	CD3+CD4+ %Lymphs	PCD4
☑	CD3+CD4+ Abs Cnt	CD4ABS
☐	CD3+CD4+ %Lymphs (excl. dual pos.)	PCD4_NDP
☐	CD3+CD4+ Abs Cnt (excl. dual pos.)	CD4ABS_NDP
☑	CD3+CD8+ %Lymphs	PCD8
☑	CD3+CD8+ Abs Cnt	CD8ABS
☐	CD3+CD8+ %Lymphs (excl. dual pos.)	PCD8_NDP
☐	CD3+CD8+ Abs Cnt (excl. dual pos.)	CD8ABS_NDP
☐	CD3+CD4+CD8+ %Lymphs	PCD4_8
☐	CD3+CD4+CD8+ Abs Cnt	CD4_8ABS
☐	CD3+CD4-CD8- %Lymphs	PCD4N_8N
☐	CD3+CD4-CD8- Abs Cnt	CD4N_8NABS
☑	CD19+ %Lymphs	PCD19
☑	CD19+ Abs Cnt	CD19ABS
☑	CD3-CD16+CD56+ %Lymphs	PCD16_56
☑	CD3-CD16+CD56+ Abs Cnt	CD16_56ABS
☐	4/8 Ratio	4_8_RATIO
☐	CD3+CD16+CD56+ %Lymphs	PCD3_16_56
☐	CD3+CD16+CD56+ Abs Cnt	CD3_16_56ABS

** BD FACSuite™ Clinical IVD 6-Color TBNK Assay*

BD FACSLink Assay Name: MNTL Send

	Keywords & Expressions	BD FACSLink Result Name
☐	$SRC (N-N-45-3-N-N)	
☐	SAMPLE NAME (N-N-45-3-N-N)	
☐	CASE NUMBER (N-N-45-3-N-N)	
☐	$DATE (N-N-45-3-N-N)	
☐	$CYTSN (N-N-45-3-N-N)	
☑	WCC (PB) (N-N-45-3-N-N)	MNWC
☑	Lymph # (N-N-45-3-N-N)	MNLY
☑	CD3 Ave	MNT3
☑	KEYWORD 1 (N-N-45-3-N-N)	KEY1

	Statistics	BD FACSLink Result Name
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, Events (RA-62L-45-3-RO-4)	
☑	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, % Parent (RA-62L-45-3-RO-4)	MNT4
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, % Grandparent (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, % Total (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+8+, Events (RA-62L-45-3-RO-8)	
☑	All Events, Lymph SIZE AND Lymph CD45, CD3+8+, % Parent (RA-62L-45-3-RO-8)	MNT8
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+8+, % Grandparent (RA-62L-45-3-RO-8)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+8+, % Total (RA-62L-45-3-RO-8)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_UL, Events (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_UL, % Parent (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_UL, % Grandparent (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_UL, % Total (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_Naive4+RA+62L+, Events (RA-62L-45-3-RO-4)	
☑	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_Naive4+RA+62L+, % Parent (RA-62L-45-3-RO-4)	MRA4
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_Naive4+RA+62L+, % Grandparent (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_Naive4+RA+62L+, % Total (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_LL, Events (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_LL, % Parent (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_LL, % Grandparent (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_LL, % Total (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_TEffMem4+RA+62L-, Events (RA-62L-45-3-RO-4)	
☑	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_TEffMem4+RA+62L-, % Parent (RA-62L-45-3-RO-4)	TEM4
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_TEffMem4+RA+62L-, % Grandparent (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RA/62L, 4/RA/62L_TEffMem4+RA+62L-, % Total (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RO/62L, 4/RO/62L_UL, Events (RA-62L-45-3-RO-4)	
☐	All Events, Lymph SIZE AND Lymph CD45, CD3+4+, 4/RO/62L, 4/RO/62L_UL, % Parent (RA-62L-45-3-RO-4)	

** BD FACSuite™ LabPLUS MNTL Assay*

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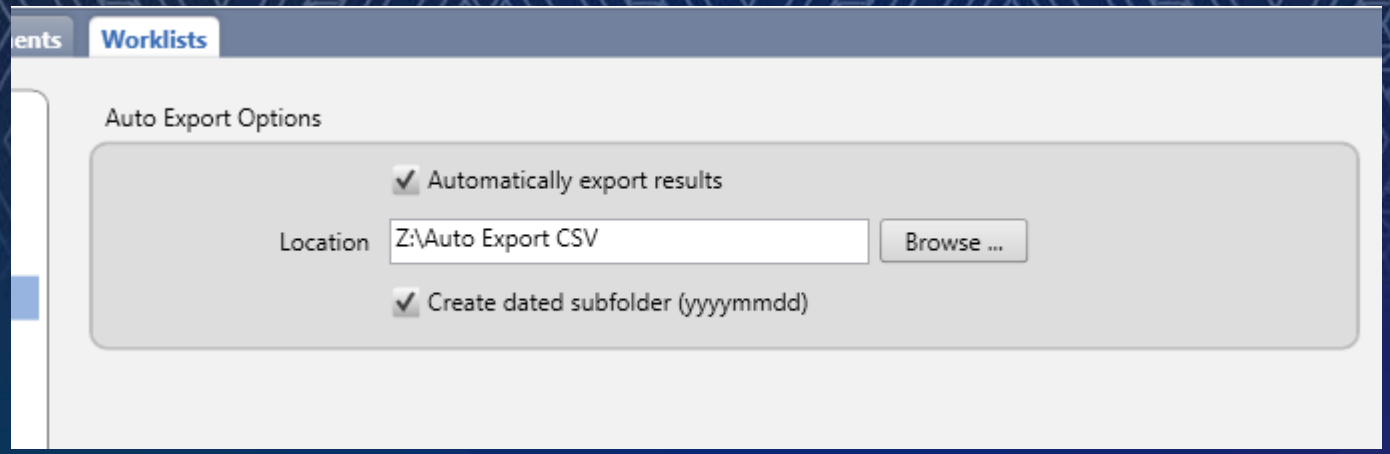

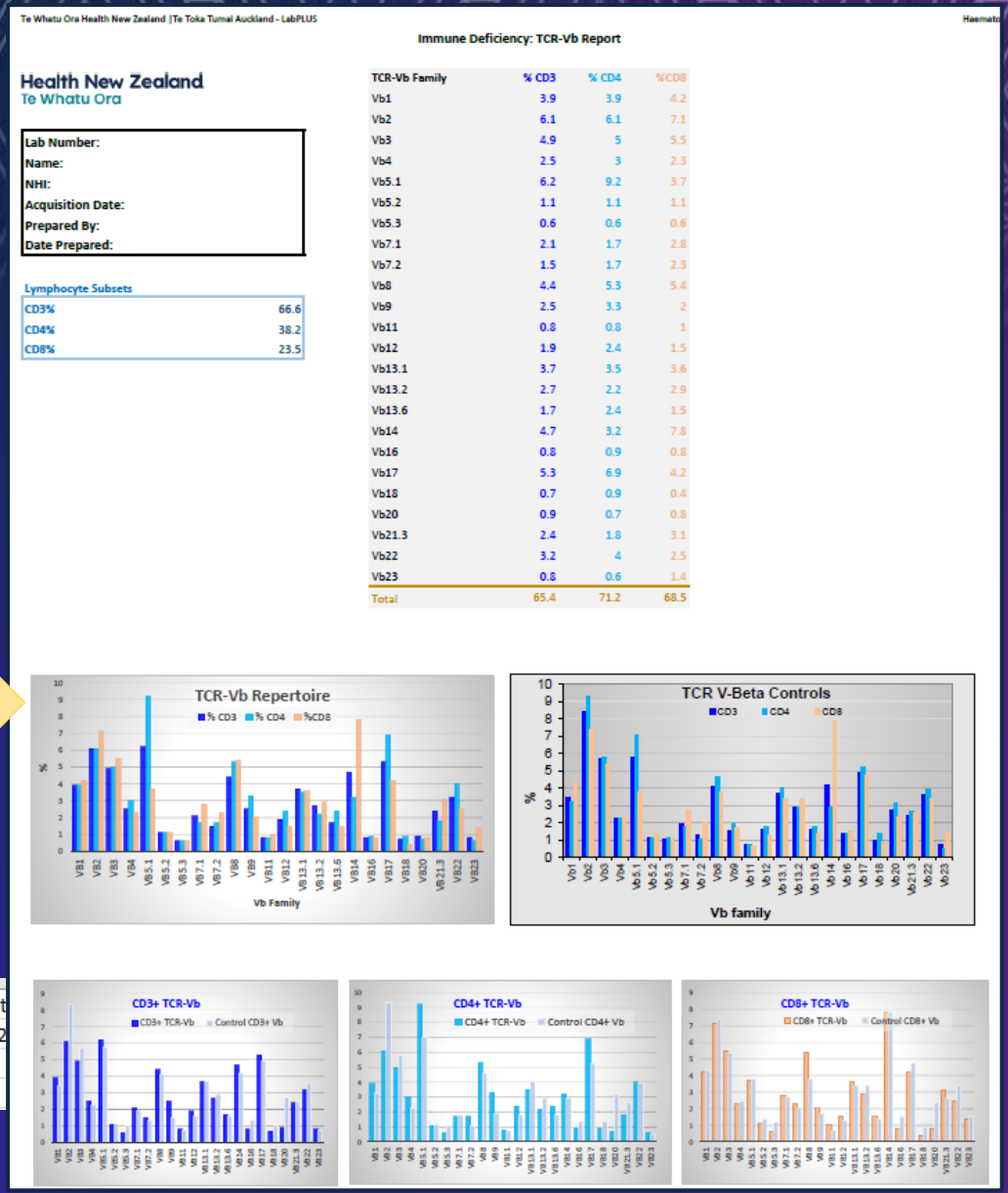

Sample ID	Assay Nan	Export Dat	Sample ID	Sample Na	Case Num	Acquisitio	Populatio	Populatio	Populatio	Populatio	Populatio	Populatio	Populatio	Populat
	IDEF TCRV	########				########	0.6	2.1	4.9	0.6	1.7	5	0.6	2

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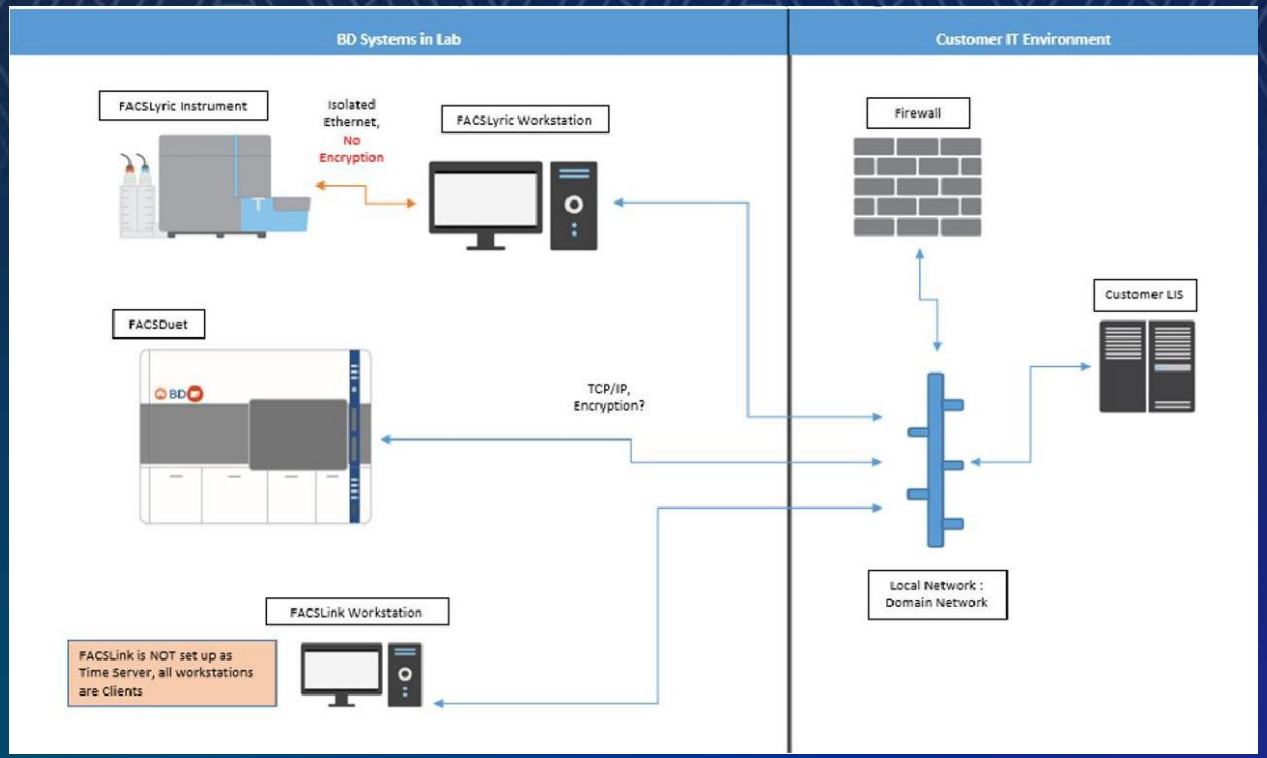
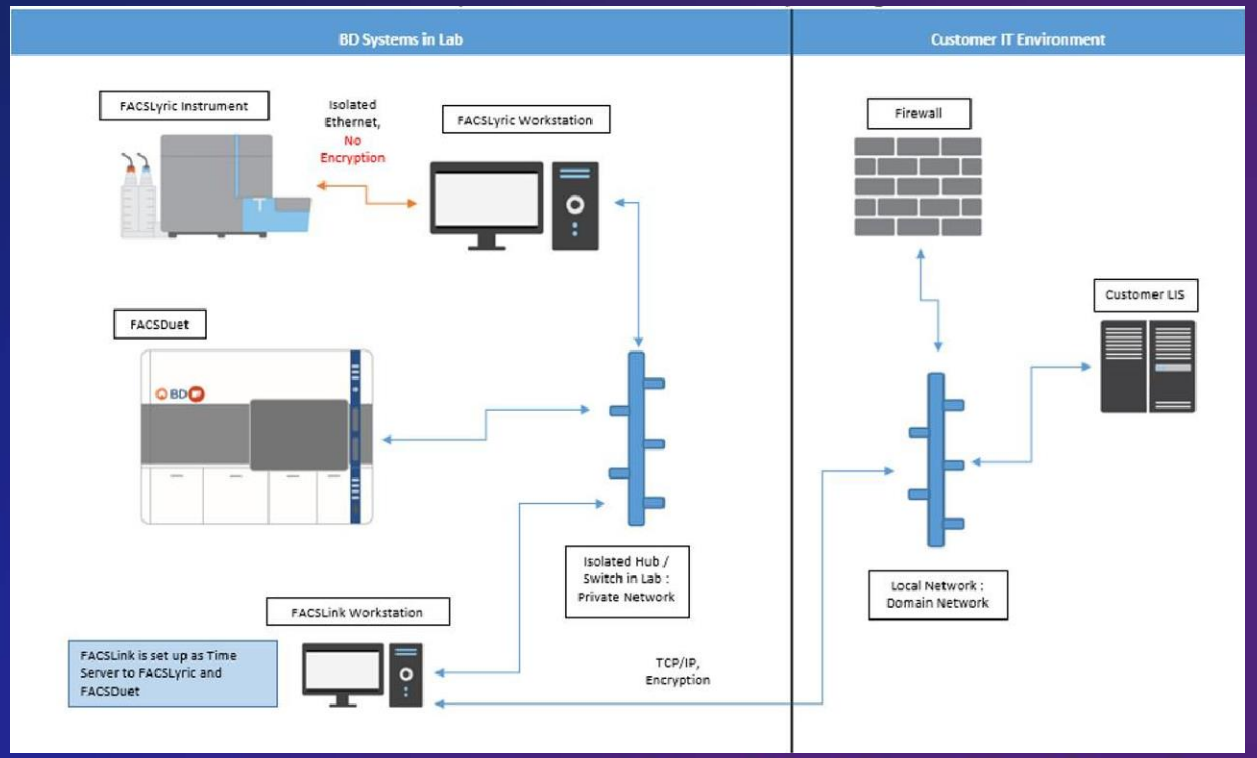
Network Deployment

- The instruments need to be on a network
- A project was underway
- Parties to this project:
  - IT/Network Team
  - Our LIS team
  - LIS Provider
  - End user - that’s us
- Overseen by Project Manager

Lots of COFFEE

Deployment Options





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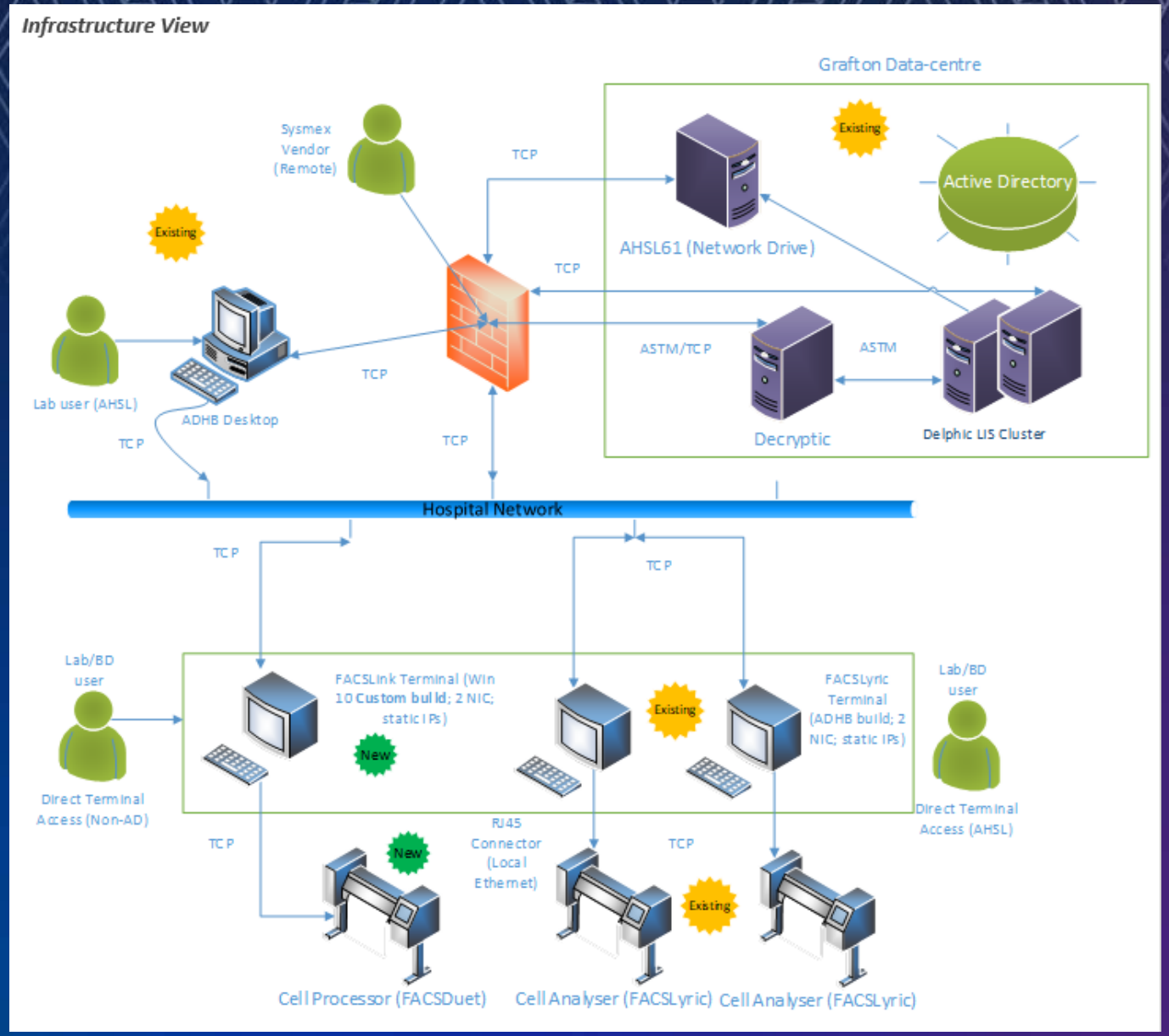
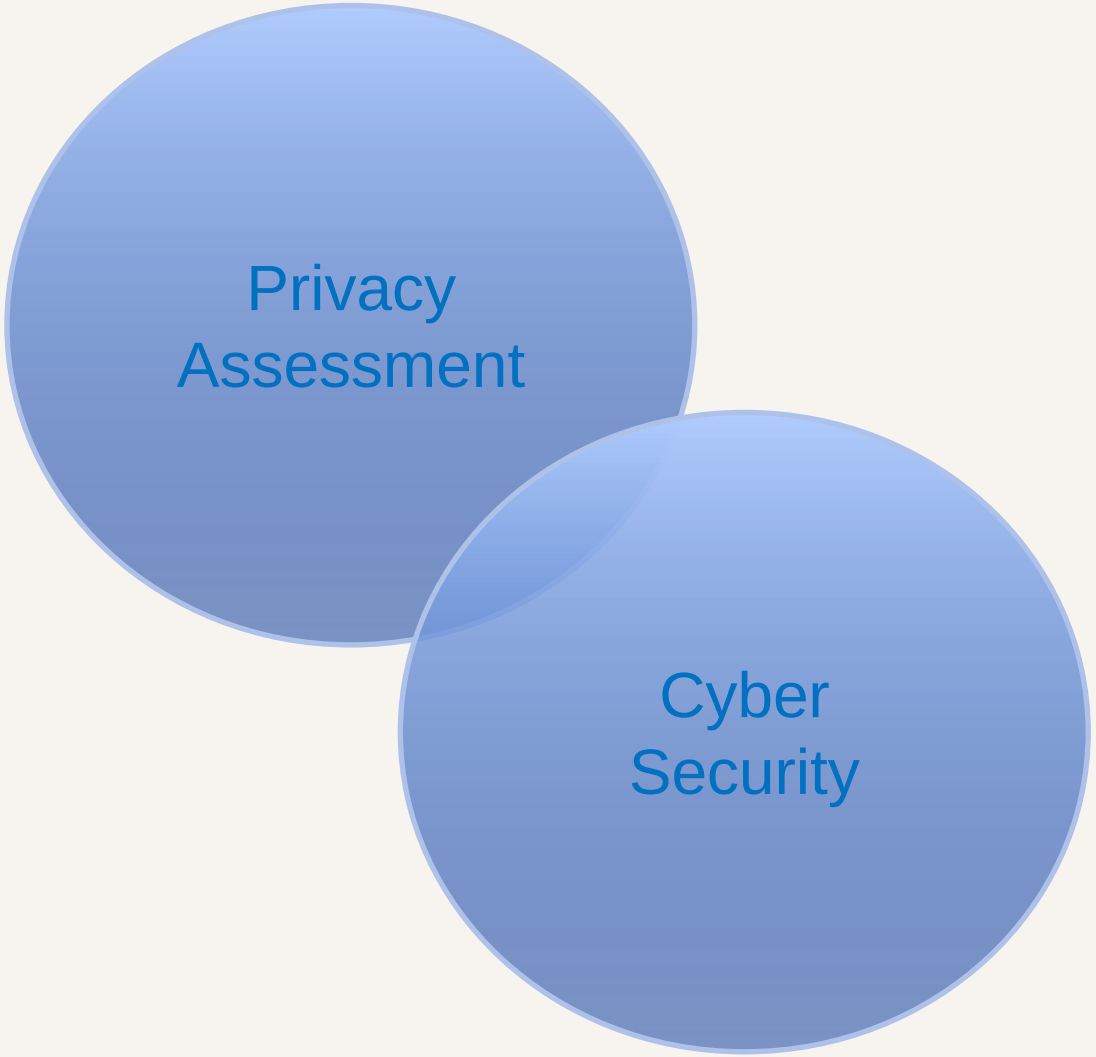
Infrastructure View

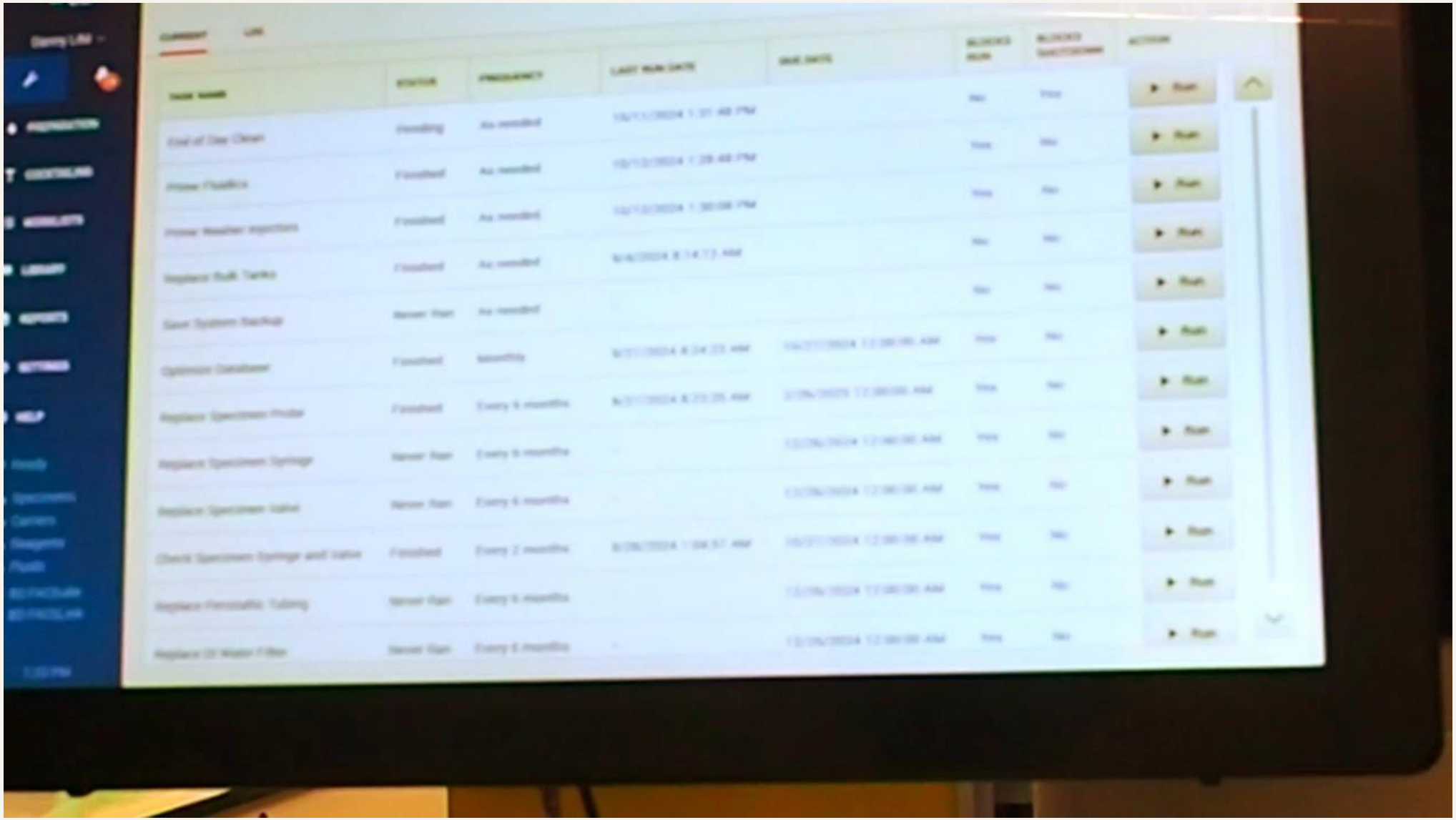


Networking
Naughty Bits



Interface Build

- Once the network was established, it was over to the LIS provider to build the interface
- Your experience may be different
- ASTM or HL7?
- Testing
- Fine tuning



Go LIVE!

- It took a few years to get to this point.
- Not for the faint-hearted
- Automation is wonderful!
- Pairing automation with an interface – Priceless!

Was It Worth It?

Thank You!

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