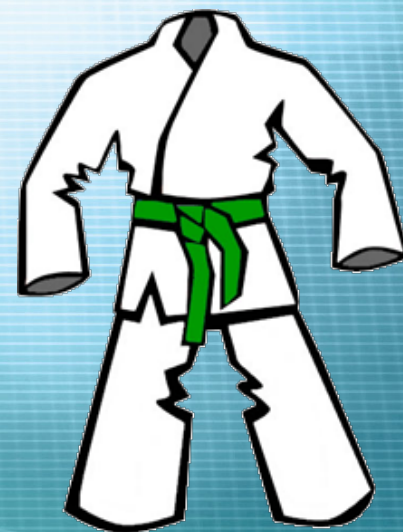
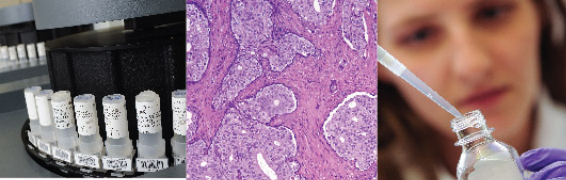




**Linking Materials Management to Standardization Across
Multiple Lab Sites: How We Gained Buy-in and Sustained
Support from Medical Directors and Staff**

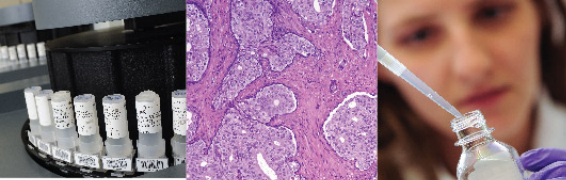
**Mike Kimpland
Damon Silvestry**





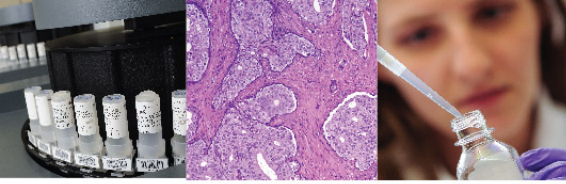
Agenda

- | | |
|--|-------|
| • Miraca Life Sciences Overview | Damon |
| • Green Belt Project | Mike |
| • Miraca's first 12 months of Lean / Six Sigma | Damon |
| • Q&A | All |



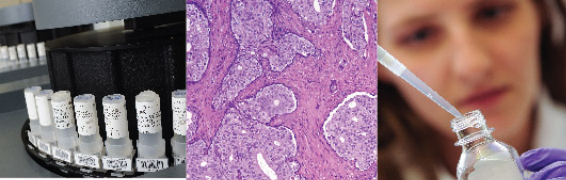
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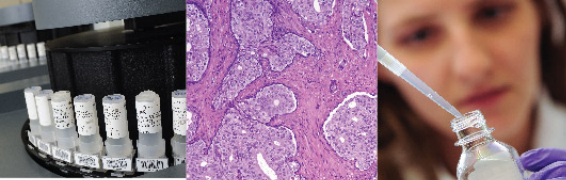
Miraca Life Sciences---Origin

Mirai + **Ka(ca)gaku**
Future **Science**



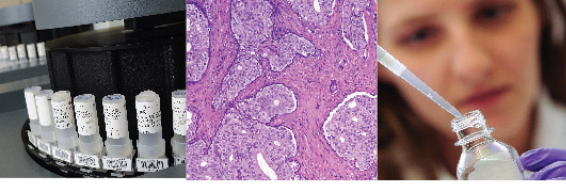
About Miraca Life Sciences

- Miraca Life Sciences specializes in the development and commercialization of the **highest quality anatomic pathology services** (Gastrointestinal Pathology, Dermatopathology, Hematopathology, and Urologic Pathology)
- The company employs **over 800 teammates** which includes **70 academic-caliber pathologists**
- Miraca Life Sciences serves over **3,500 patients** every day with an **annual volume of approximately 1 million cases**
- Miraca Life Sciences **continuously improves diagnostic precision**
- The company operates state-of-the-art, **CAP and CLIA approved laboratories across the United States**



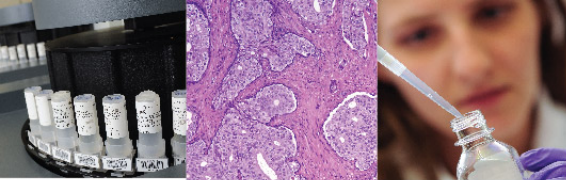
Miraca Life Sciences Laboratories





Our Specialties

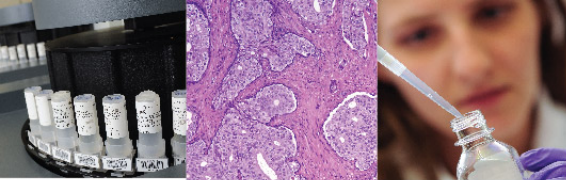
- Gastrointestinal Pathology
- Dermatopathology
- Hematopathology
- Urologic Pathology



Consensus Conference



Our expert pathologists review unique and complex cases as part of a daily, multi-headed microscope consensus conference.



Agenda

- | | |
|--|-------|
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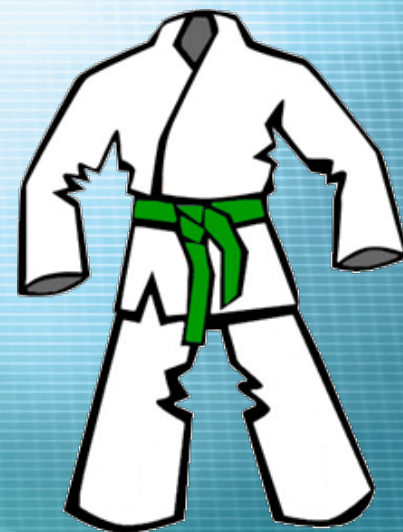


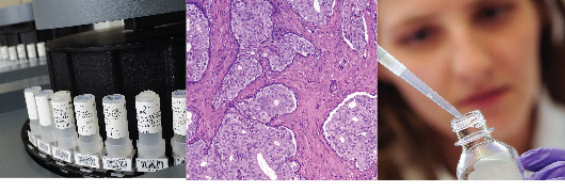
Linking Materials Management to Standardization Across Multiple Lab Sites: How We Gained Buy-in and Sustained Support from Medical Directors and Staff

Mike Kimpland

Start Date: 10/19/2012

Finish Date: 05/01/13





DMAICR Approach



What should
be improved?

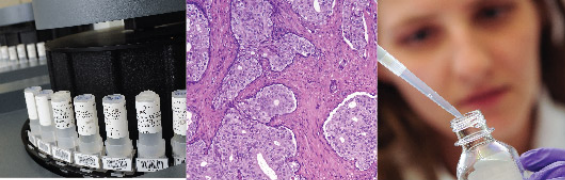
By what
Magnitude?

What
does the
data tell
you?

What X's will
you improve?

How do you
control and
sustain
Improvement?

How do we
communicate?



Define: Materials Standardization

Project Problem Statement : Each Miraca site is sourcing the same products from different suppliers. Cost variance from supplier to supplier causes Miraca to pay higher prices at some locations compared to the others.

<u>Metric</u>	<u>Baseline</u>	<u>Goal</u>	<u>Cap*</u>	<u>Improvement</u>
Cost Savings	\$0	\$500k	Path Preference	\$500k in savings
Average Cost per Case Variance	\$8.25	\$6.00	Equipment Limitations	25% Reduction

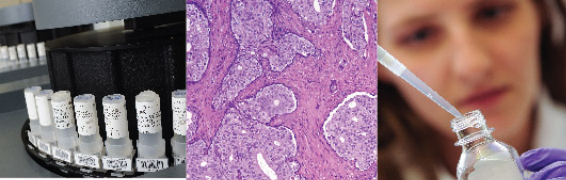
Scope : Newton, Phoenix, & Irving sites.

Estimated business results / Benefits:

- Decreased cost on materials, lower inventory balances, less exposure to expiring materials
- Standardized materials, less variation in stains from site to site

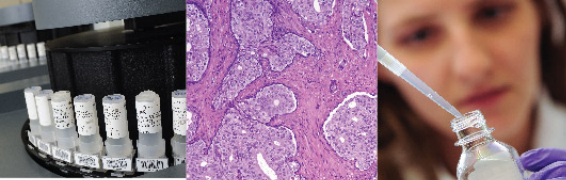
Team Members

- BPI Champion: Damon Silvestry
- BPI Mentor: Tyrone Butler
- Financial Advisor: M. Dolenuck
- Team Members:
 - Kristi Johnson / Purchasing
 - Tina Williams / Purchasing
 - Brad David / Materials
 - Shelley Karl / IHC
 - A. Jojatu / Lab Mgt.
 - Torey Andrews / Lab Mgt.
 - R. Ramnani / Data Analysis
 - Z. Taylor / Receiving Coordinator
 - K. Thoman / Lab Mgt.



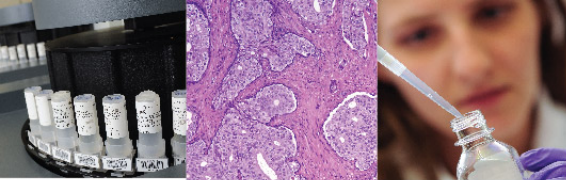
Miraca Life Sciences Laboratories





Miraca Life Sciences Laboratories





Define: How do we track items?

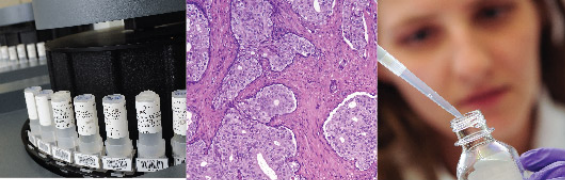
- Miraca Identification Numbers (MIDs)
 - Internal numbers
 - Controlled by Miraca in WASP database
- Vendor Identification Numbers (VIDs)
 - “Catalog Numbers, Part Numbers, Product Codes”
 - Numbers referenced on Purchase Orders
 - Unique to each different supplier
- One MID links together many VIDs
 - Example: Xylene, Reagent Grade

MID: PR00475

VID1: 8400-1 (Vendor 1)

VID2: HC7001GAL (Vendor 2)

VID3: 3803665 (Vendor 3)



Define: How do we track items?

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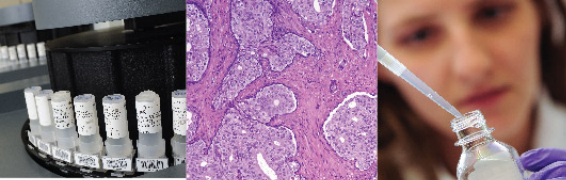
VID2: HC7001GAL (Vendor 2)

VID3: 3803665 (Vendor 3)

If two sites are buying the same product from two different suppliers, there will be different costs at each site.

One cost will be higher than the other for the same exact product!!

We call this difference “price variance.”



Example

Define: Think of it this way...

Non-Standardized

MID = Coke (Irving)

VID1 = Coca- Cola™

MID = Pepsi (Phoenix)

VID1 = Pepsi™

MID = R/C (Newton)

VID1 = R/C Cola™

Standardized

MID = COLA (All Sites)

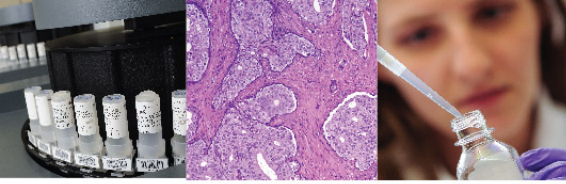
VID1 = Coca- Cola™

VID2 = Pepsi™

VID3 = R/C Cola™

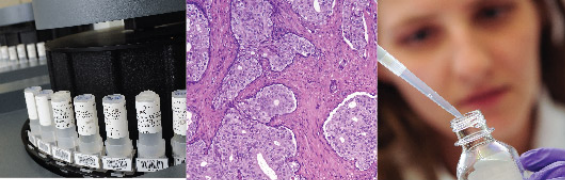


Sounds easy enough so far!
What do you think?

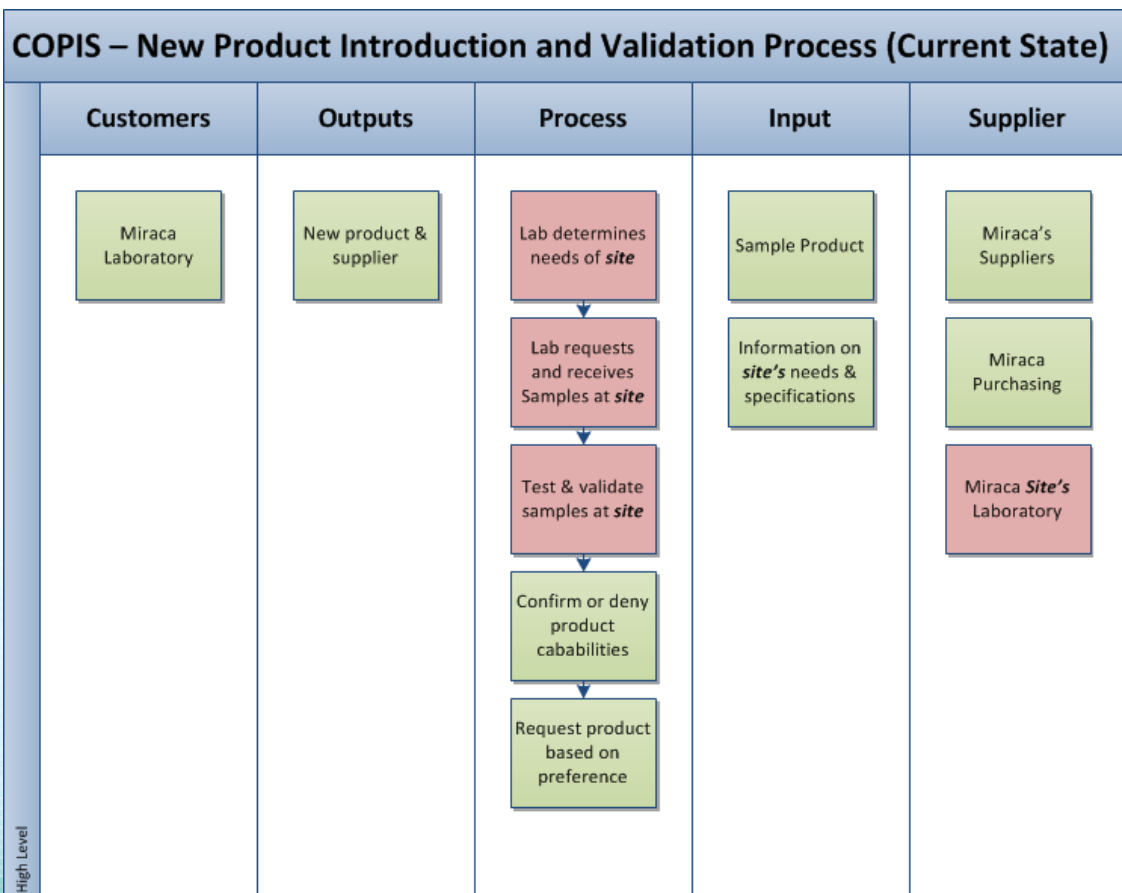


Define: What are the processes?

- COPIS Diagram (Customer, Output, Process, Input, Supplier)
 - New Material Introduction Process
 - Purchase Order/Materials Acquisition Process



Define: COPIS & 7 Wastes (New Products)



Defects

- FPY due to bad products

Waiting

- Validation wait time

Transportation

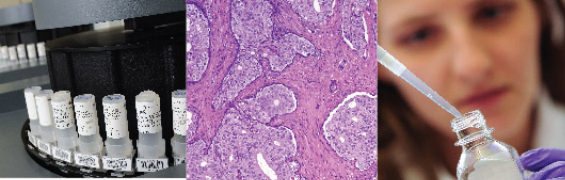
- Supplier Backorders

Extra Processing

- Concentrates, Powders, & Pre-dilutes

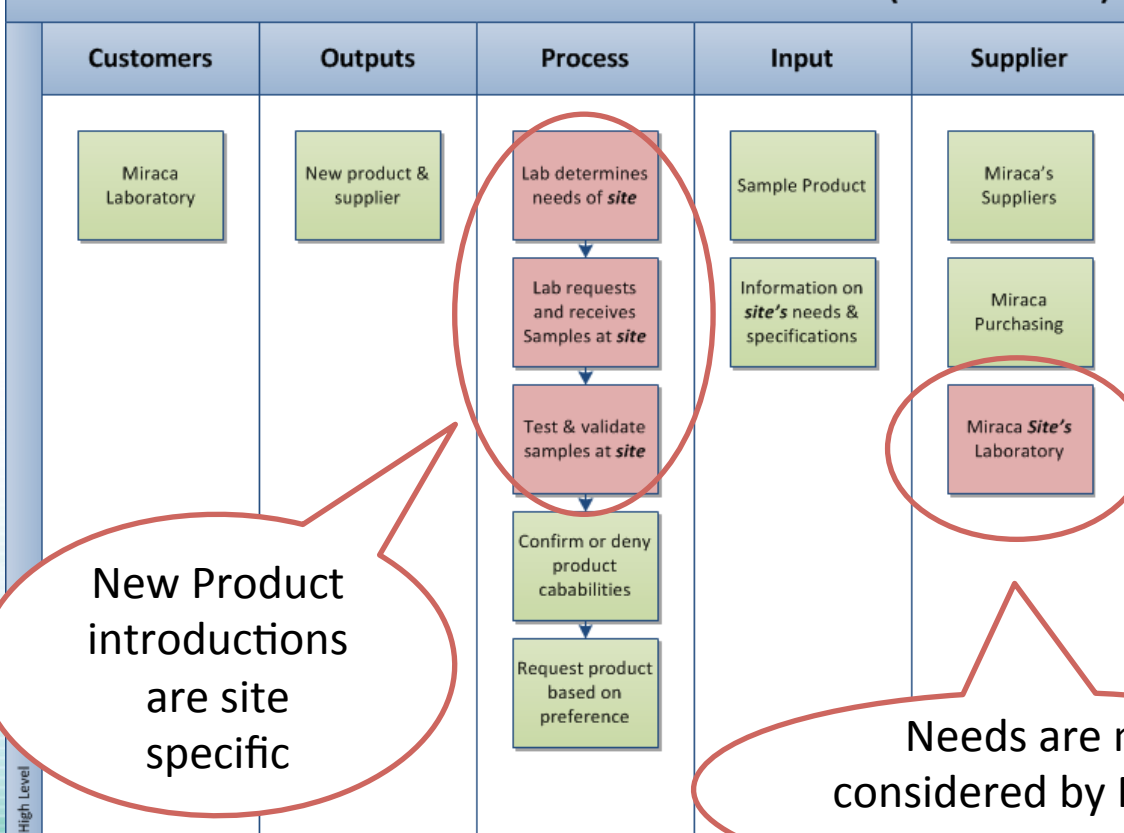
Wasted Resources

- Data available, not being used



Define: COPIS & 7 Wastes (New Products)

COPIS – New Product Introduction and Validation Process (Current State)



New Product introductions are site specific

Needs are not considered by Miraca as a whole

Defects

- FPY due to bad products

Waiting

- Validation wait time

Transportation

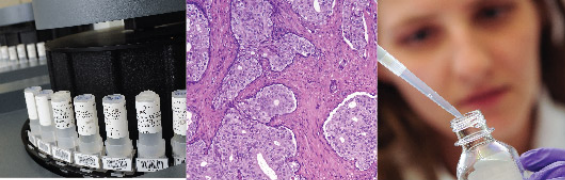
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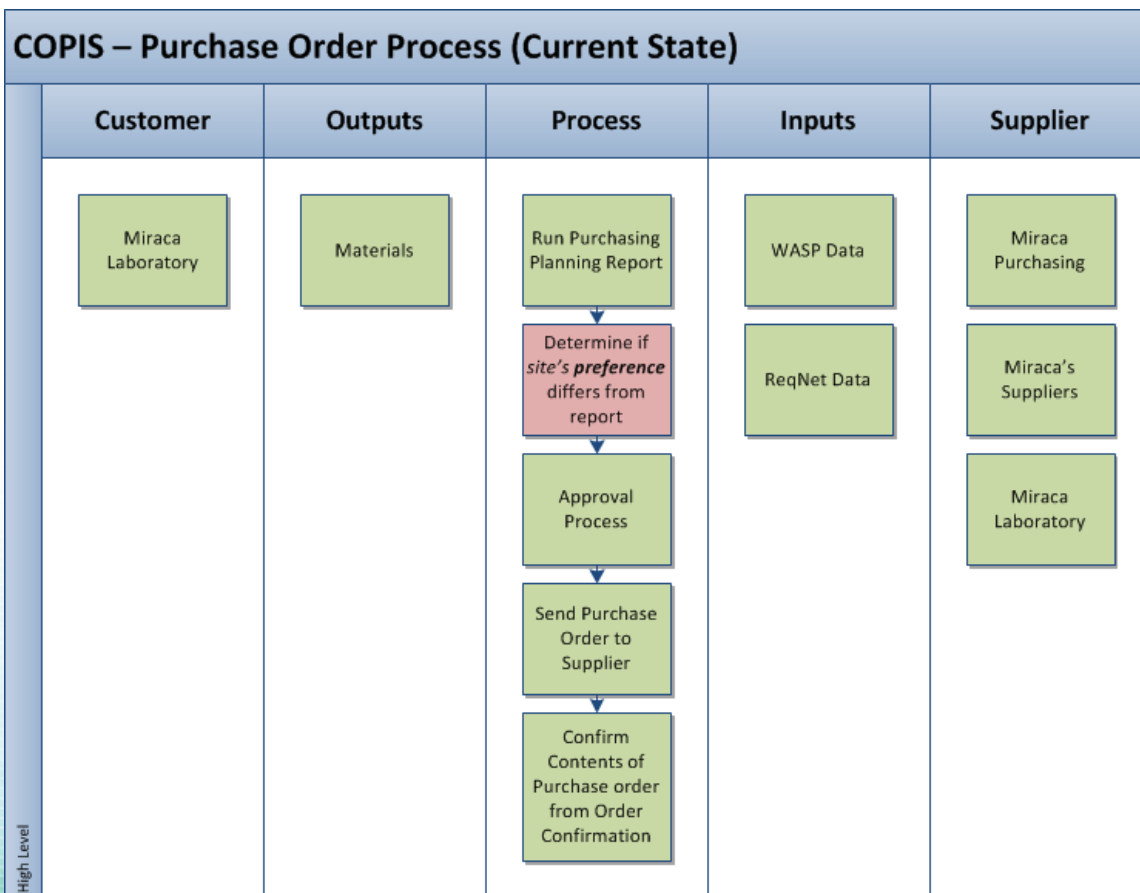
- Concentrates, Powders, & Pre-dilutes

Wasted Resources

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Define: COPIS & 7 Wastes (PO Process)



Waiting

- Validation wait time

Transportation

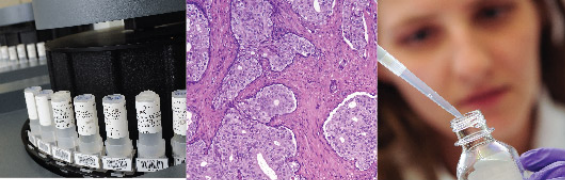
- Supplier Backorders

Wasted Resources

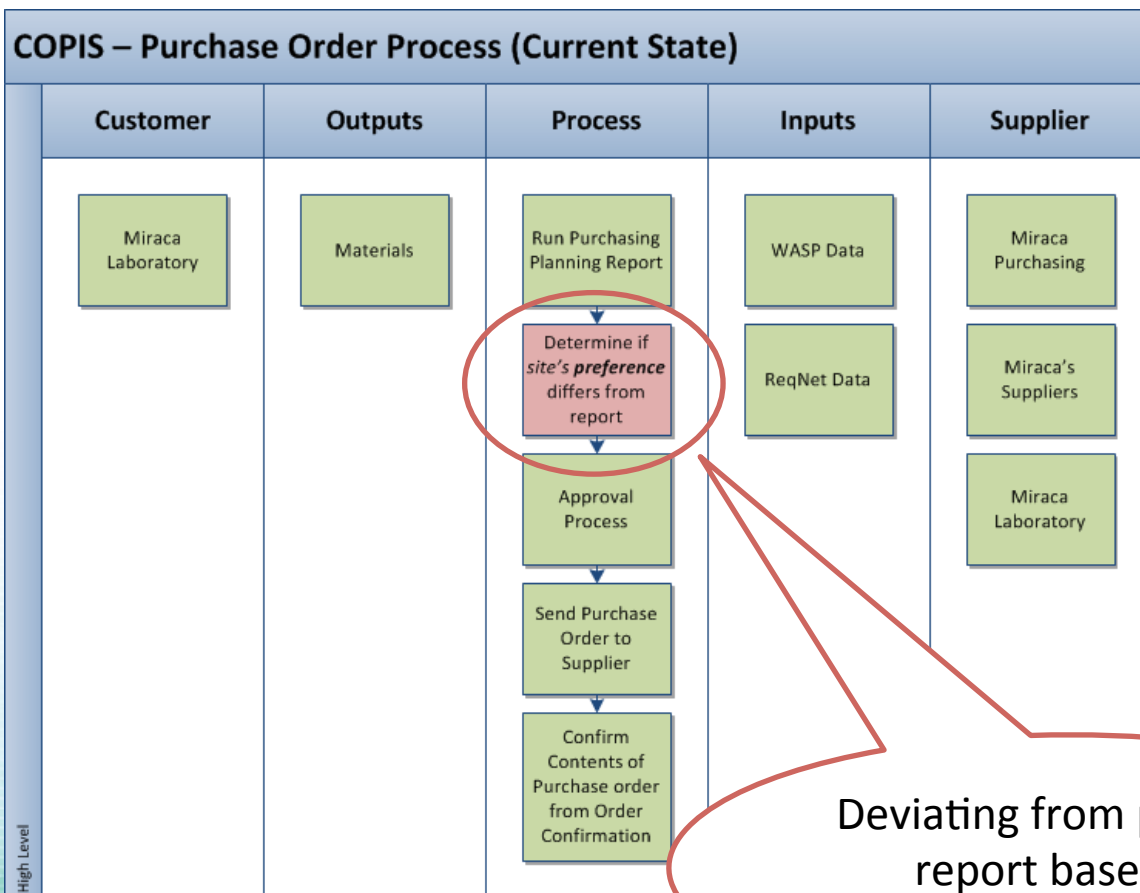
- Data available, not being used

Motion

- Extra steps in process



Define: COPIS & 7 Wastes (PO Process)



Waiting

- Validation wait time

Transportation

- Supplier Backorders

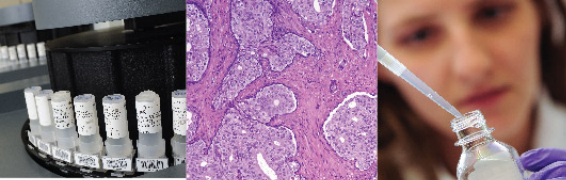
Wasted Resources

- Data available, not being used

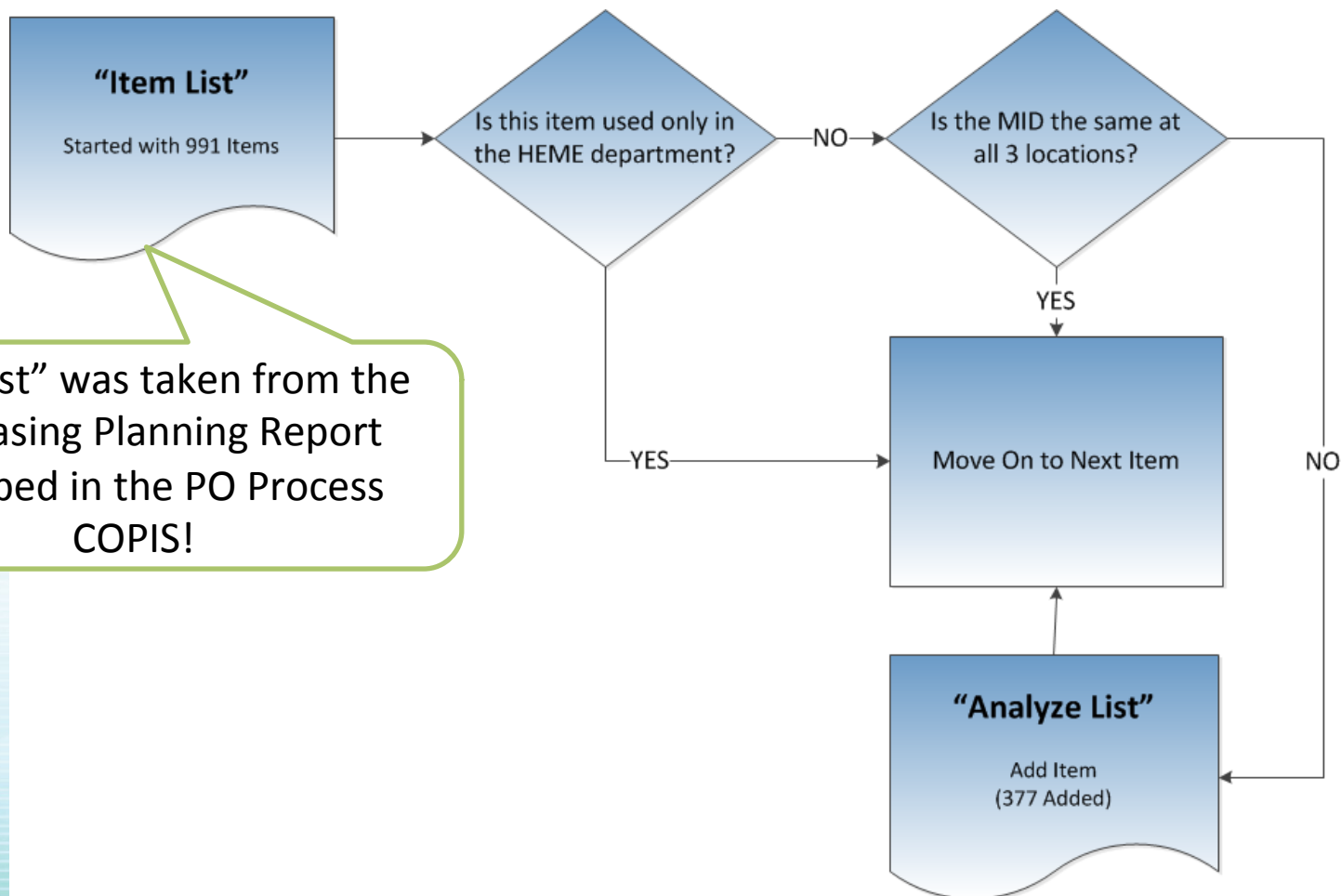
Motion

- Extra steps in process

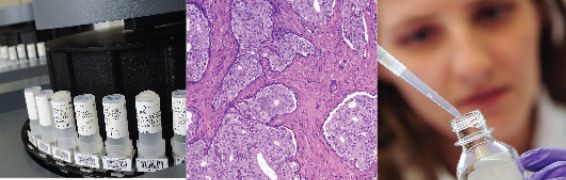
Deviating from planning report based on preference of each lab



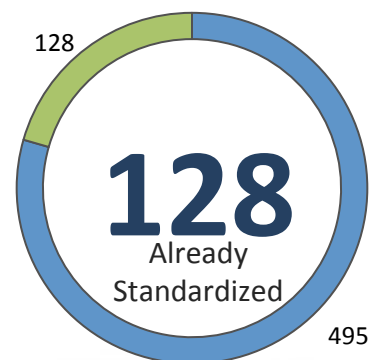
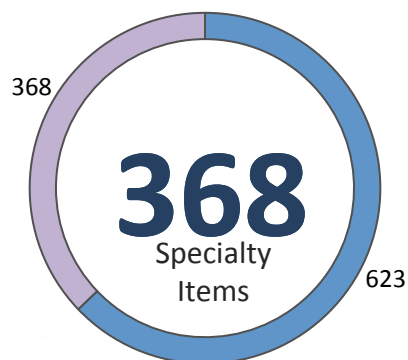
Measure: Process Used for Creating a List of “Non-Standardized” Items

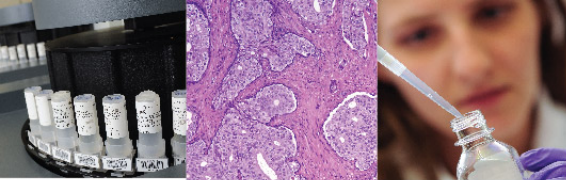


“Item List” was taken from the Purchasing Planning Report described in the PO Process COPIS!

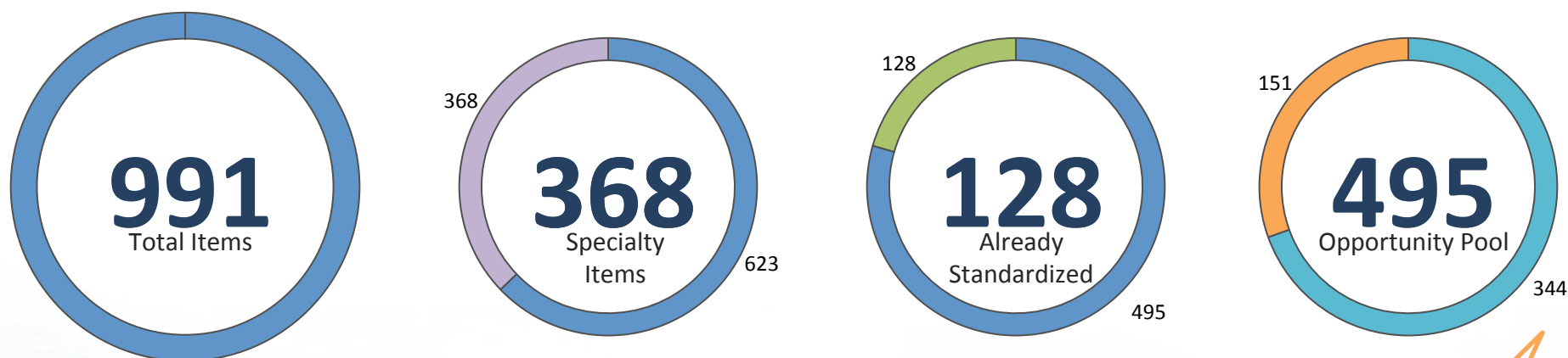


Measure: **Miraca ID Usage by Site**

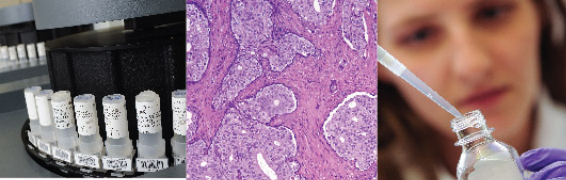




Measure: Miraca ID Usage by Site



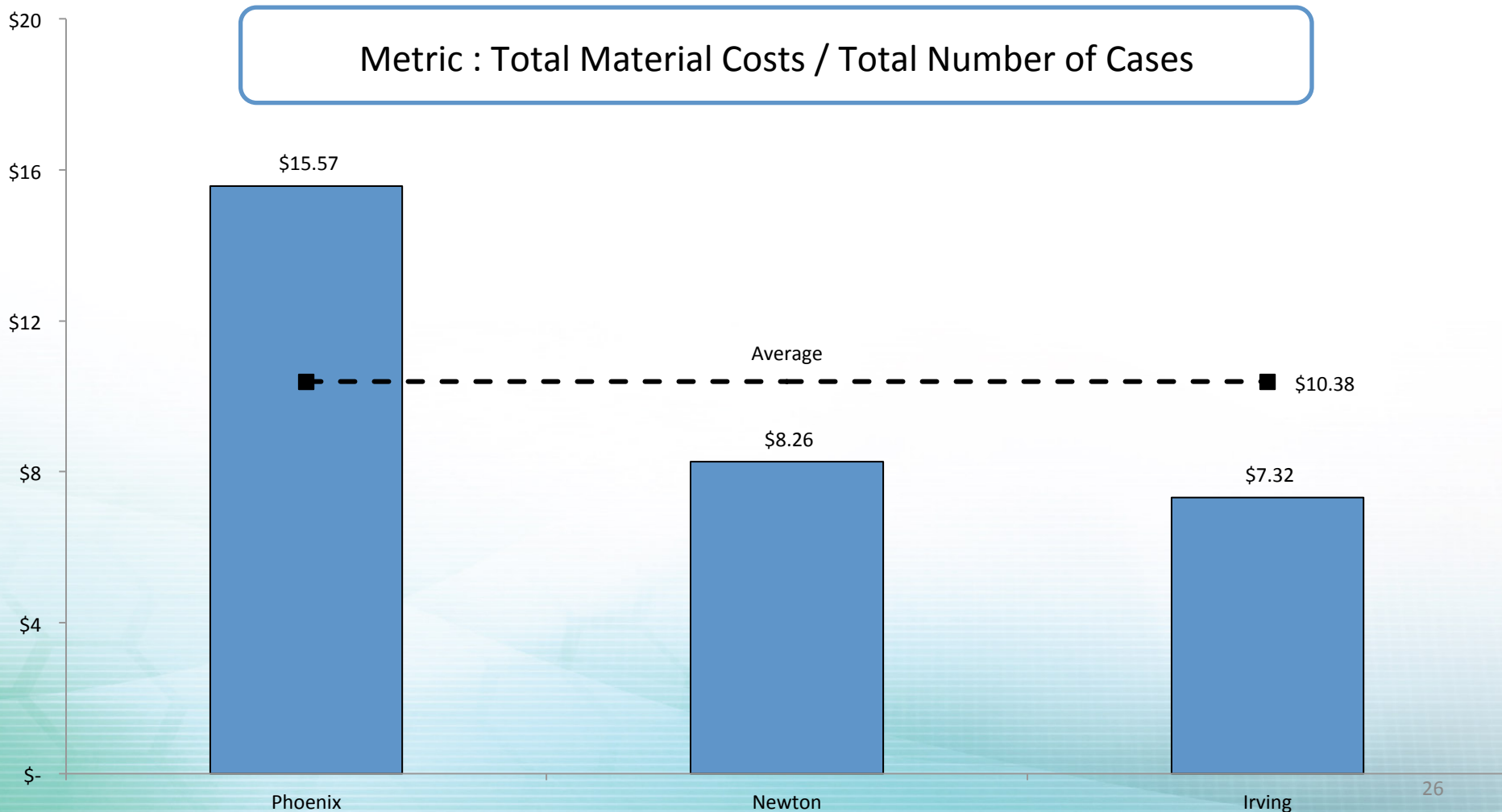
344 MIDs are only used by 1 site

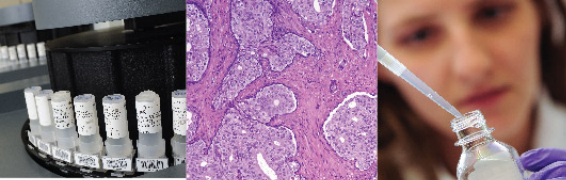


Measure: How much variance by case?

Average Materials Cost per Case - August 2012 through Oct 2012

Metric : Total Material Costs / Total Number of Cases

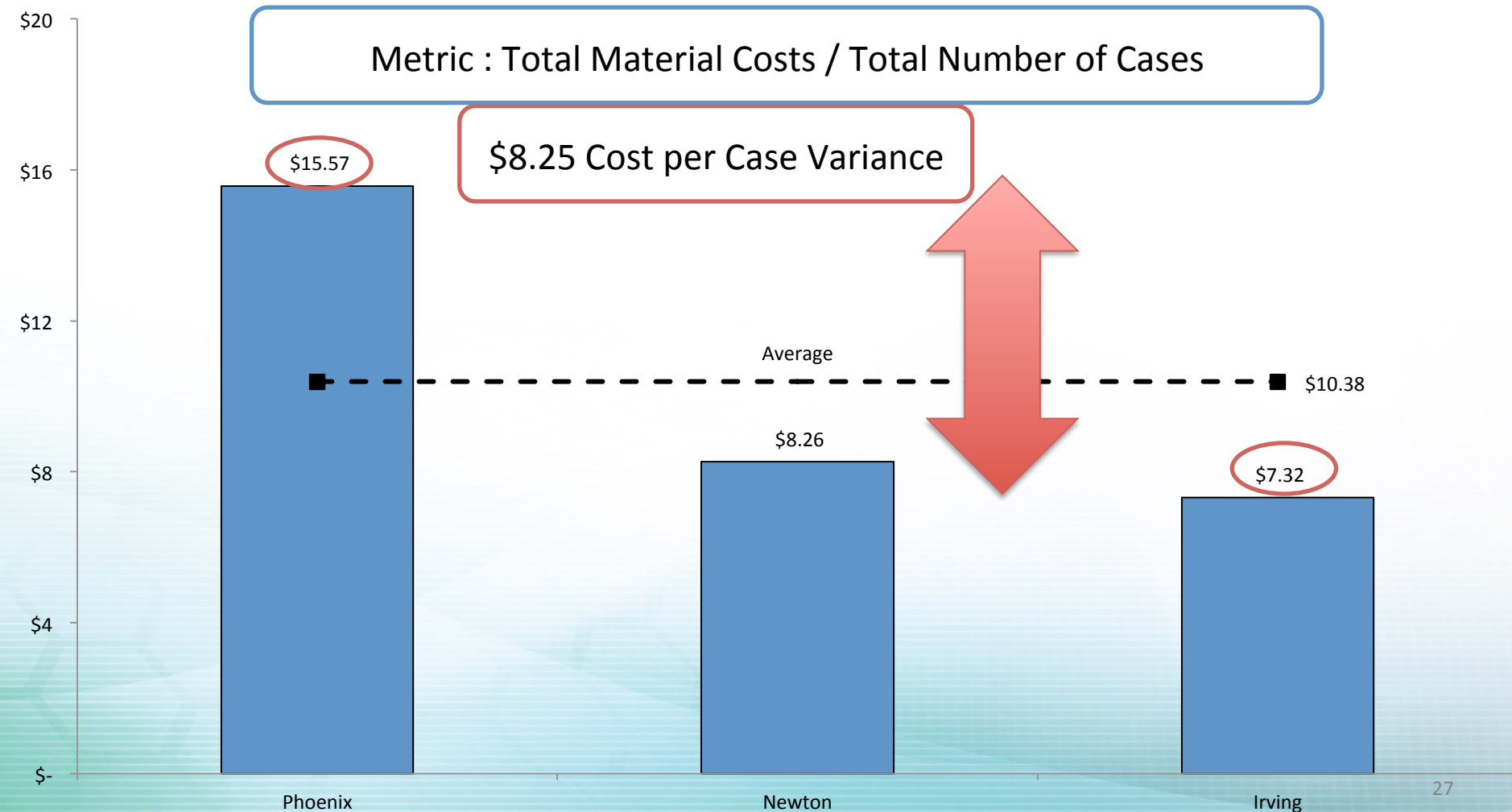


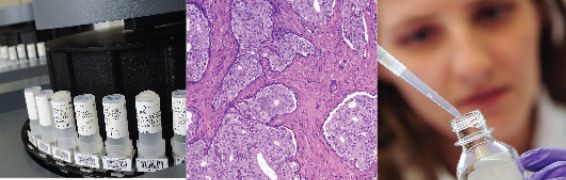


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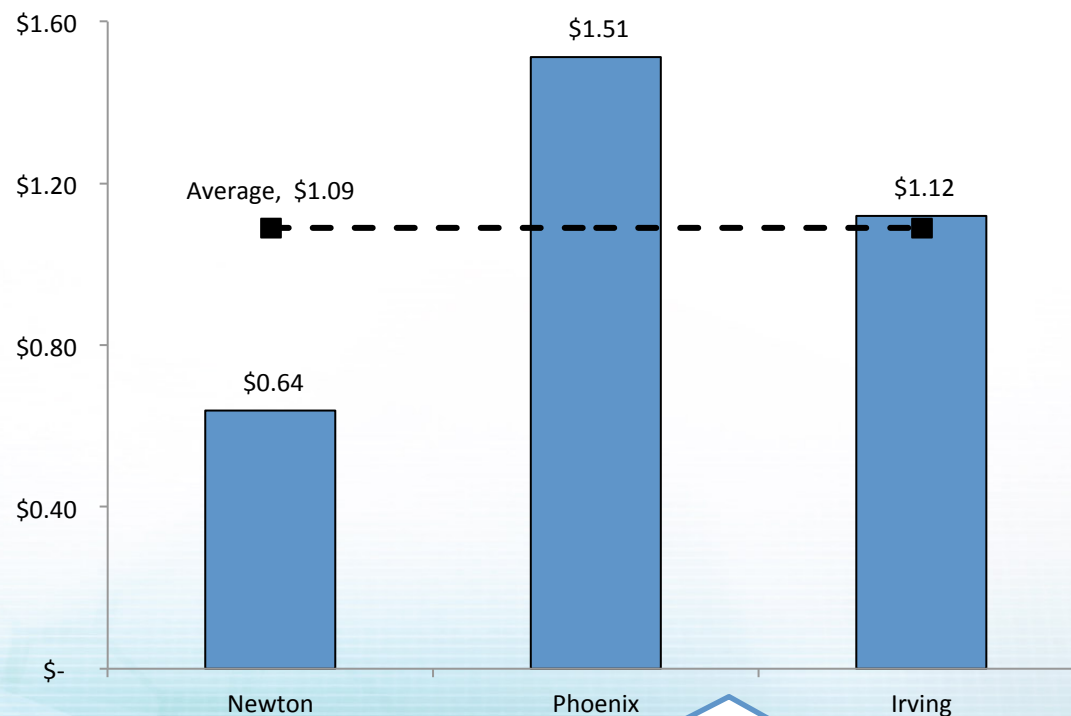


Example

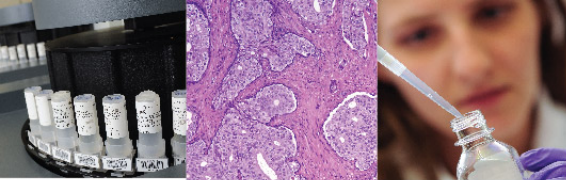
Measure: Back to our “cola” example

- Irving – Coca-Cola™
 - \$2.49 per 2 liter
 - 4,500 units per year
 - 10,000 cases per year
- PHX – Pepsi™
 - \$1.89 per 20oz.
 - 4,000 units per year
 - 5,000 cases per year
- BOS – R/C Cola™
 - \$0.85 per can
 - 6,000 units per year
 - 8,000 cases per year

Cola Challenge - Materials Cost per Case



Who is the most un-standardized?
Who's getting the best deal?

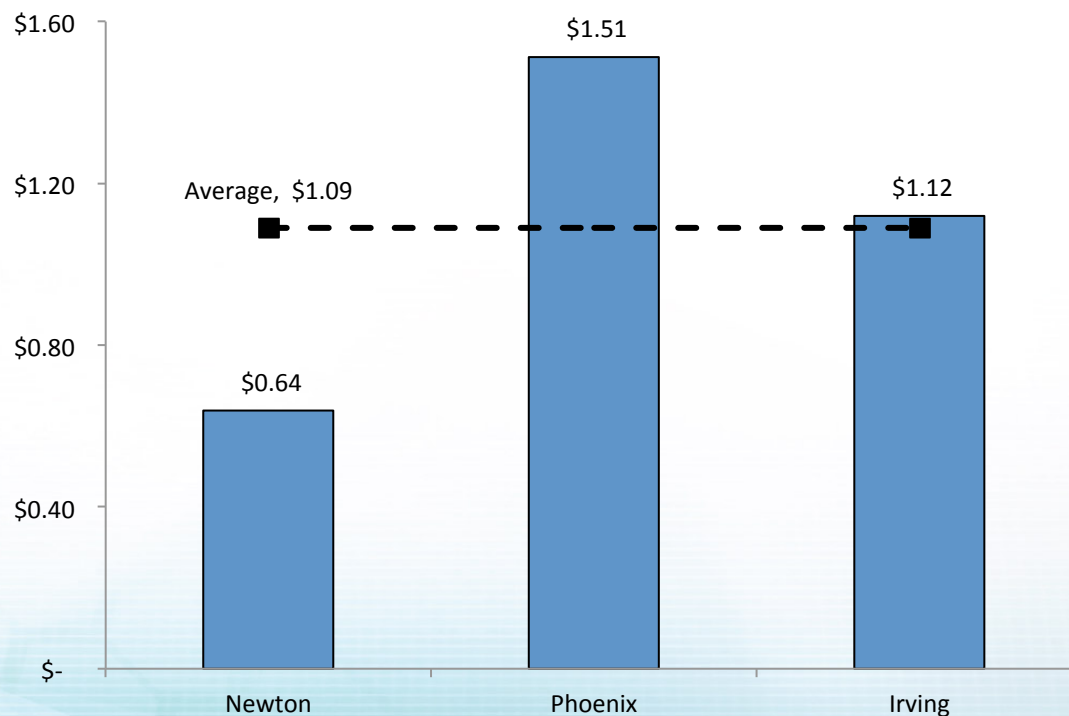


Example

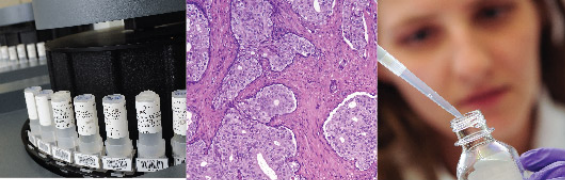
Measure: Back to our “cola” example

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- Phoenix – Pepsi™
 - \$1.89 per 20oz.
 - 4,000 units per year
 - 5,000 cases per year
- Newton – R/C Cola™
 - \$0.85 per can
 - 6,000 units per year
 - 8,000 cases per year

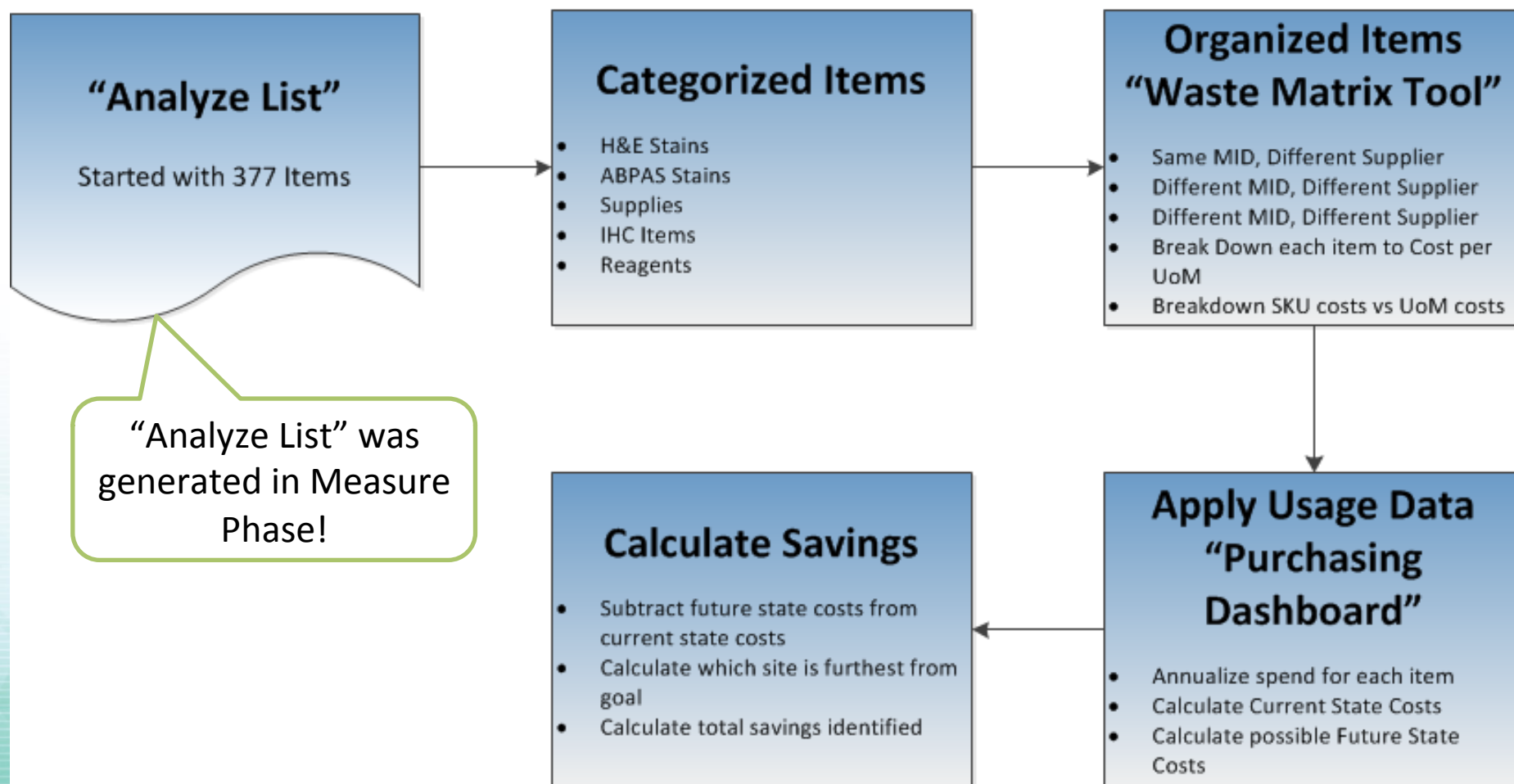
Cola Challenge - Materials Cost per Case

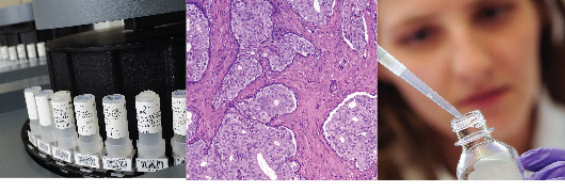


Let's move over the analyze and find out who's getting the best deal!



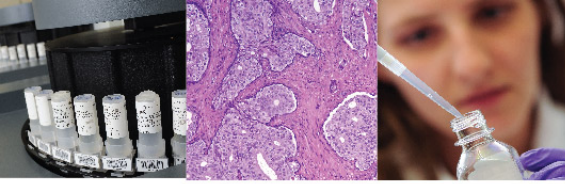
Analyze: Process Used for Calculating WASTE





Analyze: Drilling Down – SKU vs. UoM





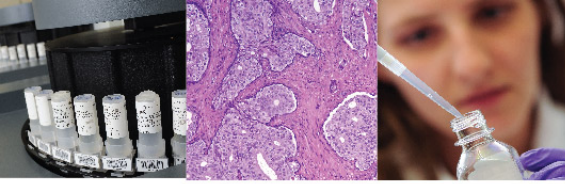
Analyze: Real World Example (SKU Cost)

Wow! Ziploc is \$0.01 less expensive than the “store brand!”

SKU

SKU

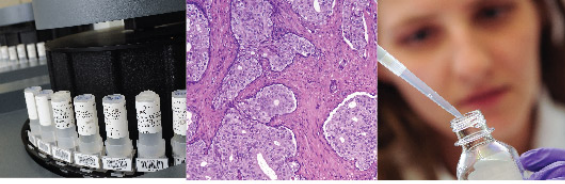
Product	Price
Store Brand 40 zipper - medium freezer bags	3.28
Ziploc 40 zipper - medium freezer bags	3.27



Analyze: Real World Example (UoM Cost)

Wait a second! I'm only getting 15 bags (UoM) as opposed to 40 (UoM)! That's not a **bargain**!

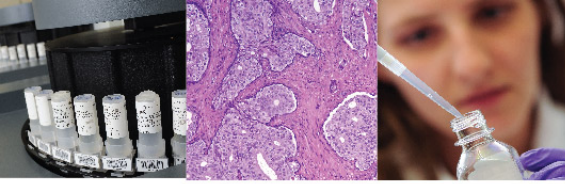




Analyze: Real World Example (UoM Cost)



“That’s just like buying gloves back at Miraca! One brand has 75/box, the other is 100/box, but they’re the same price!” –Miraca Teammate



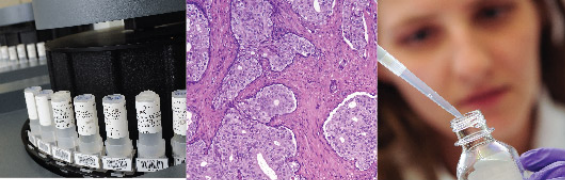
Analyze: Real World Example (UoM Cost)

Wait a second! I'm only getting 15 bags (UoM) as opposed to 40 (UoM)! That's not a **bargain**!

\$0.082 per bag (UoM)

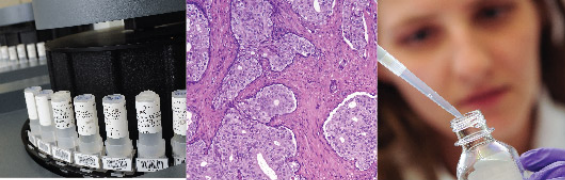
\$0.218 per bag (UoM)

“That’s just like buying gloves back at Miraca! One brand has 75/box, the other is 100/box, but they’re the same price!” –Miraca Teammate



Analyze: What is the “WASTE Matrix” Custom Tool?

Hematoxylin															
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL		Newton	Phoenix	Irving	Total mLs	Current Cost	Future Cost	Savings
PR02260	Vendor 1	3801581	Hematoxylin 560 - Seletech	\$ 75.71	4 x 500mL	2000	\$ 0.04			319	503	1644000	\$ 62,234	\$ 77,135	\$ (4,553)
PR03639	Vendor 2	23245678	Hematoxylin - Protocol	\$ 99.50	1 Gal	3785	\$ 0.03		104			393640	\$ 10,348	\$ 53,565	\$ 19,016
No MID	Vendor 3	SL90-1	Harris	\$ 85.00	1 Gal	3785	\$ 0.02					0	\$ -	\$ 45,759	\$ 26,822
PR03884	Vendor 3	SL106	Vintage Plus Hematoxylin	\$ 18.00	500mL	500	\$ 0.04					0	\$ -	\$ 73,355	\$ (773)
									\$ 1,508	\$ 9,824	\$ 15,490	2037640	\$ 72,582	\$ 45,759	\$ 26,822
Eosin															
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL		Newton	Phoenix	Irving	Total mLs	Current Cost	Future Cost	Savings
PR02855	Vendor 1	3801616	Eosin, Alcoholic, Y 515 - Selectech	\$ 68.38	4 x 500mL	2000	\$ 0.03			219	333	1104000	\$ 37,746	\$ 53,922	\$ (6,864)
PR03636	Vendor 2	23245827	Eosin Y, 1% Alcoholic - Protocol	\$ 74.50	1 Gal	3785	\$ 0.02		125			473125	\$ 9,313	\$ 31,042	\$ 16,016
No MID	Vendor 3	SL98-1	Eosin Y Alcoholic	\$ 60.00	1 Gal	3785	\$ 0.02					0	\$ -	\$ 25,001	\$ 22,058
PR03885	Vendor 3	SL402	Select Eosin	\$ 14.00	Pint	473	\$ 0.03					0	\$ -	\$ 46,680	\$ 378
									\$ 1,813	\$ 8,032	\$ 12,213	1577125	\$ 47,058	\$ 25,001	\$ 22,058
Bluing															
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL		Newton	Phoenix	Irving	Total mLs	Current Cost	Future Cost	Savings
PR02262	Vendor 1	3802916	Blue Buffer - Selectech	\$ 316.22	4 x 500mL	2000	\$ 0.16			18	66	168000	\$ 26,562	\$ 107,951	\$ (77,744)
PR03794	Vendor 2	22220106	Bluing - Vendor 2 Healthcare Pinn	\$ 26.80	1 Gal	3785	\$ 0.01		136			514760	\$ 3,645	\$ 4,834	\$ 25,373
No MID	Vendor 3	SL203	Reserve Bluing	\$ 20.00	1 Gal	3785	\$ 0.01					0	\$ -	\$ 3,608	\$ 26,600
PR03886	Vendor 3	SL403	Select Bluing	\$ 15.00	1 Gal	3785	\$ 0.00					0	\$ -	\$ 2,706	\$ 27,501
									\$ 1,605	\$ 5,549	\$ 20,347	682760	\$ 30,207	\$ 2,706	\$ 27,501
Clarifier															
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL		Newton	Phoenix	Irving	Total mLs	Current Cost	Future Cost	Savings
PR02261	Vendor 1	3803591	Define - Selectech	\$ 225.00	4 x 500mL	2000	\$ 0.11			32	70	204000	\$ 22,950	\$ 80,861	\$ (54,266)
PR03795	Vendor 2	22220107	Clarifier - Vendor 2 Healthcare Pir	\$ 26.80	1 Gal	3785	\$ 0.01		136			514760	\$ 3,645	\$ 5,089	\$ 21,506
PR03887	Vendor 3	SL103	High-Def	\$ 17.50	1 Gal	3785	\$ 0.00					0	\$ -	\$ 3,323	\$ 23,272
									\$ 1,265	\$ 6,904	\$ 15,103	718760	\$ 26,595	\$ 3,323	\$ 23,272



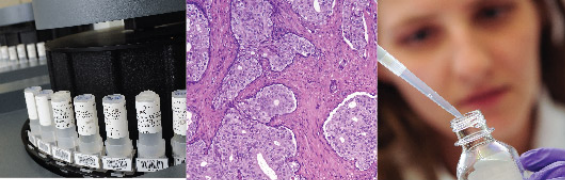
Analyze: What is the “WASTE Matrix” Custom Tool?

Hematoxylin								Newton	Phoenix	Irving	Total mLs	Current Cost	Future Cost	Savings	
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL								
PR02260	Vendor 1	3801581	Hematoxylin 560 - Selectech	\$ 75.71	4 x 500mL	2000	\$ 0.04			319	503	1644000	\$ 62,234	\$ 77,135	\$ (4,553)
PR03639	Vendor 2	23245678	Hematoxylin - Protocol	\$ 99.50	1 Gal	3785	\$ 0.03	104				393640	\$ 10,348	\$ 53,565	\$ 19,016
No MID	Vendor 3	SL90-1	Harris	\$ 85.00	1 Gal	3785	\$ 0.02					0	\$ -	\$ 45,759	\$ 26,822
PR03884	Vendor 3	SL106	Vintage Plus Hematoxylin	\$ 18.00	500mL	500	\$ 0.04					0	\$ -	\$ 73,355	\$ (773)
									\$ 1,508	\$ 9,824	\$ 15,490	2037640	\$ 72,582	\$ 45,759	\$ 26,822
Eosin								Newton	Phoenix	Irving	Total mLs	Current Cost	Future Cost	Savings	
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL								
PR02855	Vendor 1	3801616	Eosin, Alcoholic, Y515 - Selectech	\$ 68.38	4 x 500mL	2000	\$ 0.03			219	333	1104000	\$ 37,746	\$ 53,922	\$ (6,864)
PR03636	Vendor 2	23245827	Eosin Y, 1% Alcoholic - Protocol	\$ 74.50	1 Gal	3785	\$ 0.02	125				473125	\$ 9,313	\$ 31,042	\$ 16,016
No MID	Vendor 3	SL98-1	Eosin Y Alcoholic	\$ 60.00	1 Gal	3785	\$ 0.02					0	\$ -	\$ 25,001	\$ 22,058
PR03885	Vendor 3	SL402	Select Eosin	\$ 14.00	Pint	473	\$ 0.03					0	\$ -	\$ 46,680	\$ 378
									\$ 1,813	\$ 8,032	\$ 12,213	1577125	\$ 47,058	\$ 25,001	\$ 22,058
Bluing								Newton	Phoenix	Irving	Total mLs	Current Cost	Future Cost	Savings	
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL								
PR02262	Vendor 1	3802916	Blue Buffer - Selectech	\$ 316.22	4 x 500mL	2000	\$ 0.16			18	66	168000	\$ 26,562	\$ 107,951	\$ (77,744)
PR03794	Vendor 2	22220106	Bluing - Vendor 2 Healthcare Pin	\$ 26.80	1 Gal	3785	\$ 0.01	136				514760	\$ 3,645	\$ 4,834	\$ 25,373
No MID	Vendor 3	SL203	Reserve Bluing	\$ 20.00	1 Gal	3785	\$ 0.01					0	\$ -	\$ 3,608	\$ 26,600
PR03886	Vendor 3	SL403	Select Bluing	\$ 15.00	1 Gal	3785	\$ 0.00					0	\$ -	\$ 2,706	\$ 27,501
									\$ 1,600					2,706	\$ 27,501
Clarifier								Newton	Phoenix	Irving	Total mLs	Current Cost	Future Cost	Savings	
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL								
PR02261	Vendor 1	380359	Define - Selectech	\$ 225.00	4 x 500mL	2000	\$ 0.11							80,861	\$ (54,266)
PR03795	Vendor 2	222201	Clarifier - Vendor 2 Healthcare Pin	\$ 26.80	1 Gal	3785	\$ 0.01							5,089	\$ 21,506
PR03887	Vendor 3	SL103		\$ 17.50	1 Gal	3785	\$ 0.00							3,323	\$ 23,272
									\$ 1,000					3,323	\$ 23,272

Categories and sub-categories by product!

Categories and sub-categories by product!

“I really wish I had a *WASTE Matrix* at the supermarket yesterday!”

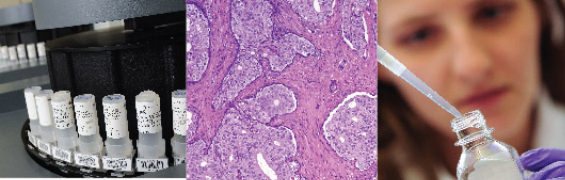


Analyze: WASTE Matrix Section 1

Differences in product, supplier, price, & UOM captured in **vertical** fields



Hematoxylin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02260	Vendor 1	3801581	Hematoxylin 560 - Selettech	\$ 75.71	4 x 500mL	2000	\$ 0.04	\$ 28.39
PR03639	Vendor 2	23245678	Hematoxylin - Protocol	\$ 99.50	1 Gal	3785	\$ 0.03	\$ 19.72
No MID	Vendor 3	SL90-1	Harris	\$ 85.00	1 Gal	3785	\$ 0.02	\$ 16.84
PR03884	Vendor 3	SL106	Vintage Plus Hematoxylin	\$ 18.00	500mL	500	\$ 0.04	\$ 27.00
Eosin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02855	Vendor 1	3801616	Eosin, Alcoholic, Y 515 - Selectech	\$ 68.38	4 x 500mL	2000	\$ 0.03	\$ 25.64
PR03636	Vendor 2	23245827	Eosin Y, 1% Alcoholic - Protocol	\$ 74.50	1 Gal	3785	\$ 0.02	\$ 14.76
No MID	Vendor 3	SL98-1	Eosin Y Alcoholic	\$ 60.00	1 Gal	3785	\$ 0.02	\$ 11.89
PR03885	Vendor 3	SL402	Select Eosin	\$ 14.00	Pint	473	\$ 0.03	\$ 22.20
Bluing								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02262	Vendor 1	3802916	Blue Buffer - Selectech	\$ 316.22	4 x 500mL	2000	\$ 0.16	\$ 118.58
PR03794	Vendor 2	22220106	Bluing - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
No MID	Vendor 3	SL203	Reserve Bluing	\$ 20.00	1 Gal	3785	\$ 0.01	\$ 3.96
PR03886	Vendor 3	SL403	Select Bluing	\$ 15.00	1 Gal	3785	\$ 0.00	\$ 2.97
Clarifier								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02261	Vendor 1	3803591	Define - Selectech	\$ 225.00	4 x 500mL	2000	\$ 0.11	\$ 84.38
PR03795	Vendor 2	22220107	Clarifier - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
PR03887	Vendor 3	SL103	High-Def	\$ 17.50	1 Gal	3785	\$ 0.00	\$ 3.47

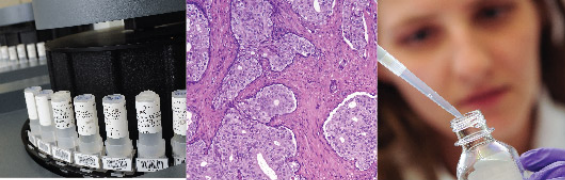


Analyze: WASTE Matrix Section 1

Differences in product, supplier, price, & UOM captured in ***vertical*** fields



Hematoxylin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02260	Vendor 1	3801581	Hematoxylin 560 - Selettech	\$ 75.71	4 x 500mL	2000	\$ 0.04	\$ 28.39
PR03639	Vendor 2	23245678	Hematoxylin - Protocol	\$ 99.50	1 Gal	3785	\$ 0.03	\$ 19.72
No MID	Vendor 3	SL90-1	Harris	\$ 85.00	1 Gal	3785	\$ 0.02	\$ 16.84
PR03884	Vendor 3	SL106	Vintage Plus Hematoxylin	\$ 18.00	500mL	500	\$ 0.04	\$ 27.00
Eosin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02855	Vendor 1	3801616	Eosin, Alcoholic, Y 515 - Selectech	\$ 68.38	4 x 500mL	2000	\$ 0.03	\$ 25.64
PR03636	Vendor 2	23245827	Eosin Y, 1% Alcoholic - Protocol	\$ 74.50	1 Gal	3785	\$ 0.02	\$ 14.76
No MID	Vendor 3	SL98-1	Eosin Y Alcoholic	\$ 60.00	1 Gal	3785	\$ 0.02	\$ 11.89
PR03885	Vendor 3	SL402	Select Eosin	\$ 14.00	Pint	473	\$ 0.03	\$ 22.20
Bluing								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02262	Vendor 1	3802916	Blue Buffer - Selectech	\$ 316.22	4 x 500mL	2000	\$ 0.16	\$ 118.58
PR03794	Vendor 2	22220106	Bluing - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
No MID	Vendor 3	SL203	Reserve Bluing	\$ 20.00	1 Gal	3785	\$ 0.01	\$ 3.96
PR03886	Vendor 3	SL403	Select Bluing	\$ 15.00	1 Gal	3785	\$ 0.00	\$ 2.97
Clarifier								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02261	Vendor 1	3803591	Define - Selectech	\$ 225.00	4 x 500mL	2000	\$ 0.11	\$ 84.38
PR03795	Vendor 2	22220107	Clarifier - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
PR03887	Vendor 3	SL103	High-Def	\$ 17.50	1 Gal	3785	\$ 0.00	\$ 3.47

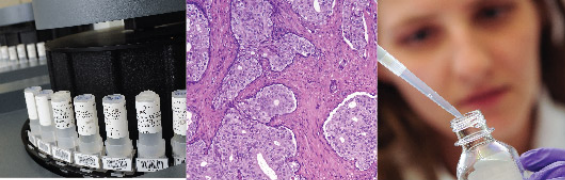


Analyze: WASTE Matrix Section 1

Differences in product, supplier, price, & UOM captured in **vertical** fields



Hematoxylin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02260	Vendor 1	3801581	Hematoxylin 560 - Selettech	\$ 75.71	4 x 500mL	2000	\$ 0.04	\$ 28.39
PR03639	Vendor 2	23245678	Hematoxylin - Protocol	\$ 99.50	1 Gal	3785	\$ 0.03	\$ 19.72
No MID	Vendor 3	SL90-1	Harris	\$ 85.00	1 Gal	3785	\$ 0.02	\$ 16.84
PR03884	Vendor 3	SL106	Vintage Plus Hematoxylin	\$ 18.00	500mL	500	\$ 0.04	\$ 27.00
Eosin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02855	Vendor 1	3801616	Eosin, Alcoholic, Y 515 - Selectech	\$ 68.38	4 x 500mL	2000	\$ 0.03	\$ 25.64
PR03636	Vendor 2	23245827	Eosin Y, 1% Alcoholic - Protocol	\$ 74.50	1 Gal	3785	\$ 0.02	\$ 14.76
No MID	Vendor 3	SL98-1	Eosin Y Alcoholic	\$ 60.00	1 Gal	3785	\$ 0.02	\$ 11.89
PR03885	Vendor 3	SL402	Select Eosin	\$ 14.00	Pint	473	\$ 0.03	\$ 22.20
Bluing								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02262	Vendor 1	3802916	Blue Buffer - Selectech	\$ 316.22	4 x 500mL	2000	\$ 0.16	\$ 118.58
PR03794	Vendor 2	22220106	Bluing - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
No MID	Vendor 3	SL203	Reserve Bluing	\$ 20.00	1 Gal	3785	\$ 0.01	\$ 3.96
PR03886	Vendor 3	SL403	Select Bluing	\$ 15.00	1 Gal	3785	\$ 0.00	\$ 2.97
Clarifier								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02261	Vendor 1	3803591	Define - Selectech	\$ 225.00	4 x 500mL	2000	\$ 0.11	\$ 84.38
PR03795	Vendor 2	22220107	Clarifier - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
PR03887	Vendor 3	SL103	High-Def	\$ 17.50	1 Gal	3785	\$ 0.00	\$ 3.47

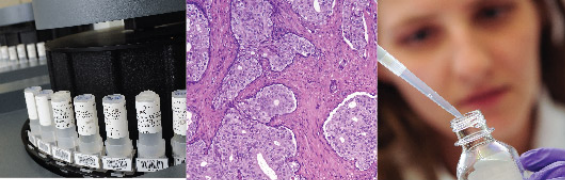


Analyze: WASTE Matrix Section 1

Differences in product, supplier, price, & UOM captured in **vertical** fields



Hematoxylin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02260	Vendor 1	3801581	Hematoxylin 560 - Selettech	\$ 75.71	4 x 500mL	2000	\$ 0.04	\$ 28.39
PR03639	Vendor 2	23245678	Hematoxylin - Protocol	\$ 99.50	1 Gal	3785	\$ 0.03	\$ 19.72
No MID	Vendor 3	SL90-1	Harris	\$ 85.00	1 Gal	3785	\$ 0.02	\$ 16.84
PR03884	Vendor 3	SL106	Vintage Plus Hematoxylin	\$ 18.00	500mL	500	\$ 0.04	\$ 27.00
Eosin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02855	Vendor 1	3801616	Eosin, Alcoholic, Y 515 - Selectech	\$ 68.38	4 x 500mL	2000	\$ 0.03	\$ 25.64
PR03636	Vendor 2	23245827	Eosin Y, 1% Alcoholic - Protocol	\$ 74.50	1 Gal	3785	\$ 0.02	\$ 14.76
No MID	Vendor 3	SL98-1	Eosin Y Alcoholic	\$ 60.00	1 Gal	3785	\$ 0.02	\$ 11.89
PR03885	Vendor 3	SL402	Select Eosin	\$ 14.00	Pint	473	\$ 0.03	\$ 22.20
Bluing								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02262	Vendor 1	3802916	Blue Buffer - Selectech	\$ 316.22	4 x 500mL	2000	\$ 0.16	\$ 118.58
PR03794	Vendor 2	22220106	Bluing - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
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PR03886	Vendor 3	SL403	Select Bluing	\$ 15.00	1 Gal	3785	\$ 0.00	\$ 2.97
Clarifier								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02261	Vendor 1	3803591	Define - Selectech	\$ 225.00	4 x 500mL	2000	\$ 0.11	\$ 84.38
PR03795	Vendor 2	22220107	Clarifier - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
PR03887	Vendor 3	SL103	High-Def	\$ 17.50	1 Gal	3785	\$ 0.00	\$ 3.47

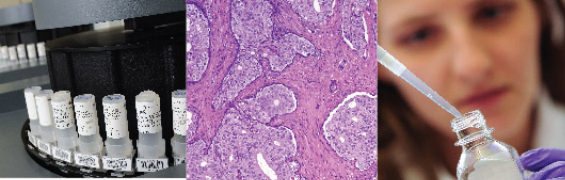


Analyze: WASTE Matrix Section 1

Differences in
product,
supplier, price,
& UOM
captured in
vertical fields



Hematoxylin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02260	Vendor 1	3801581	Hematoxylin 560 - Selettech	\$ 75.71	4 x 500mL	2000	\$ 0.04	\$ 28.39
PR03639	Vendor 2	23245678	Hematoxylin - Protocol	\$ 99.50	1 Gal	3785	\$ 0.03	\$ 19.72
No MID	Vendor 3	SL90-1	Harris	\$ 85.00	1 Gal	3785	\$ 0.02	\$ 16.84
PR03884	Vendor 3	SL106	Vintage Plus Hematoxylin	\$ 18.00	500mL	500	\$ 0.04	\$ 27.00
Eosin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02855	Vendor 1	3801616	Eosin, Alcoholic, Y 515 - Selectech	\$ 68.38	4 x 500mL	2000	\$ 0.03	\$ 25.64
PR03636	Vendor 2	23245827	Eosin Y, 1% Alcoholic - Protocol	\$ 74.50	1 Gal	3785	\$ 0.02	\$ 14.76
No MID	Vendor 3	SL98-1	Eosin Y Alcoholic	\$ 60.00	1 Gal	3785	\$ 0.02	\$ 11.89
PR03885	Vendor 3	SL402	Select Eosin	\$ 14.00	Pint	473	\$ 0.03	\$ 22.20
Bluing								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02262	Vendor 1	3802916	Blue Buffer - Selectech	\$ 316.22	4 x 500mL	2000	\$ 0.16	\$ 118.58
PR03794	Vendor 2	22220106	Bluing - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
No MID	Vendor 3	SL203	Reserve Bluing	\$ 20.00	1 Gal	3785	\$ 0.01	\$ 3.96
PR03886	Vendor 3	SL403	Select Bluing	\$ 15.00	1 Gal	3785	\$ 0.00	\$ 2.97
Clarifier								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02261	Vendor 1	3803591	Define - Selectech	\$ 225.00	4 x 500mL	2000	\$ 0.11	\$ 84.38
PR03795	Vendor 2	22220107	Clarifier - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
PR03887	Vendor 3	SL103	High-Def	\$ 17.50	1 Gal	3785	\$ 0.00	\$ 3.47

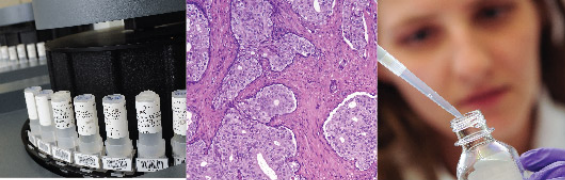


Analyze: WASTE Matrix Section 1

Differences in product, supplier, price, & UOM captured in **vertical** fields



Hematoxylin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02260	Vendor 1	3801581	Hematoxylin 560 - Selettech	\$ 75.71	4 x 500mL	2000	\$ 0.04	\$ 28.39
PR03639	Vendor 2	23245678	Hematoxylin - Protocol	\$ 99.50	1 Gal	3785	\$ 0.03	\$ 19.72
No MID	Vendor 3	SL90-1	Harris	\$ 85.00	1 Gal	3785	\$ 0.02	\$ 16.84
PR03884	Vendor 3	SL106	Vintage Plus Hematoxylin	\$ 18.00	500mL	500	\$ 0.04	\$ 27.00
Eosin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02855	Vendor 1	3801616	Eosin, Alcoholic, Y 515 - Selectech	\$ 68.38	4 x 500mL	2000	\$ 0.03	\$ 25.64
PR03636	Vendor 2	23245827	Eosin Y, 1% Alcoholic - Protocol	\$ 74.50	1 Gal	3785	\$ 0.02	\$ 14.76
No MID	Vendor 3	SL98-1	Eosin Y Alcoholic	\$ 60.00	1 Gal	3785	\$ 0.02	\$ 11.89
PR03885	Vendor 3	SL402	Select Eosin	\$ 14.00	Pint	473	\$ 0.03	\$ 22.20
Bluing								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02262	Vendor 1	3802916	Blue Buffer - Selectech	\$ 316.22	4 x 500mL	2000	\$ 0.16	\$ 118.58
PR03794	Vendor 2	22220106	Bluing - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
No MID	Vendor 3	SL203	Reserve Bluing	\$ 20.00	1 Gal	3785	\$ 0.01	\$ 3.96
PR03886	Vendor 3	SL403	Select Bluing	\$ 15.00	1 Gal	3785	\$ 0.00	\$ 2.97
Clarifier								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02261	Vendor 1	3803591	Define - Selectech	\$ 225.00	4 x 500mL	2000	\$ 0.11	\$ 84.38
PR03795	Vendor 2	22220107	Clarifier - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
PR03887	Vendor 3	SL103	High-Def	\$ 17.50	1 Gal	3785	\$ 0.00	\$ 3.47

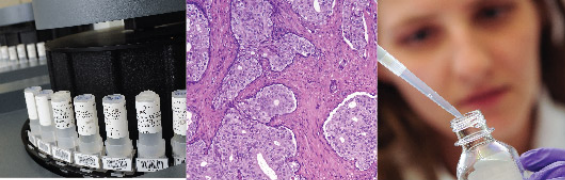


Analyze: WASTE Matrix Section 1

Differences in product, supplier, price, & UOM captured in **vertical** fields



Hematoxylin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
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No MID	Vendor 3	SL90-1	Harris	\$ 85.00	1 Gal	3785	\$ 0.02	\$ 16.84
PR03884	Vendor 3	SL106	Vintage Plus Hematoxylin	\$ 18.00	500mL	500	\$ 0.04	\$ 27.00
Eosin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02855	Vendor 1	3801616	Eosin, Alcoholic, Y 515 - Selectech	\$ 68.38	4 x 500mL	2000	\$ 0.03	\$ 25.64
PR03636	Vendor 2	23245827	Eosin Y, 1% Alcoholic - Protocol	\$ 74.50	1 Gal	3785	\$ 0.02	\$ 14.76
No MID	Vendor 3	SL98-1	Eosin Y Alcoholic	\$ 60.00	1 Gal	3785	\$ 0.02	\$ 11.89
PR03885	Vendor 3	SL402	Select Eosin	\$ 14.00	Pint	473	\$ 0.03	\$ 22.20
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PR02262	Vendor 1	3802916	Blue Buffer - Selectech	\$ 316.22	4 x 500mL	2000	\$ 0.16	\$ 118.58
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Clarifier								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02261	Vendor 1	3803591	Define - Selectech	\$ 225.00	4 x 500mL	2000	\$ 0.11	\$ 84.38
PR03795	Vendor 2	22220107	Clarifier - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
PR03887	Vendor 3	SL103	High-Def	\$ 17.50	1 Gal	3785	\$ 0.00	\$ 3.47



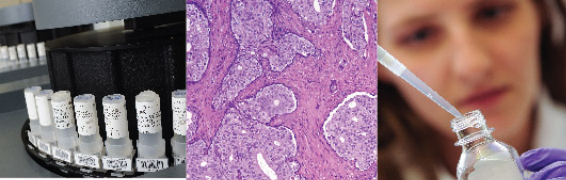
Analyze: WASTE Matrix Section 1

Differences in product, supplier, price, & UOM captured in **vertical** fields



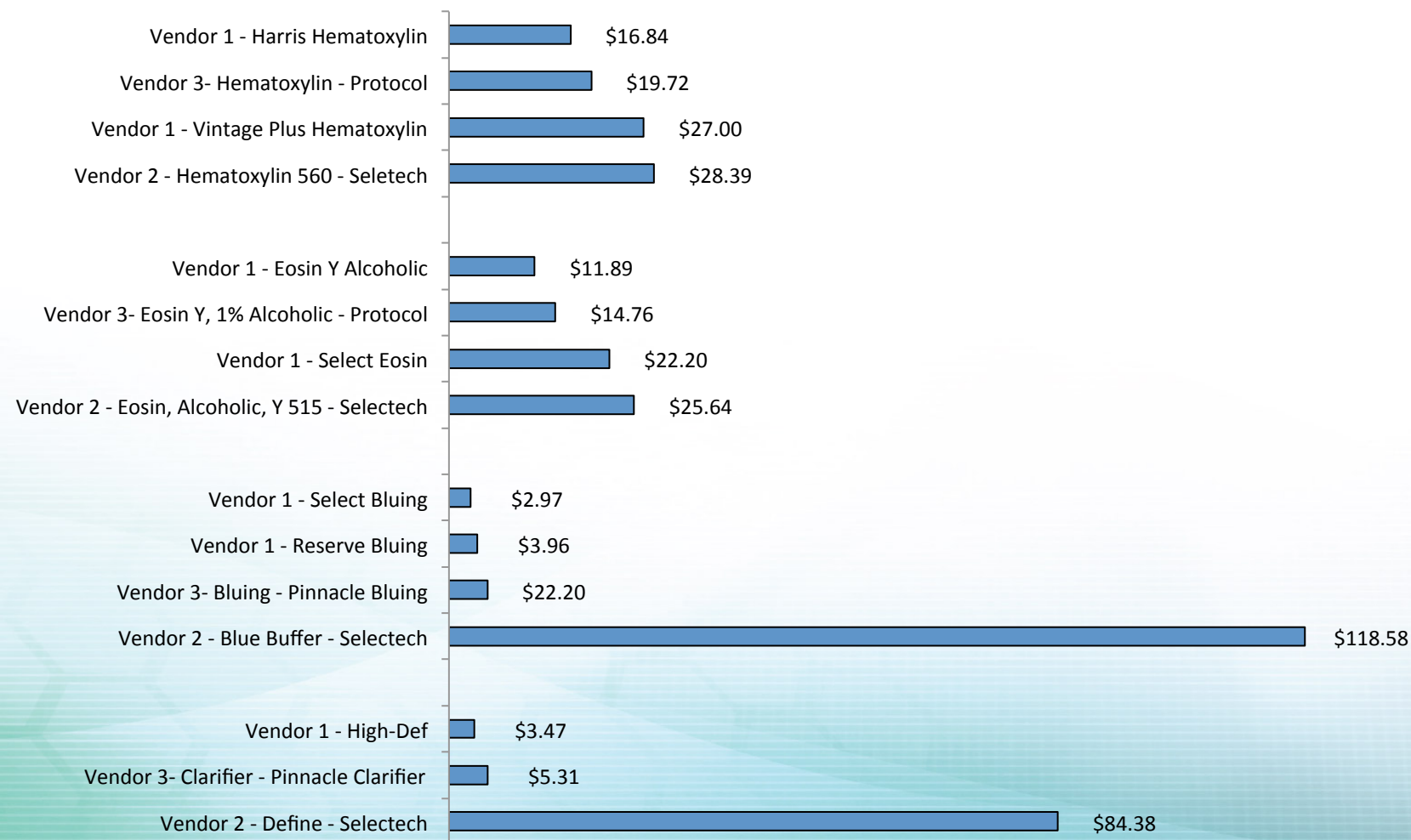
Hematoxylin								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02260	Vendor 1	3801581	Hematoxylin 560 - Selettech	\$ 75.71	4 x 500mL	2000	\$ 0.04	\$ 28.39
PR03639	Vendor 2	23245678	Hematoxylin - Protocol	\$ 99.50	1 Gal	3785	\$ 0.03	\$ 19.72
No MID	Vendor 3	SL90-1	Harris	\$ 85.00	1 Gal	3785	\$ 0.02	\$ 16.84
PR03884	Vendor 3	SL106	Vintage Plus Hematoxylin	\$ 18.00	500mL	500	\$ 0.04	\$ 27.00
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MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02855	Vendor 1	3801616	Eosin, Alcoholic, Y 515 - Selectech	\$ 68.38	4 x 500mL	2000	\$ 0.03	\$ 25.64
PR03636	Vendor 2	23245827	Eosin Y, 1% Alcoholic - Protocol	\$ 74.50	1 Gal	3785	\$ 0.02	\$ 14.76
No MID	Vendor 3	SL98-1	Eosin Y Alcoholic	\$ 60.00	1 Gal	3785	\$ 0.02	\$ 11.89
PR03885	Vendor 3	SL402	Select Eosin	\$ 14.00	Pint	473	\$ 0.03	\$ 22.20
Bluing								
MID	Vendor	Catalog #	Description	Price	Size	Yield (mL)	Cost/mL	Per 750ml
PR02262	Vendor 1	3802916	Blue Buffer - Selectech	\$ 316.22	4 x 500mL	2000	\$ 0.16	\$ 118.58
PR03794	Vendor 2	22220106	Bluing - Fisher Healthcare Pinnacle	\$ 26.80	1 Gal	3785	\$ 0.01	\$ 5.31
No MID	Vendor 3	SL203	Reserve Bluing	\$ 20.00	1 Gal	3785	\$ 0.01	\$ 3.96
PR03886	Vendor 3	SL403	Select Bluing	\$ 15.00	1 Gal	3785	\$ 0.00	\$ 2.97
MID	Vendor	Catalog #						
PR02261	Vendor 1	3803591						
PR03795	Vendor 2	22220107						
PR03887	Vendor 3	SL103						

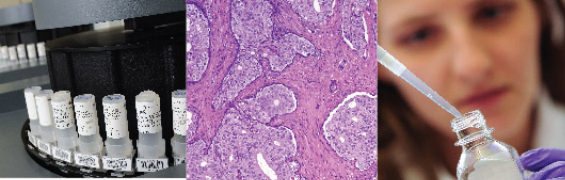
UoM cost allows us to identify WASTE by comparing “apples to apples”



Analyze: WASTE Matrix Visualized

Cost to Change a Stainer

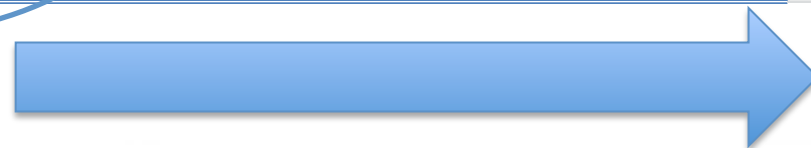


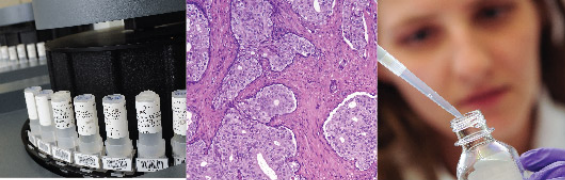


Analyze: WASTE Matrix Section 2

Hematoxylin										
MID	Vendor	Description	Newton	Phoenix	Irving	Total mLs	Current Cost	Future Cost	Savings	Rank
PR02260	Vendor 1	Hematoxylin 560 - Seletech		319	503	1644000	\$ 62,234	\$ 77,135	\$ (4,553)	4
PR03639	Vendor 2	Hematoxylin - Protocol	104			393640	\$ 10,348	\$ 53,565	\$ 19,016	2
No MID	Vendor 3	Harris				0	\$ -	\$ 45,759	\$ 26,822	1
PR03884	Vendor 3	Vintage Plus Hematoxylin				0	\$ -	\$ 73,355	\$ (773)	3
			\$ 1,508	\$ 9,824	\$ 15,490	2037640	\$ 72,582	\$ 45,759	\$ 26,822	

Volumes at each site captured **horizontally**, with USAGE SKUs converted to total mLs

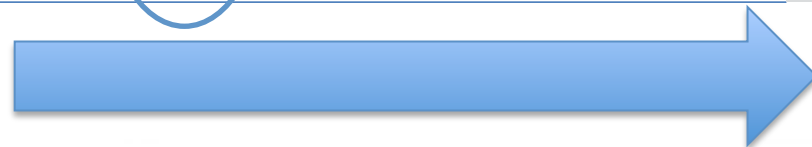


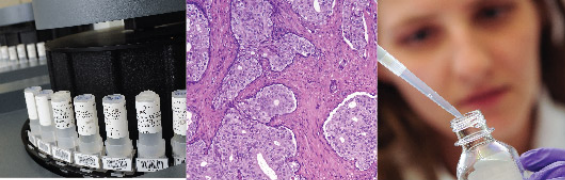


Analyze: WASTE Matrix Section 2

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			\$ 1,508	\$ 9,824	\$ 15,490	2037640	\$ 72,582	\$ 45,759	\$ 26,822	

Volumes at each site captured **horizontally**, with USAGE SKUs converted to total mLs



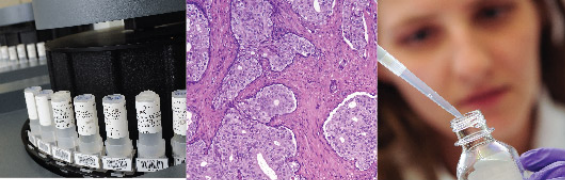


Analyze: WASTE Matrix Section 2

Hematoxylin										
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Volumes at each site captured **horizontally**, with USAGE SKUs converted to total mLs



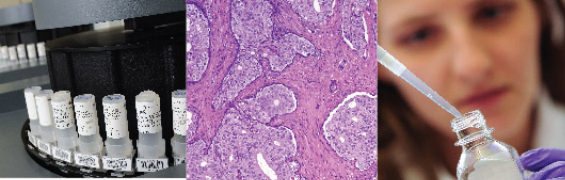


Analyze: WASTE Matrix Section 2

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Volumes at each site captured *horizontally*, with USAGE SKUs converted to total mLs



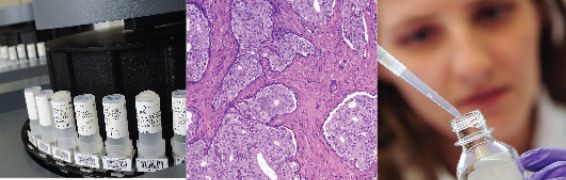


Analyze: WASTE Matrix Section 2

Hematoxylin										
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Volumes at each site captured *horizontally*, with USAGE SKUs converted to total mLs

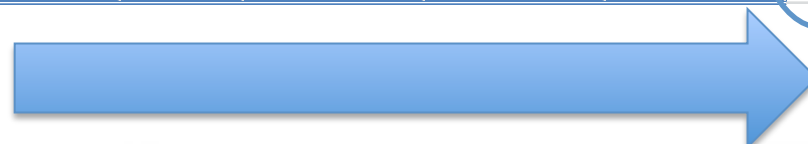


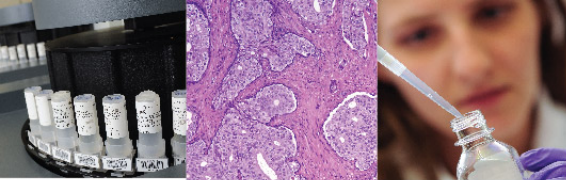


Analyze: WASTE Matrix Section 2

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Volumes at each site captured **horizontally**, with USAGE SKUs converted to total mLs

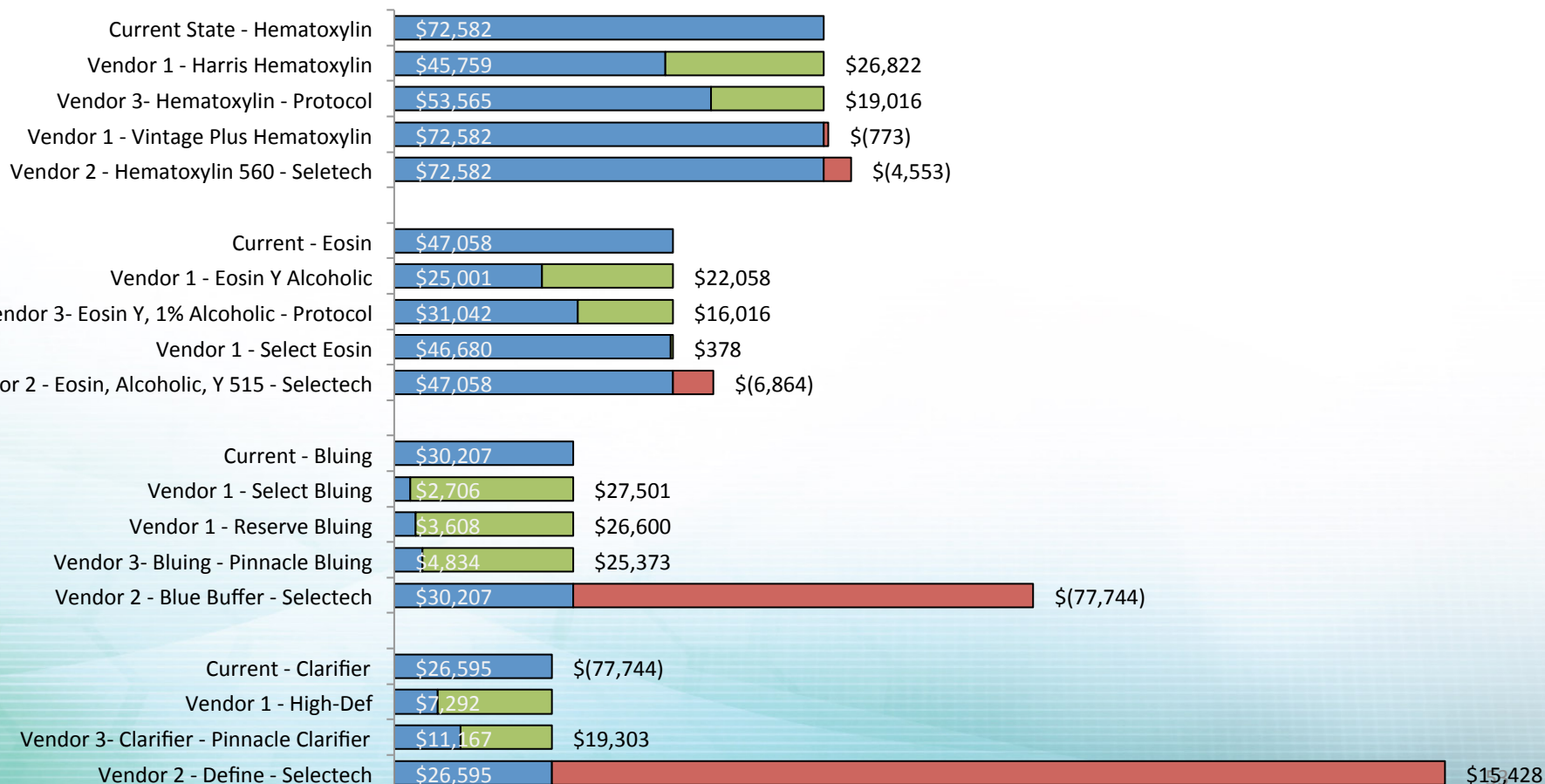


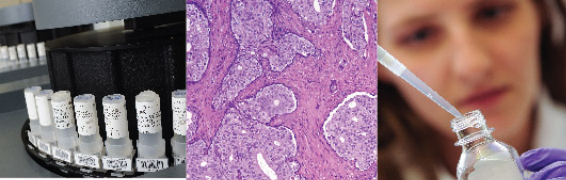


Analyze: WASTE Matrix Visualized part 2

H & E Staining Standardization Price Comparison - Annualized

■ Spend ■ Savings ■ Loss





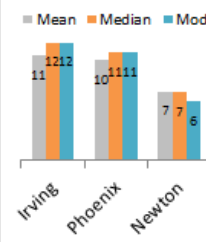
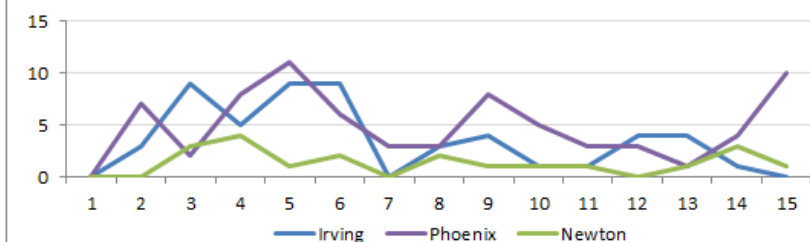
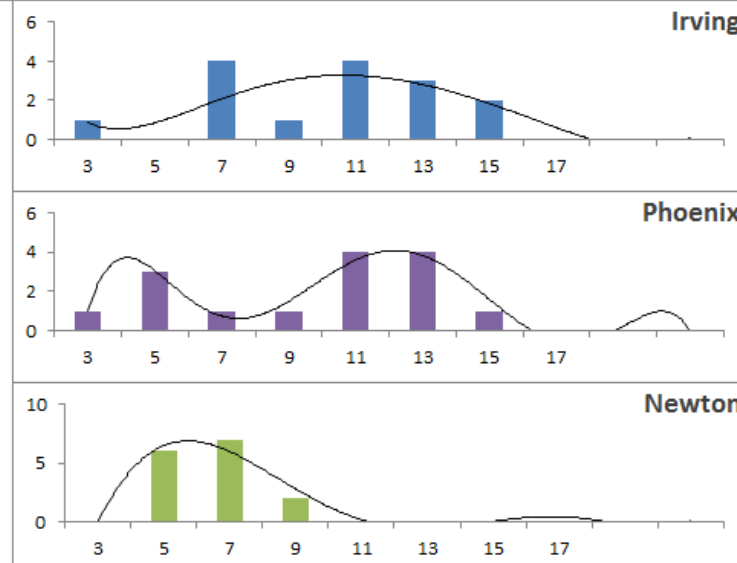
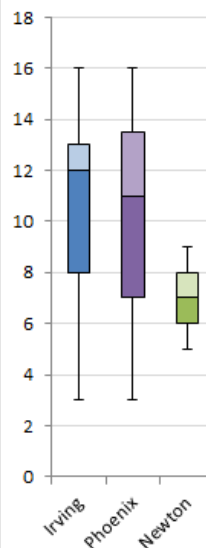
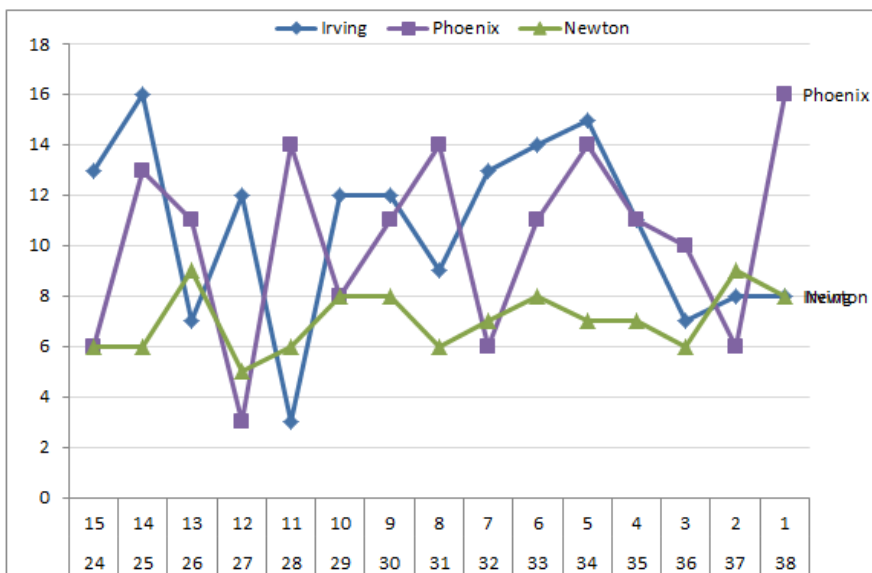
User Input Module: Input MID, Output data by site!

Analyze: Purchasing Dashboard (Custom Tool)

pr01478	Item Number	27-Sep	Today's Date
Reagent, Stain, Bluing [COLD]		39	Today's Week

38	Max Week number
23	Min Week number
15	Range

☒ Irving
☒ Phoenix
☒ Newton

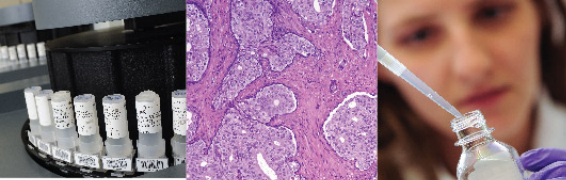


☒ Control Limits
☐ Mean Line
☒ Trend Line

Upper Spec
Lower Spec

Sigma-Limits

☐ 1σ
☐ 2σ
☒ 3σ
☐ 4σ
☐ 5σ
☐ 6σ



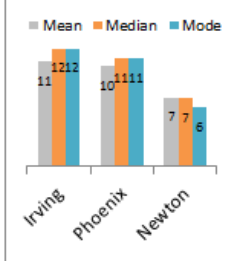
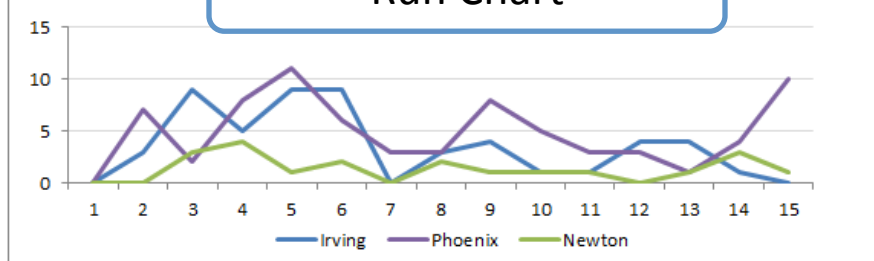
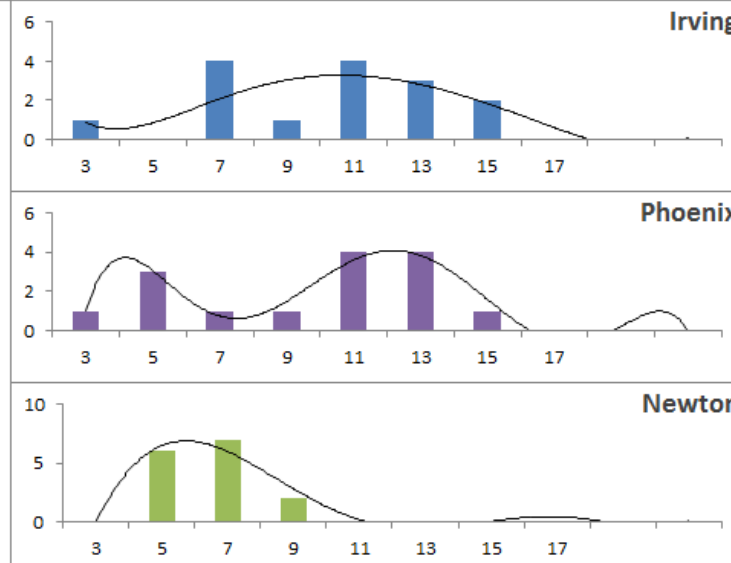
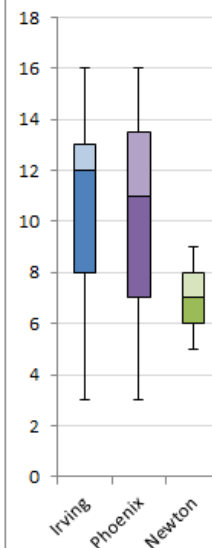
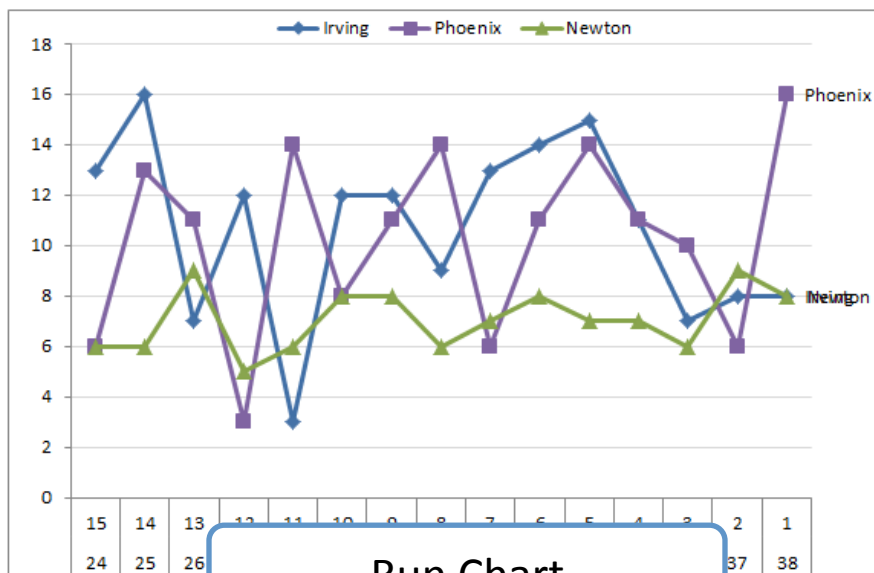
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Analyze: Purchasing Dashboard (Custom Tool)

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Reagent, Stain, Bluing [COLD]		39	Today's Week

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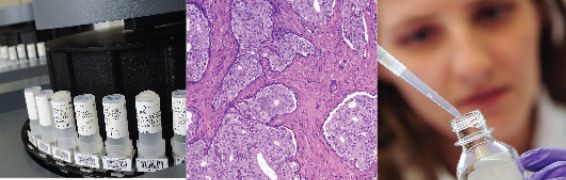


☒ Control Limits
☐ Mean Line
☒ Trend Line

Upper Spec Lower Spec

Sigma-Limits

☐ 1σ
☐ 2σ
☒ 3σ
☐ 4σ
☐ 5σ
☐ 6σ



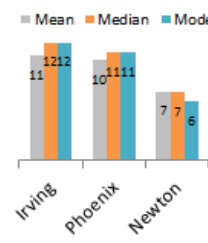
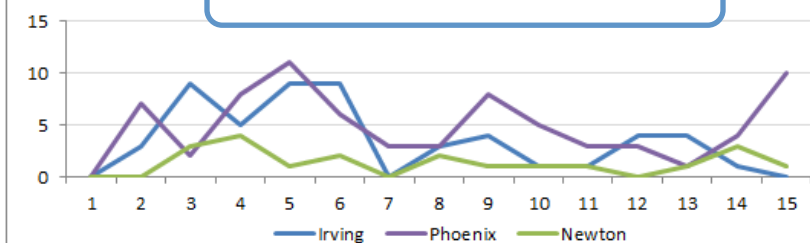
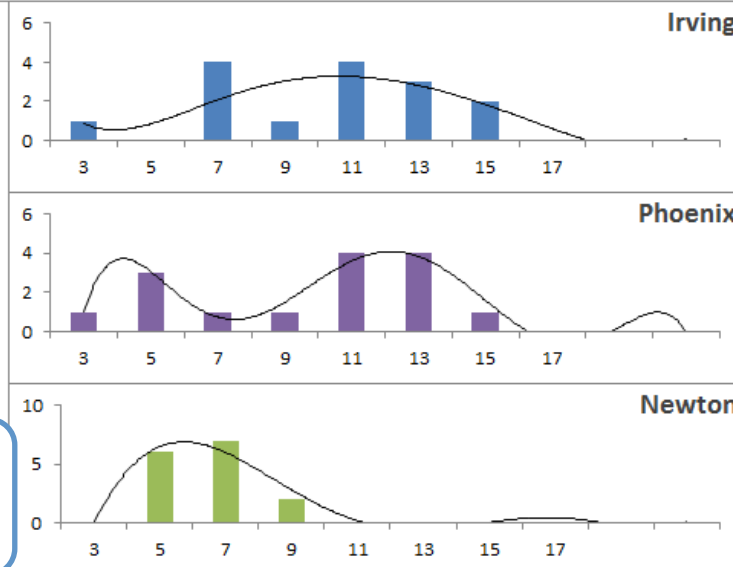
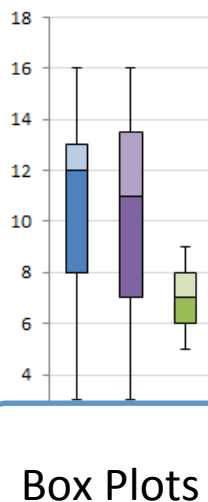
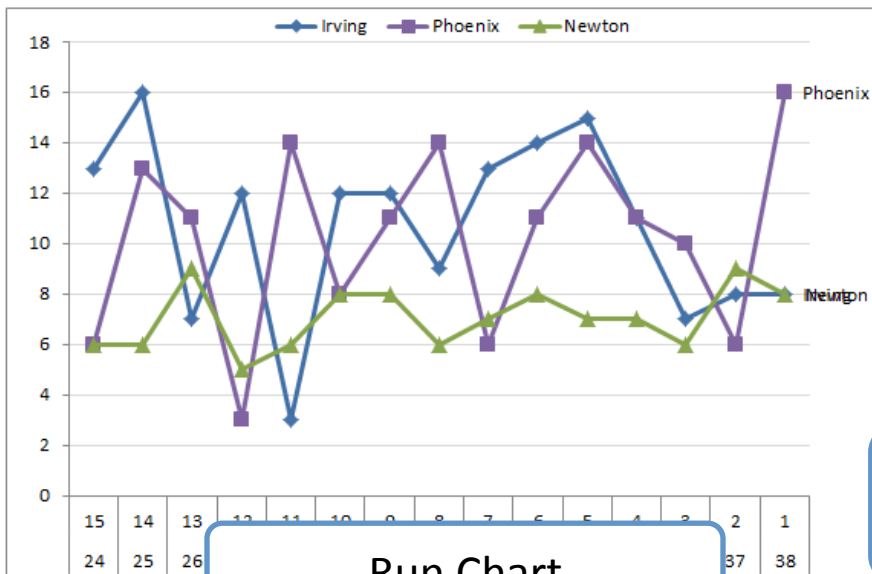
User Input Module: Input MID, Output data by site!

Analyze: Purchasing Dashboard (Custom Tool)

pr01478 *Item Number* 27-Sep Today's Date
Reagent, Stain, Bluing [COLD] 39 Today's Week

38 *Max Week number*
23 *Min Week number*
15 *Range*

☒ Irving
☒ Phoenix
☒ Newton

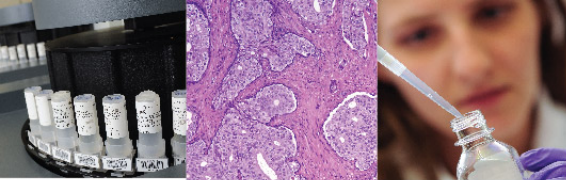


☒ Control Limits
☐ Mean Line
☒ Trend Line

Upper Spec
Lower Spec

Sigma-Limits

☐ 1σ
☐ 2σ
☒ 3σ
☐ 4σ
☐ 5σ
☐ 6σ



User Input Module: Input MID, Output data by site!

Analyze: Purchasing Dashboard (Custom Tool)

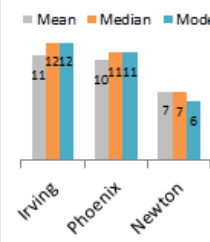
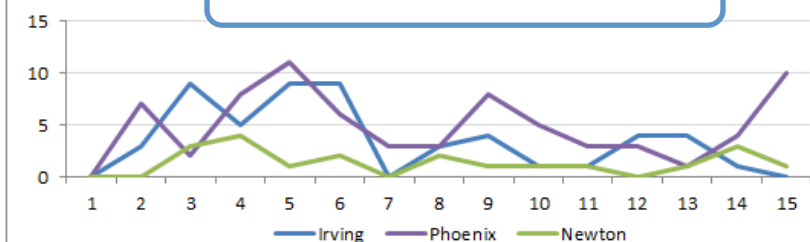
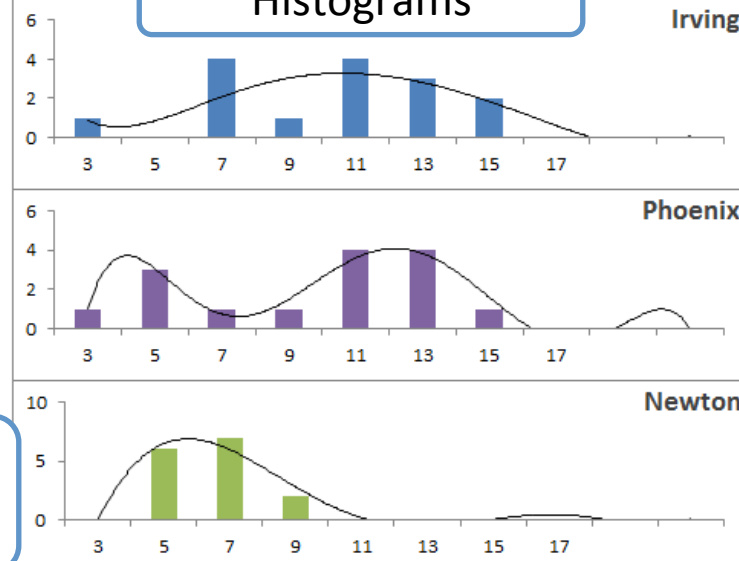
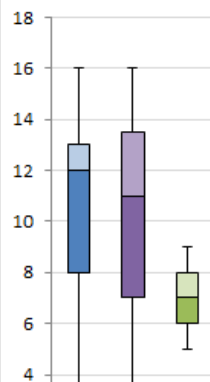
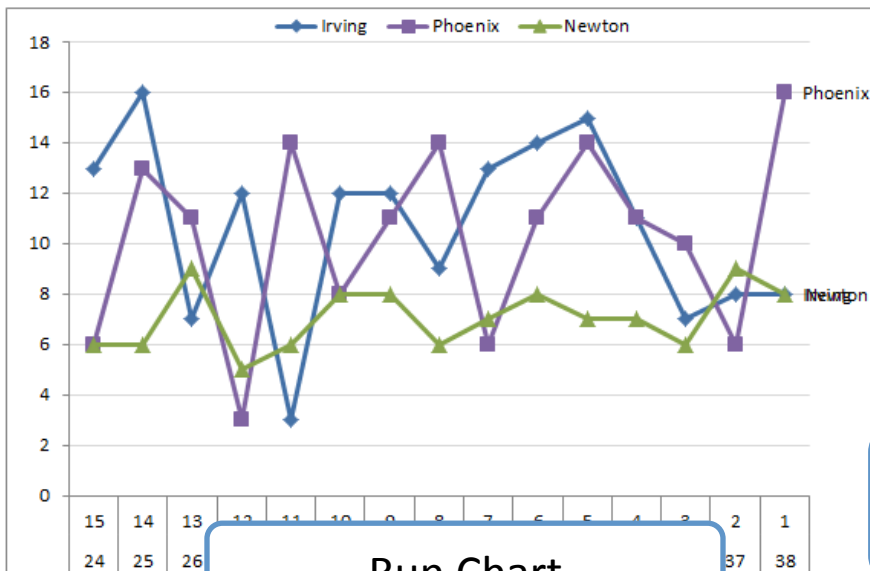
pr01478 Item Number
Reagent, Stain, Bluing [COLD]

27-Sep Today's Date
39 Today's Week

38 Max Week number
23 Min Week number
15 Range

☒ Irving
☒ Phoenix
☒ Newton

Histograms

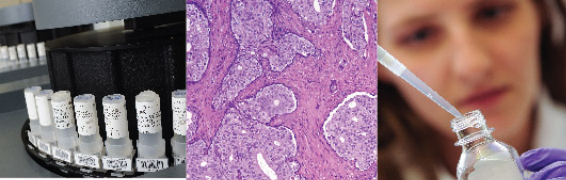


☒ Control Limits
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Upper Spec
Lower Spec

Sigma-Limits

☐ 1σ
☐ 2σ
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☐ 4σ
☐ 5σ
☐ 6σ



User Input Module: Input MID, Output data by site!

Analyze: Purchasing Dashboard (Custom Tool)

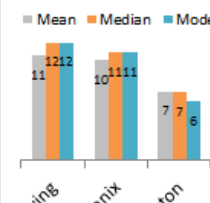
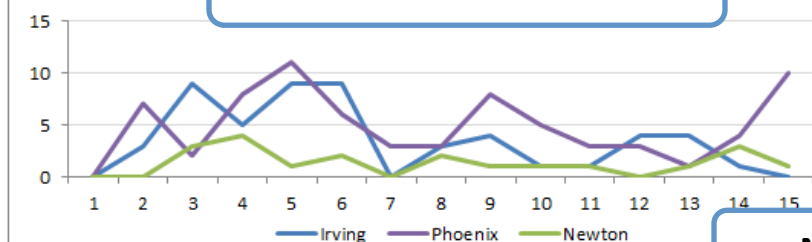
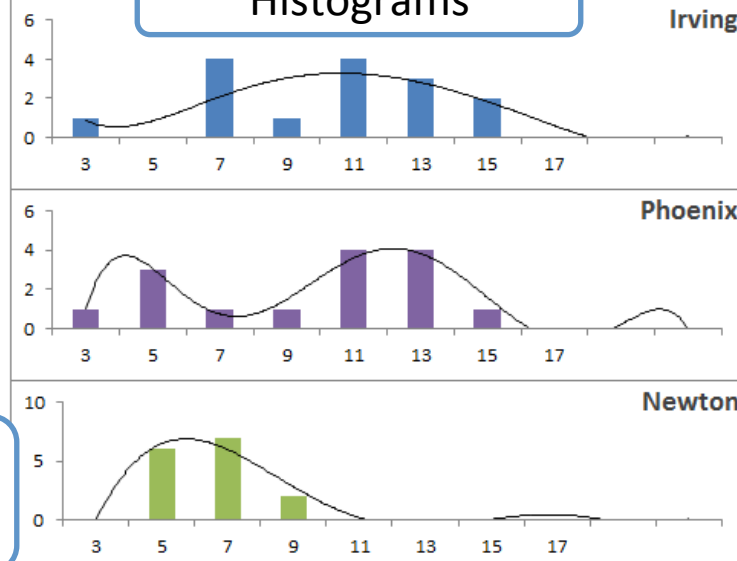
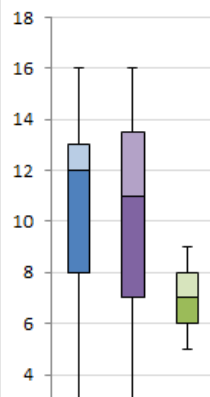
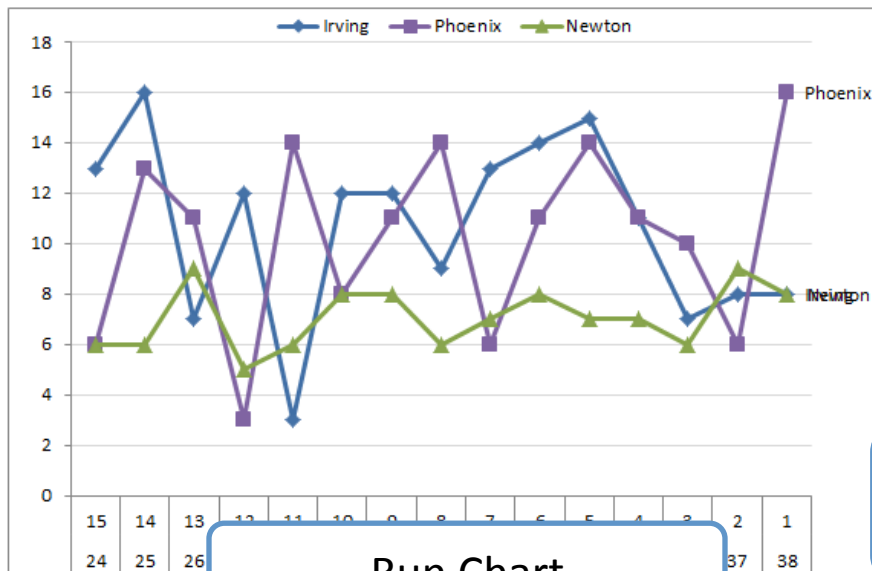
pr01478 Item Number
Reagent, Stain, Bluing [COLD]

27-Sep Today's Date
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Histograms



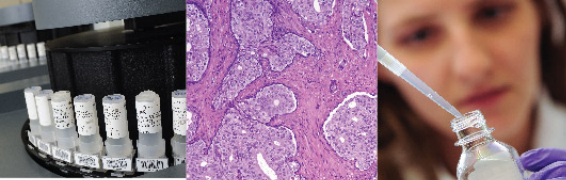
☒ Control Limits
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☒ Trend Line

Upper Spec
Lower Spec

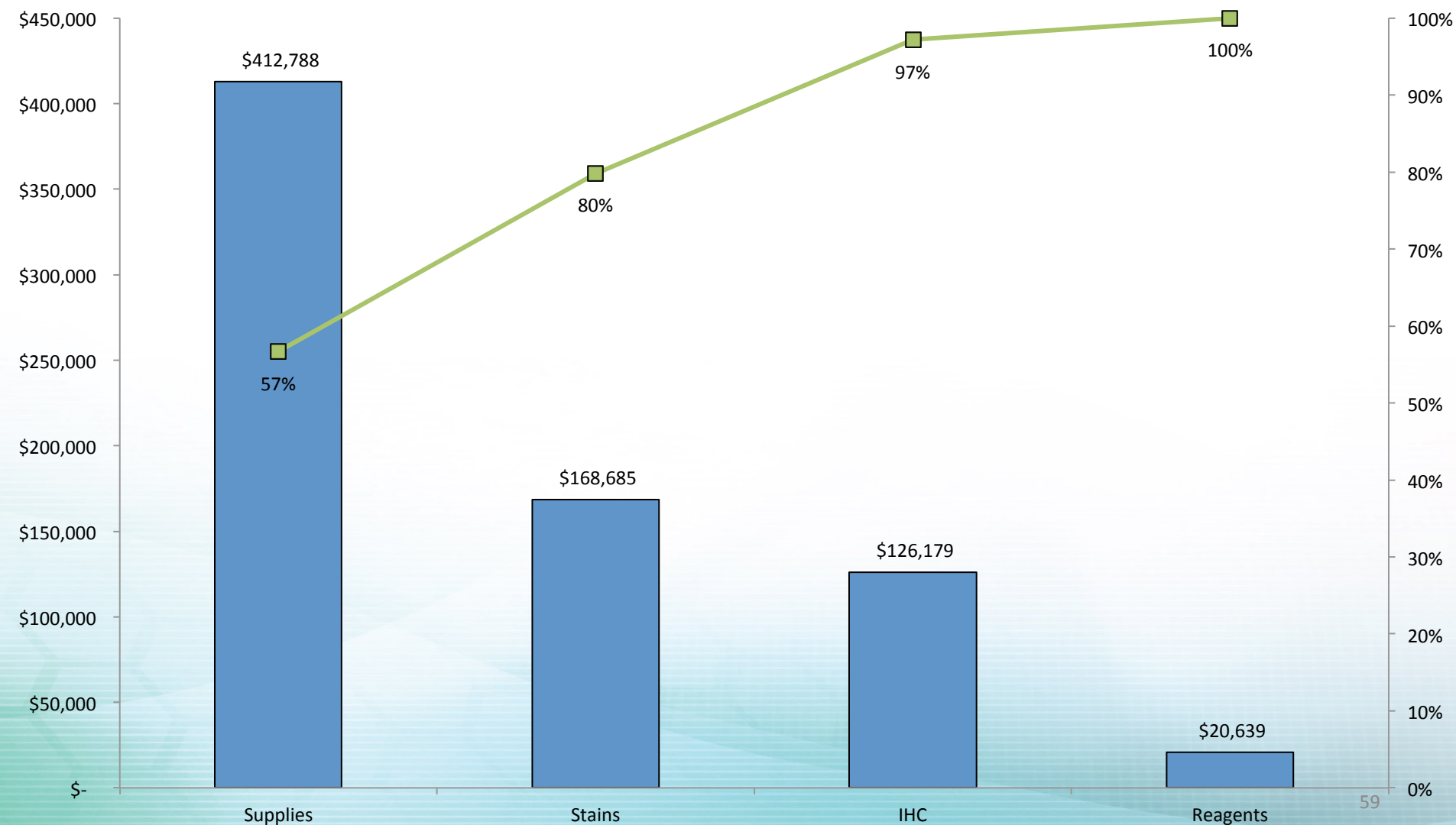
Sigma-Limits

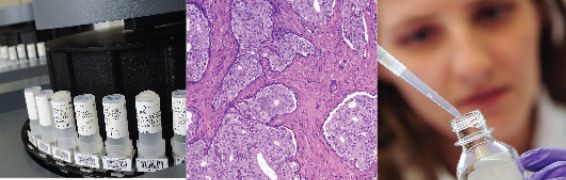
☐ 1σ
☐ 2σ
☒ 3σ
☐ 4σ
☐ 5σ
☐ 6σ

Mean, Median, & Mode

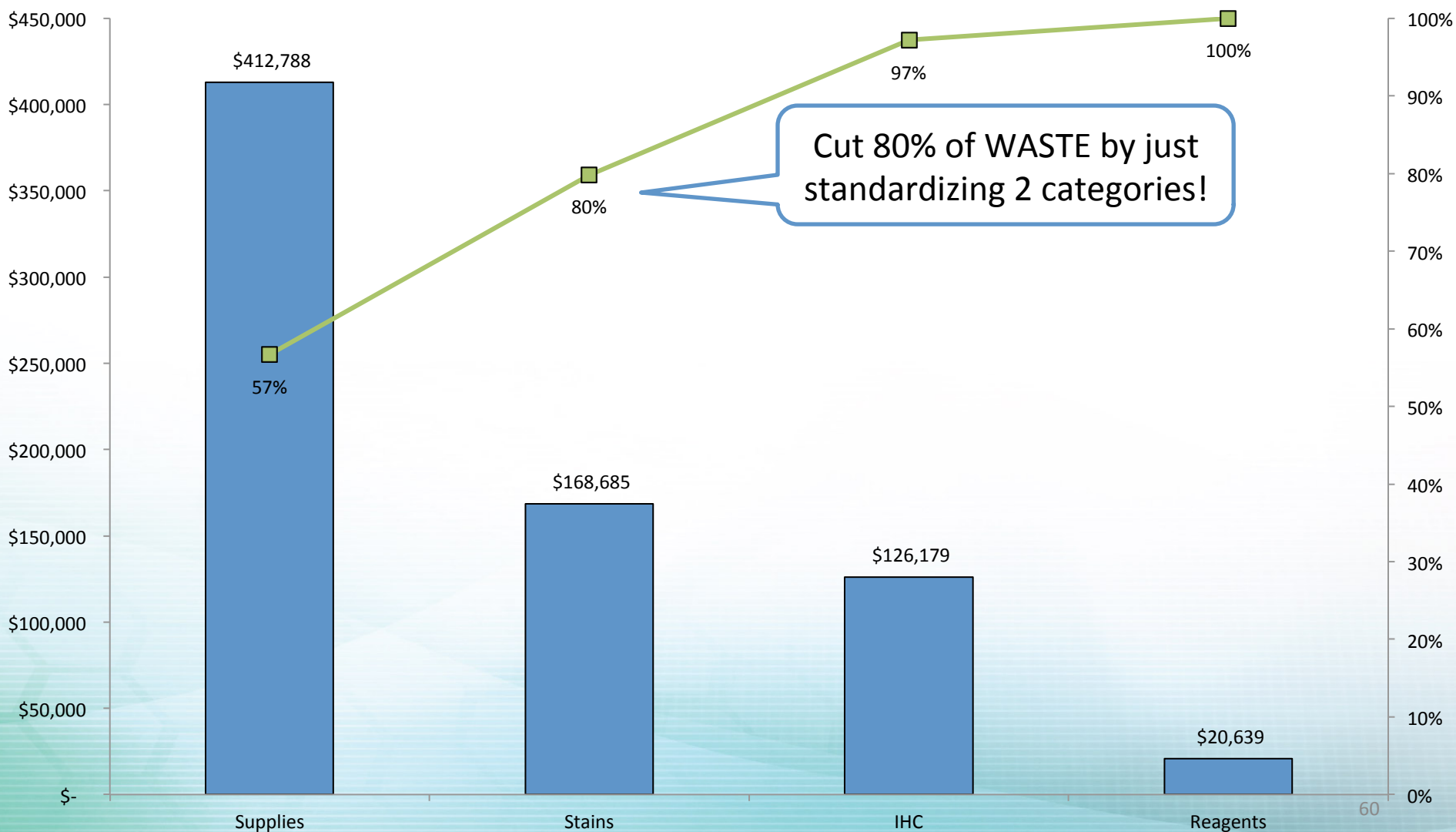


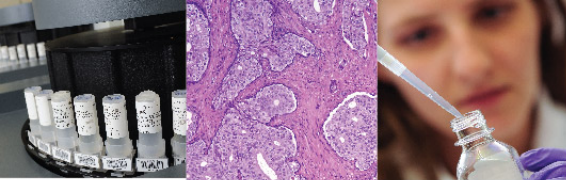
Analyze: Pareto Charts - Prioritizing



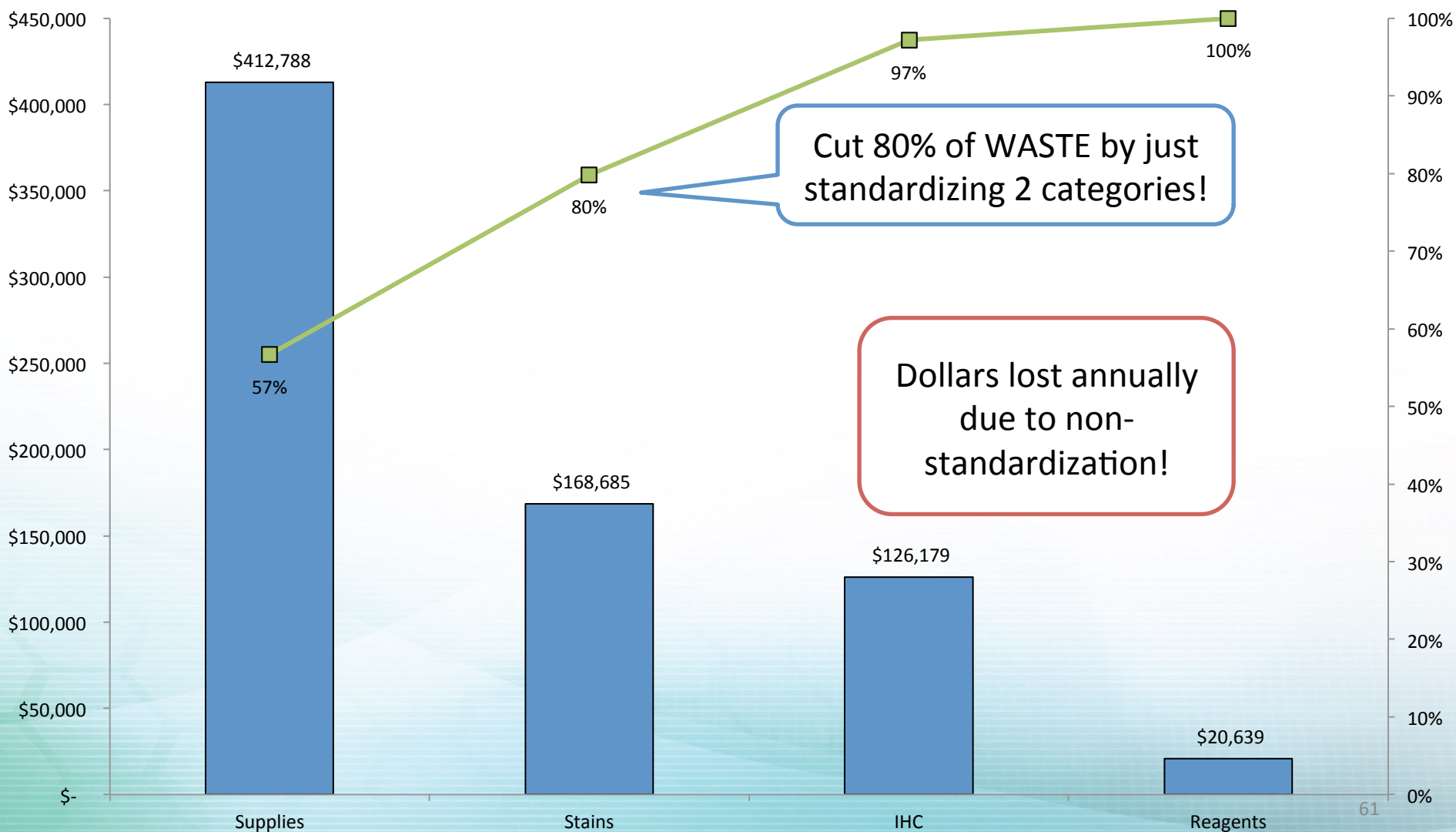


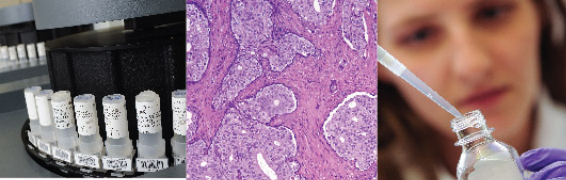
Analyze: Pareto Charts - Prioritizing



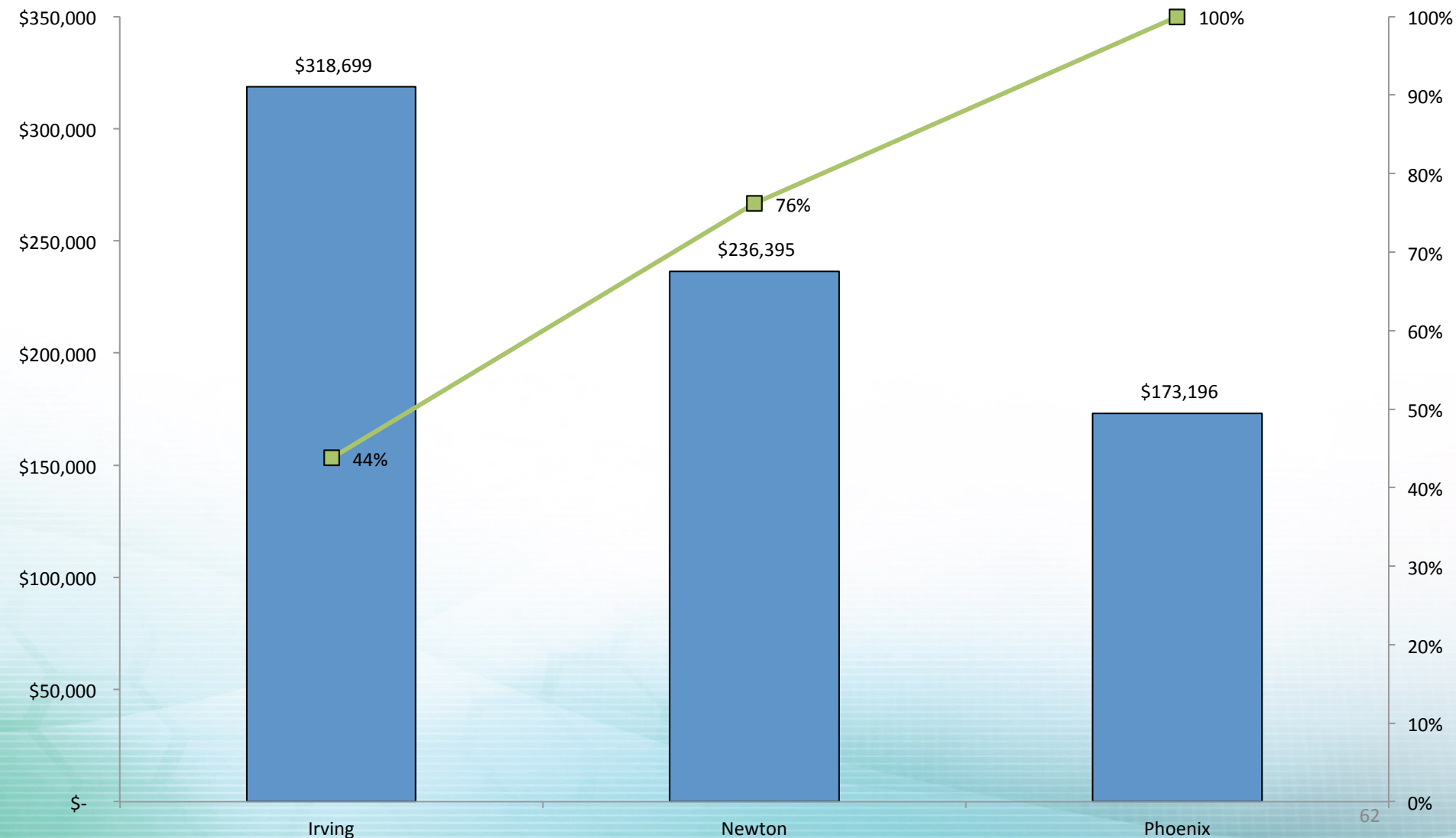


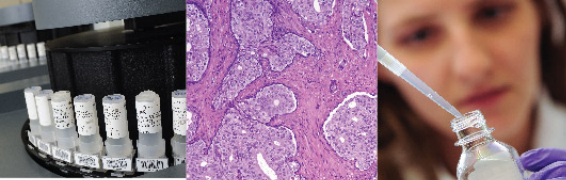
Analyze: Pareto Charts – Prioritizing Categories



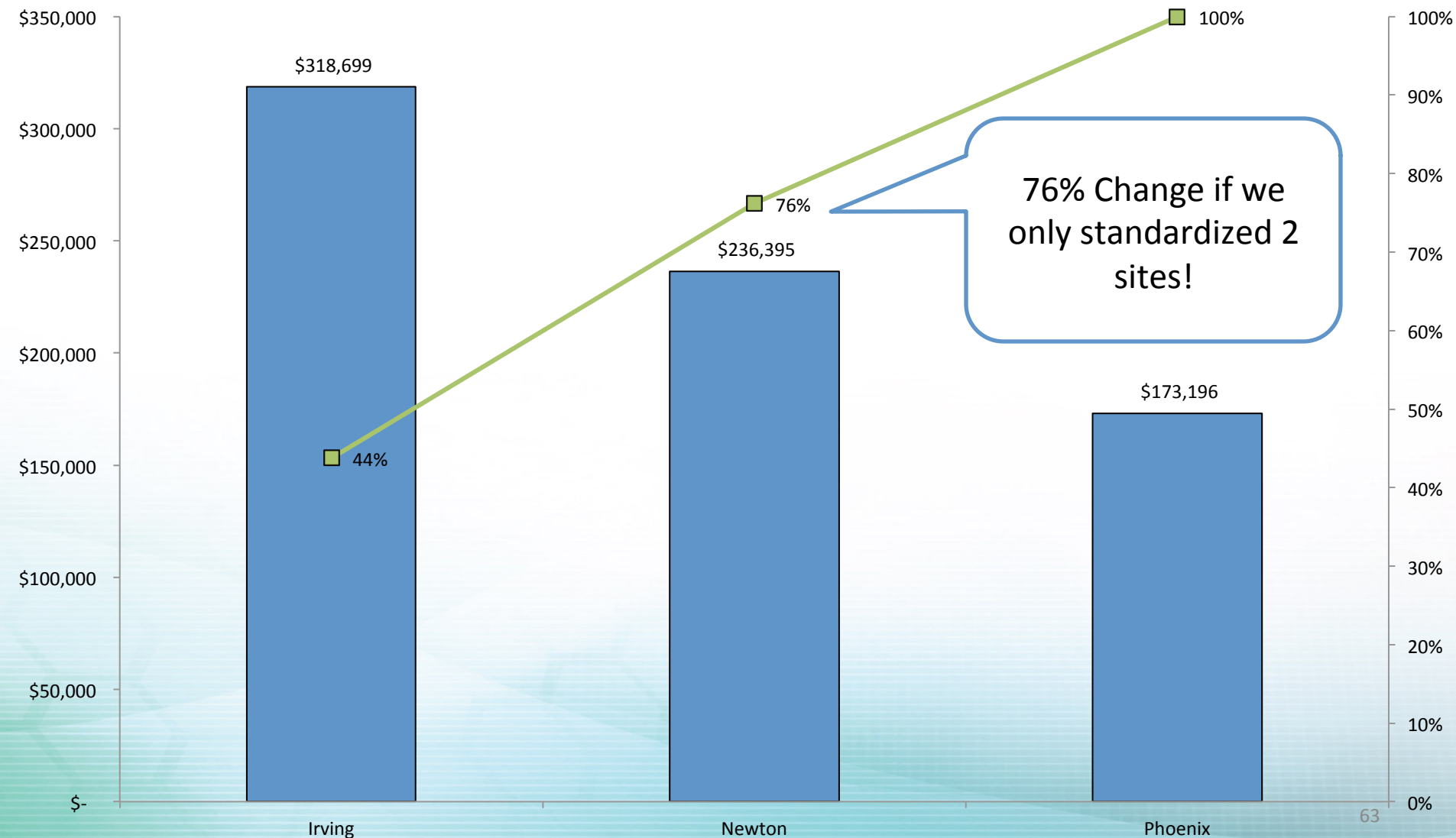


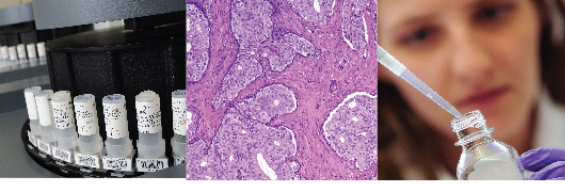
Analyze: The Cost of Doing Nothing is \$728,290





Analyze: The Cost of Doing Nothing \$728,290

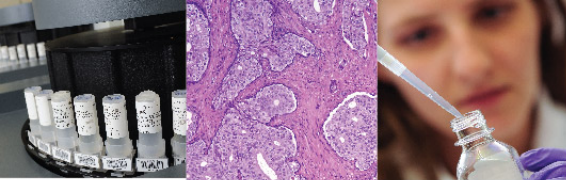




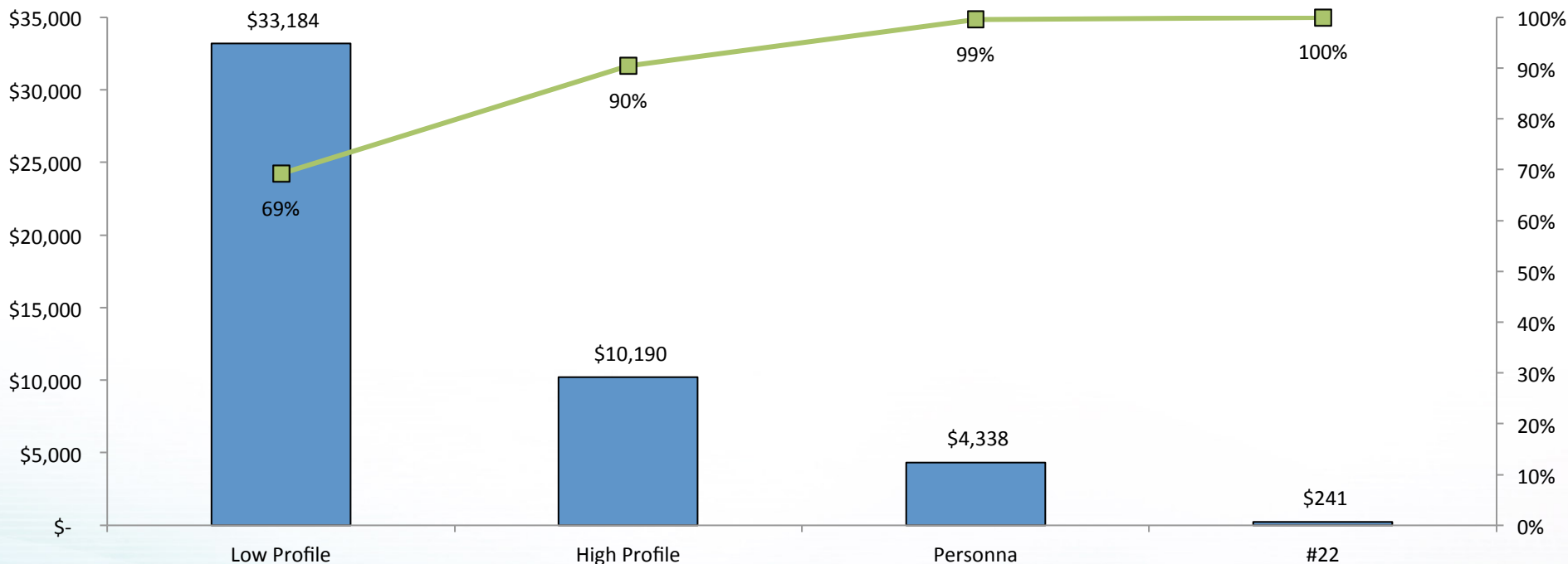
Improve: Process Used to Prioritize and Action Identified Changes



List of items & savings from Analyze phase needs to be prioritized and put into action.

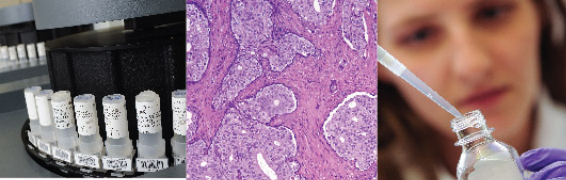


Improve: 2nd Level Pareto – Digging Deeper



Supplies	Component	Current	Future	Savings
Blades	#22	\$ 8,099	\$ 7,859	\$ 241
	#60	\$ 1,540	\$ 1,540	\$ -
	Low Profile	\$ 166,800	\$ 133,616	\$ 33,184
	High Profile	\$ 75,854	\$ 65,664	\$ 10,190
	Personna	\$ 9,418	\$ 5,080	\$ 4,338
		\$ 261,712	\$ 213,759	\$ 47,953

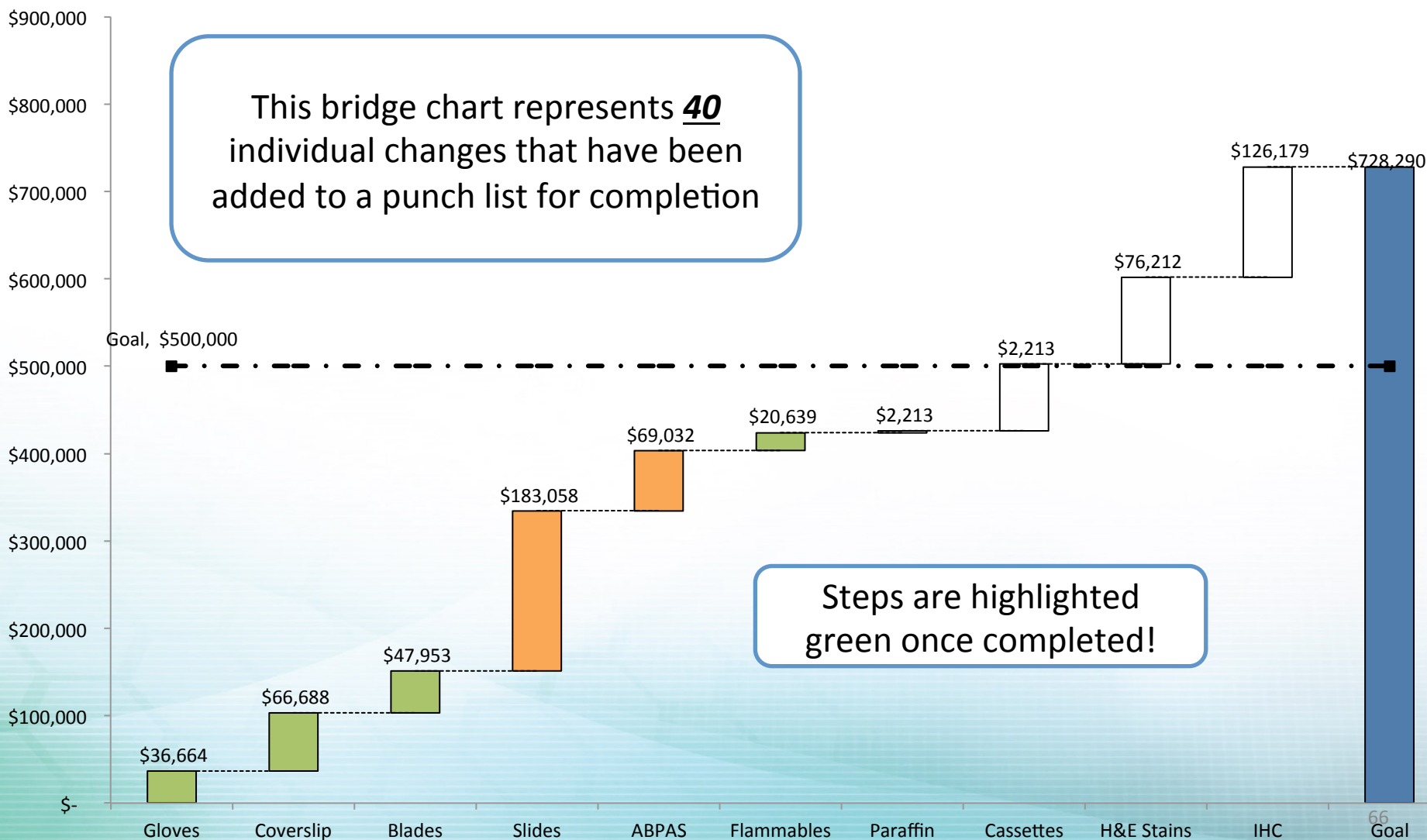
Pareto charts enable us to focus our efforts in the areas that make the biggest impact.

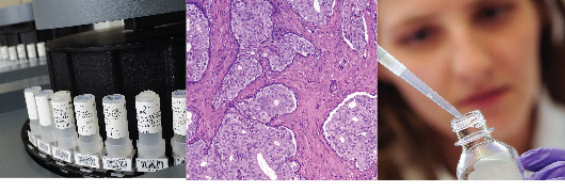


Improve: Bridge to Goal - Prioritized

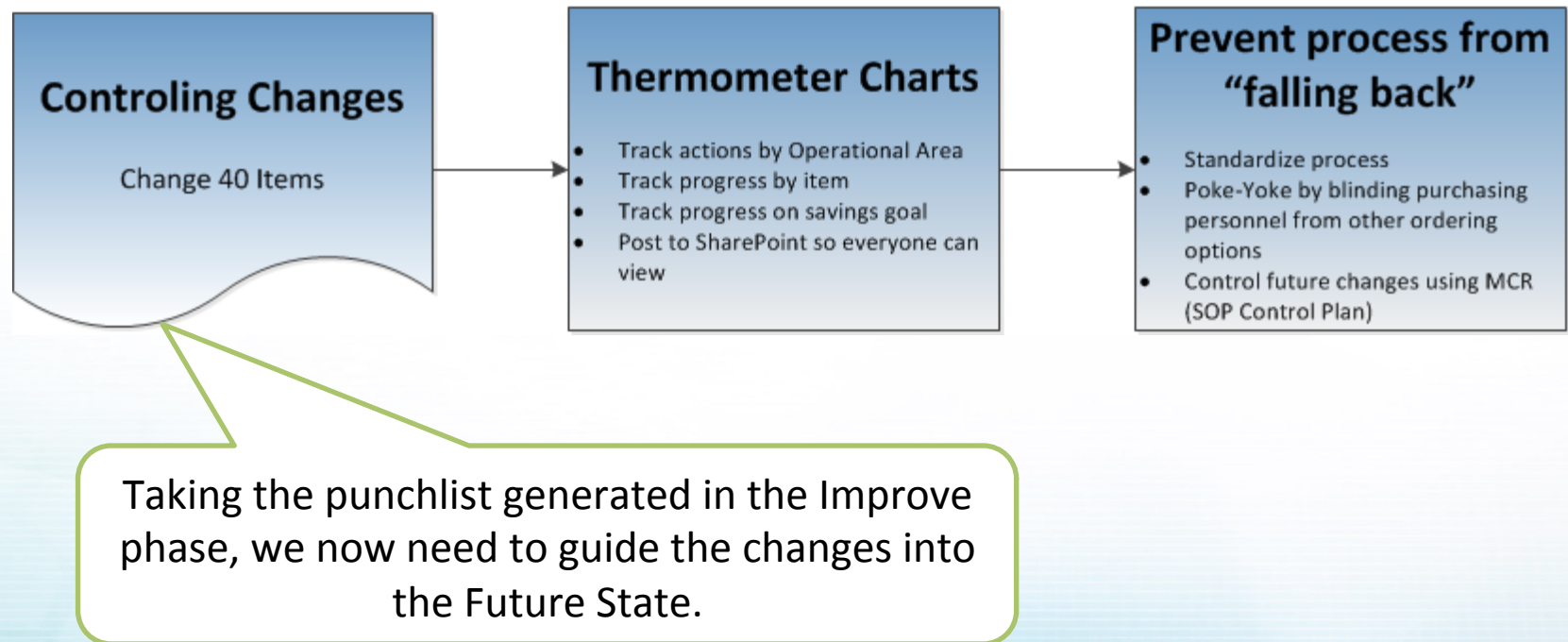
This bridge chart represents 40 individual changes that have been added to a punch list for completion

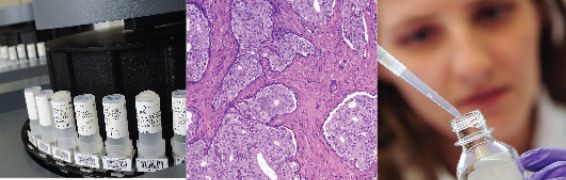
Steps are highlighted green once completed!





Control: Tracking Changes Prioritized During Improve & Preventing Drift in the Future State

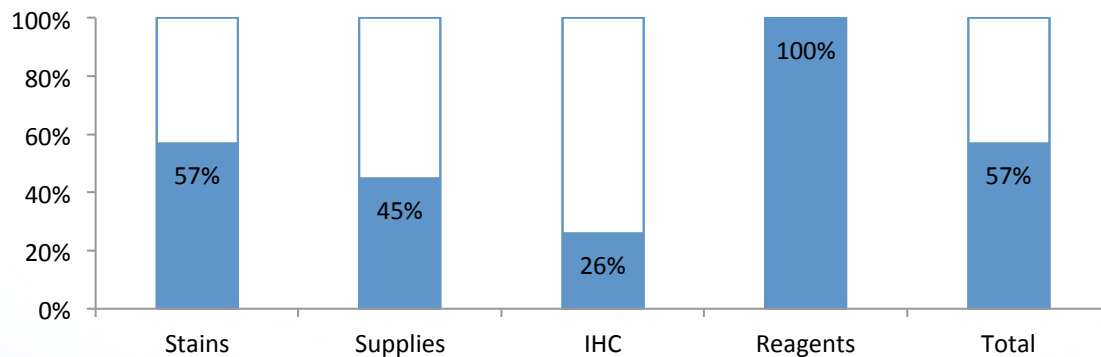




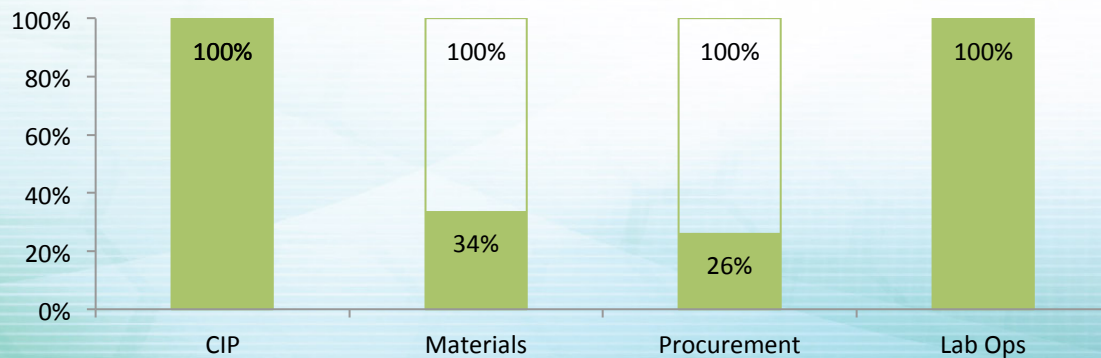
View me on Purchasing's SharePoint Site!

Control: Tracking Progress on Punchlist

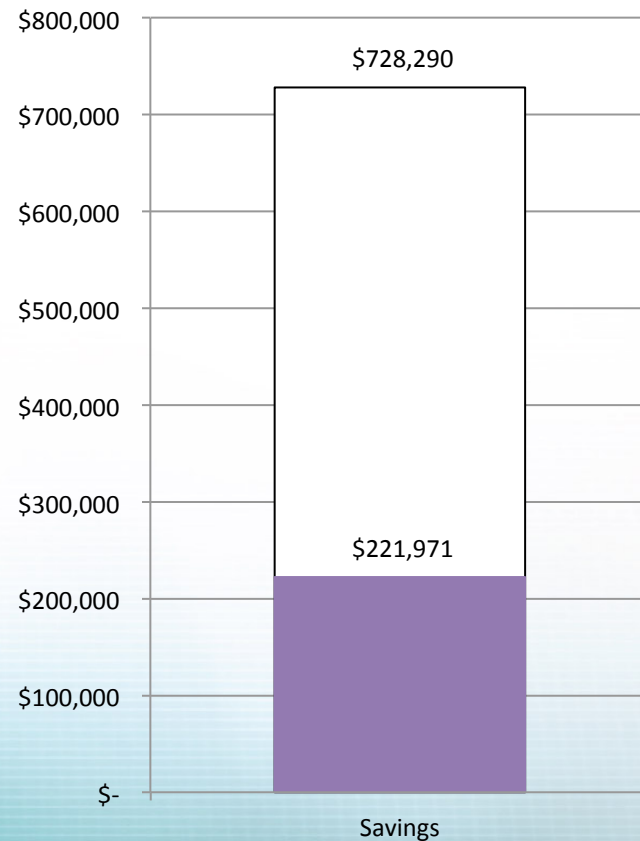
% Completion by Category

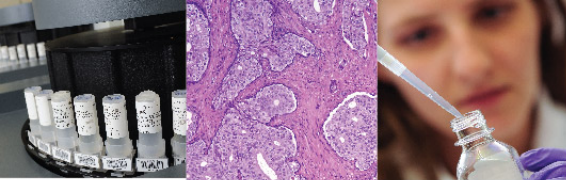


% Completion by Dept



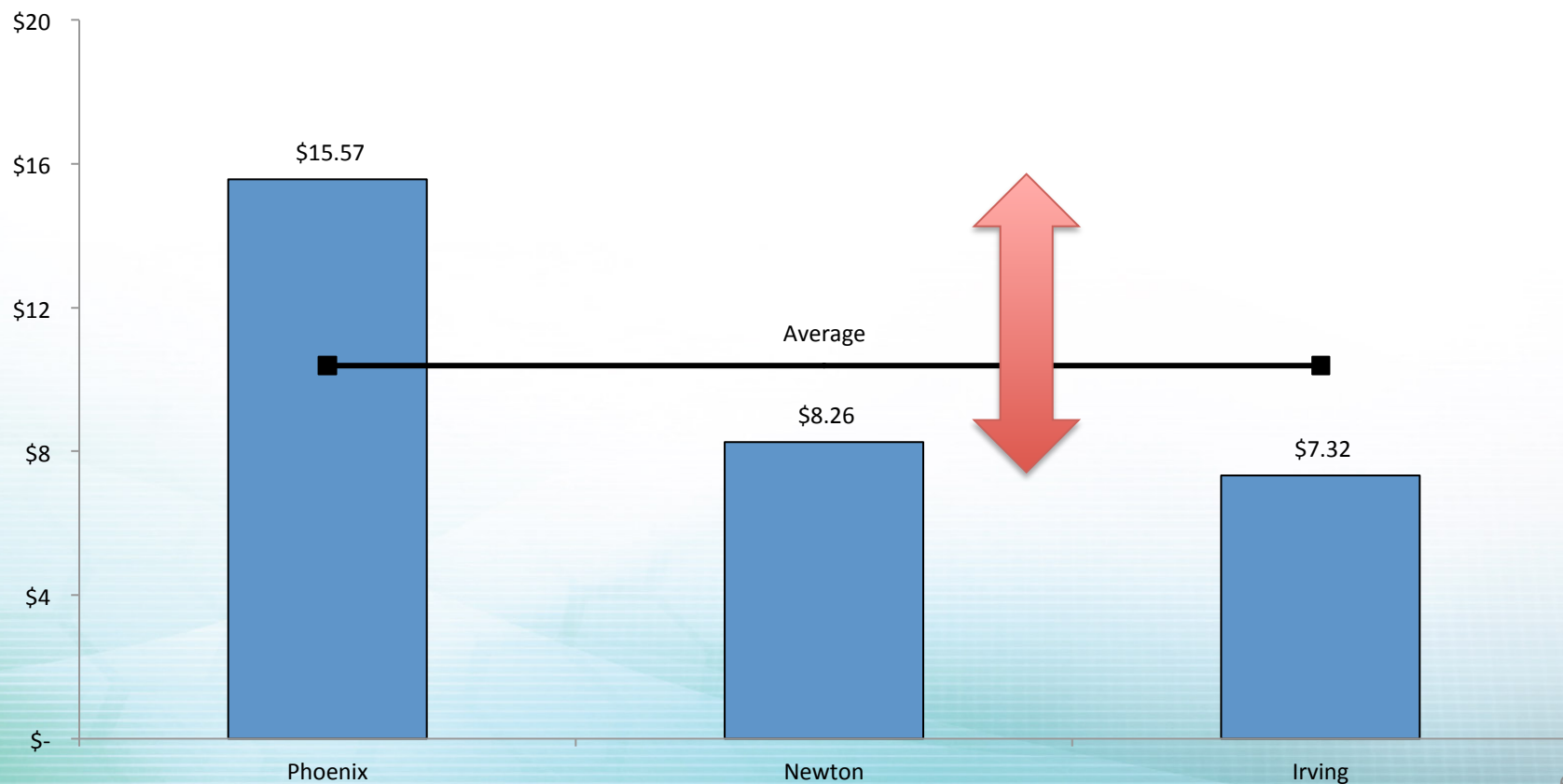
Actioned Savings

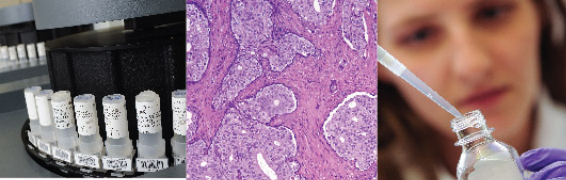




Measure: Average Cost per Case by Site

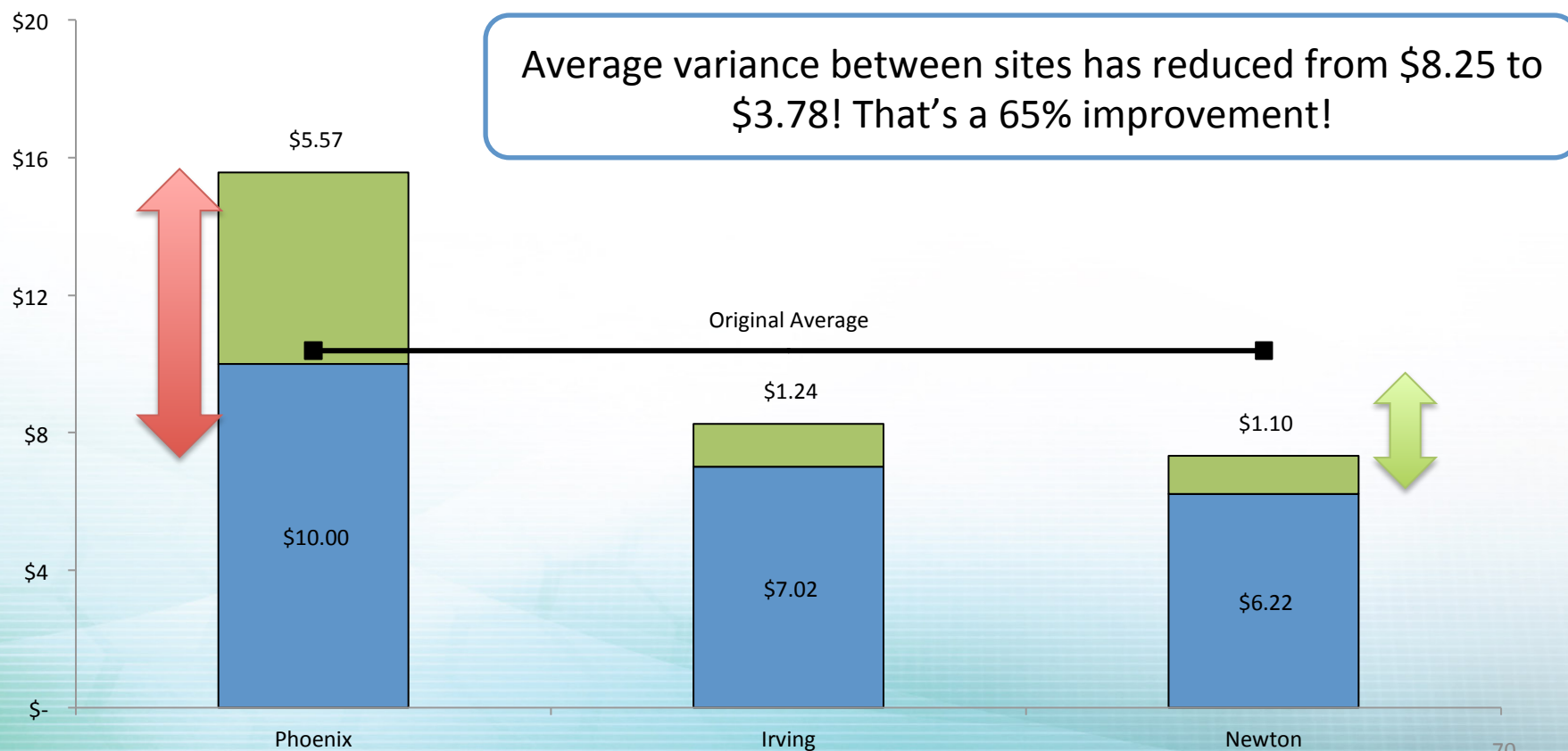
Materials Cost per Case - August 2012 through Oct 2012

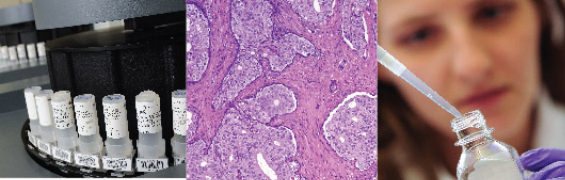




Control: Average Cost per Case by Site

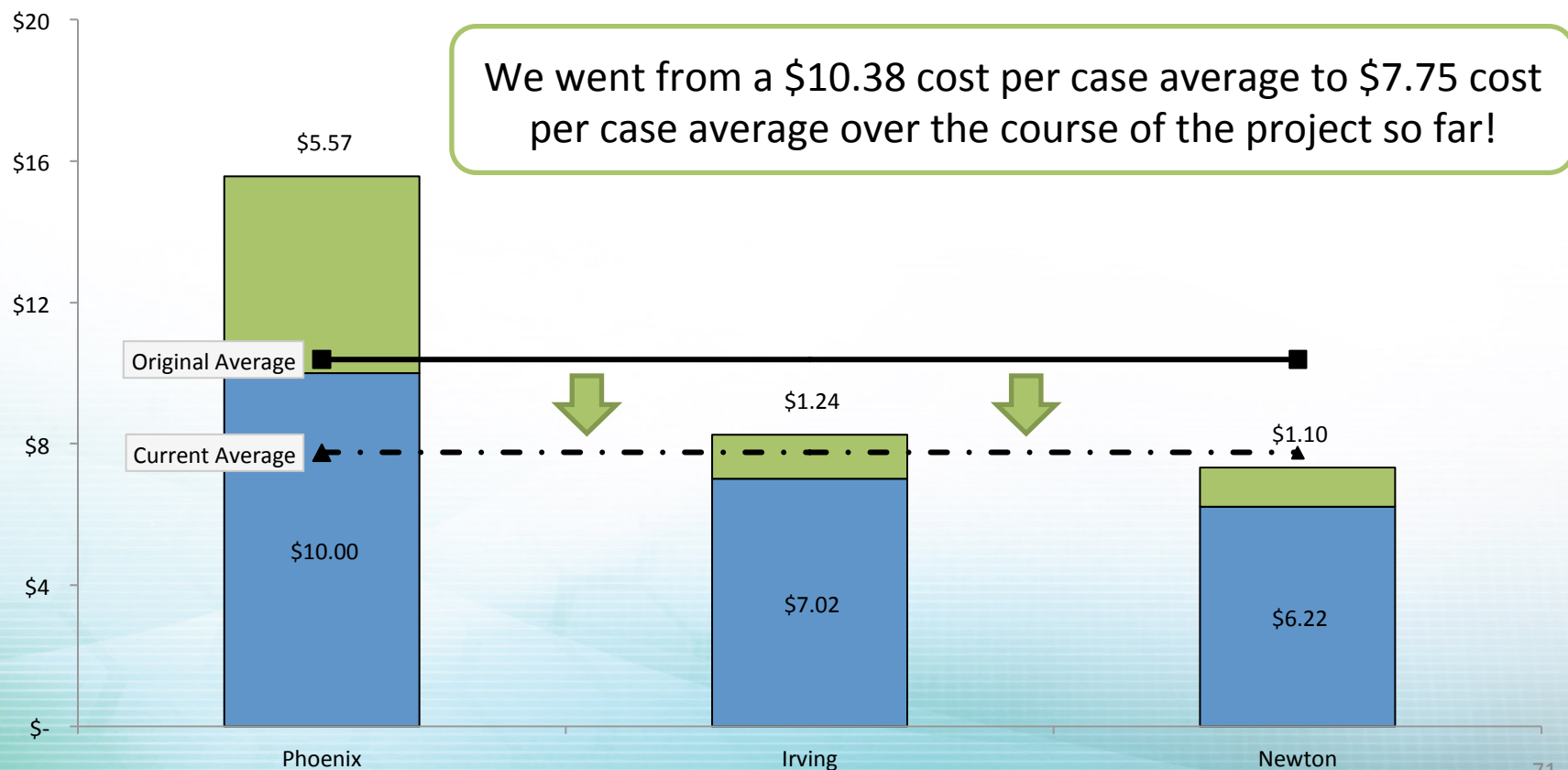
Materials Cost per Case - December 2012 to March 2013

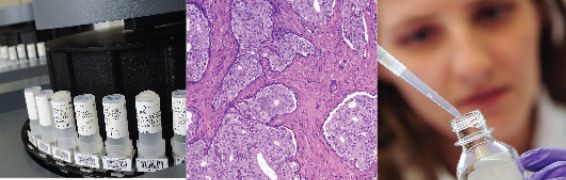




Control: Average Cost per Case by Site

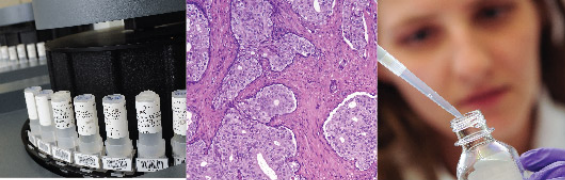
Materials Cost per Case - December 2012 to March 2013





Control: Average Cost per Case by Site





Control: SOP

Going forward, any “Material Change Requests” will need one of me filled out and approved at all sites!

Material Change Request



MCR# 36592

Business Case

- ☐ Safety
- ☐ Quality Improvement
- ☒ Productivity Improvement
- ☒ Cost Reduction
- ☐ Supplier Issue
- ☒ Additional Source

Desired Outcome

- ☐ New MID
- ☐ Qualify Only
- ☒ Replace
- ☐ Bridge Backorder
- ☒ Standardized MID

Items Affected

Newton	Phoenix	Irving	Miraca ID
PR03408	PR03408	PR03665	Description
Schiff Reagent			

New Item Info (Proposal)

Catalog #	33710-16
Description	Schiff Reagent, 500mL Bottle
Price	\$ 25.00 Y Contract Price?
SKU	500 mL
Supplier	Stalab

Performance

Good

OTP	Accuracy	Service	PM	Invoices
92%	99%	-	-	96%

Financial Analysis

Site	Supplier	Catalog #	Price	Annual Usage	Spend	On Hand Quantity	Value
Newton	Fisher	ABC123	\$ 25.00	450	\$ 11,250	120	\$ 3,000
Phoenix	AMT	ZYX456	\$ 395.00	48	\$ 18,960	98	\$ 38,710
Irving	Cardinal	JKL789	\$ 88.93	795	\$ 70,699	10	\$ 889
Miraca			\$ 78.04	1293	\$ 100,909	228	\$ 42,599

Inventory Action

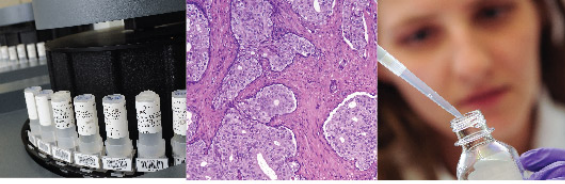
Deplete & Transition	☒	Savings/ Loss	\$ 68,584
Write Off & Transition	☐		\$ 25,985
Bridge & Return	☐	1000 # of Units	\$ 53,043
No Change	☐		

		Newton	Phoenix	Irving
Procurement	Procure Samples	3/25/2013	3/27/2013	3/27/2013
Lab	Validate/ Qualify			
Lab Management	Standardize			
Procurement	Inventory Action			
Materials	Update WASP			
Data	Update ReqNet			
Finance	Capture Savings			

Owner: Mike Kimpland

MCR Start Date: 3/28/2013

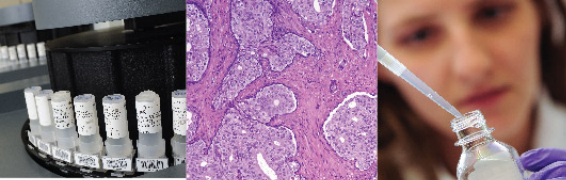
MCR Finish Date:



Report:

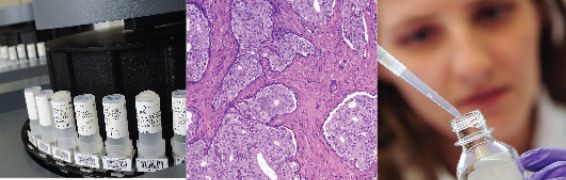
Identified Savings: \$ 728,290

- Project only identifies savings
 - Project completed: June 1, 2013
 - Implement Changes: October 30th, 2013
 - Further savings areas to explore
 - Special Stains
 - Control Slides
 - Many more supply categories
- People have to implement savings



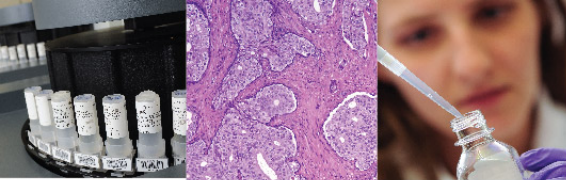
Report: Possible New Projects

- Inventory Usage Analysis Project (Kaizen or GB)
 - Use GB tools to analyze material usage
 - Gain Accuracy and Precision on transactions
- BOM Project on IHC Stains (Kaizen)
 - Get Complete transparency in IHC spend
 - Map material usage from Path Request through Slide Creation
 - Reorder IHC materials per Path requests
- Shipping Guidelines vs. Space usage (GB)
 - Improve space usage and materials spend by optimizing purchasing cadence & on hand balance
 - Increase inventory turns
 - Repeat Newton's success at other sites



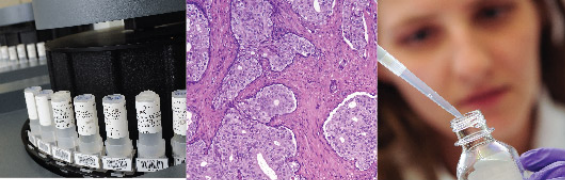
Agenda

- | | |
|--|-------|
| • Miraca Life Sciences Overview | Damon |
| • Green Belt Project | Mike |
| • Miraca's first 12 months of Lean / Six Sigma | Damon |
| • Q&A | All |



Year 1 accomplishments---Lean Six Sigma

- Created a Miraca CI Steering committee (active CEO participation)
 - CI steering committee completed executive belt training & kaizen event
 - CI Communications strategy
 - Created a Miraca Lean Six Sigma glossary
- Completed VSM's by sub-specialty
- Launched Muda Waste Reduction team
- Implemented GB certification program
 - 12 Participants
 - 3 GB projects completed in July (\$824K savings)
- 8 Kaizen events completed
- 7 Go Do It's



Results: Waste Reduction Culture (LEAN)

Our MUDA initiative utilized many of the tools and techniques and was the starting point for developing our CI program.



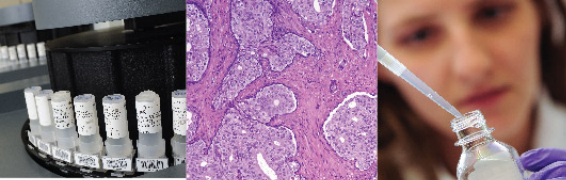
- Our Waste Reduction Goal

Cost of Services	\$ 2.5 mm
Sales and General Expenses	\$.8 mm
Corporate Support	<u>\$.7 mm</u>
Total Reduction Goal	\$ 4.0 mm

- Reductions Actions:

Cost of Services	\$4.7 mm
Sales and General Expenses	\$2.1 mm
Corporate Support	<u>\$1.3 mm</u>
Total Reduction	\$8.1 mm

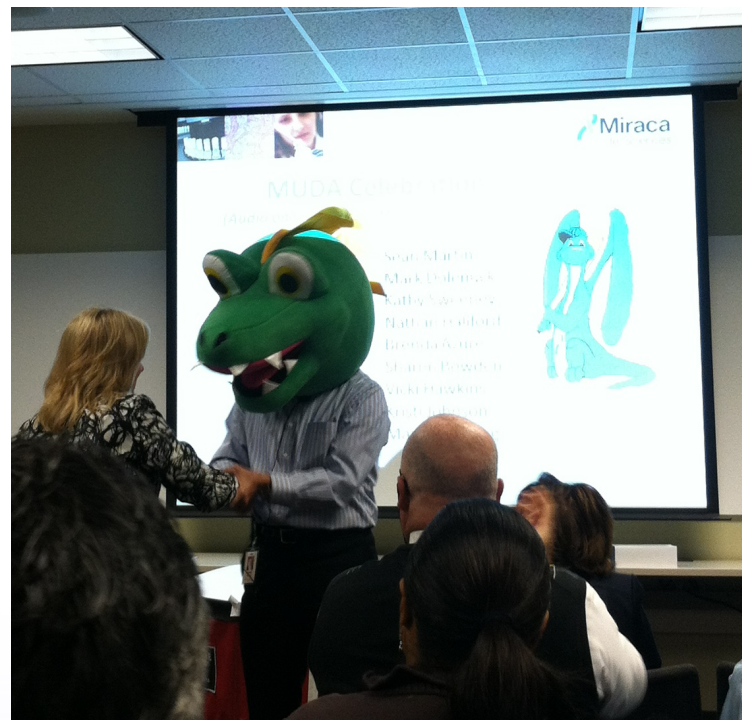
Accomplished



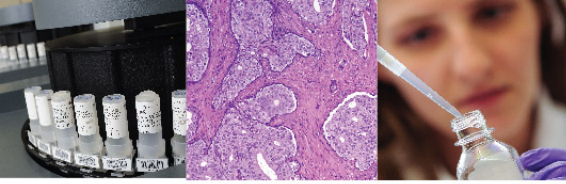
Muda Dragon Celebration



In Newton, the Muda Dragon and Damon Silvestry congratulate Waste Reduction Committee team members



In Irving, Muda Dragon CEO Dr. Frank Basile congratulate Waste Reduction Committee team members



Q & A