



LIMS Challenges for a Multi-Site Organization

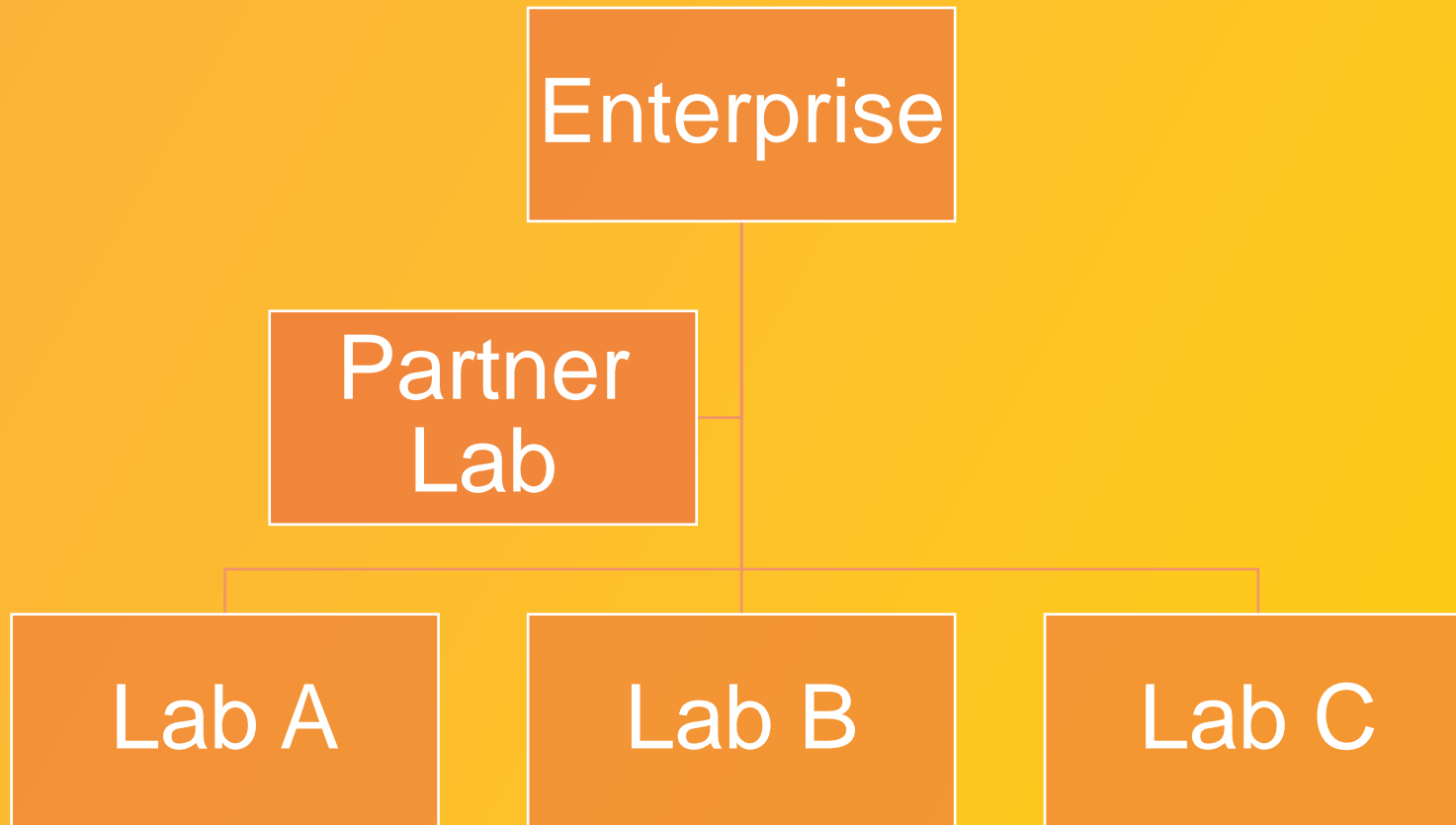
Kevin Carter

VP, Product Management

Clinisys

What is a Multi-Site Organization?

- More than one Lab operating under one Organization

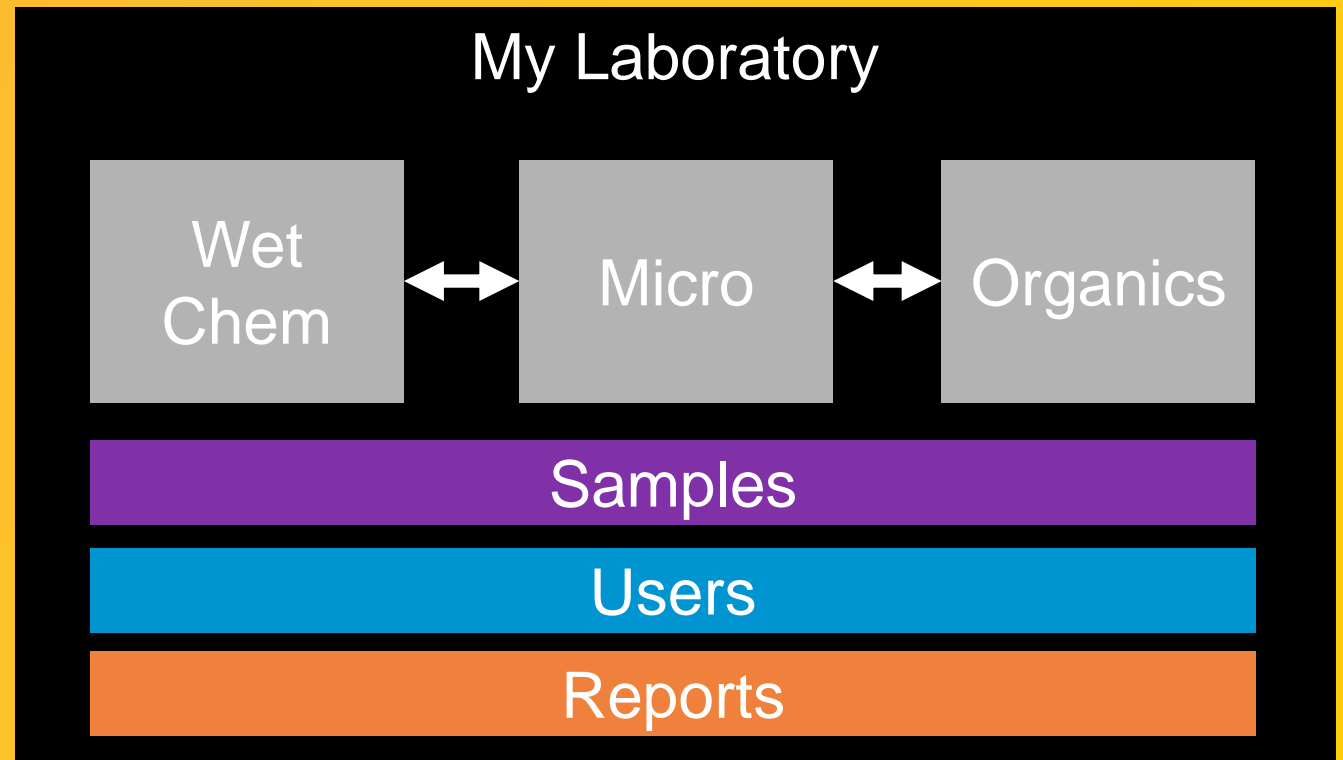


Recent Trends Towards Multi-Site

- Mergers and Acquisitions
- Expanding scope
- Specialization
- Resource constraints
 - US Lab vacancies hovering around 11%
 - Environmental testing expected to grow 23% through 2030*

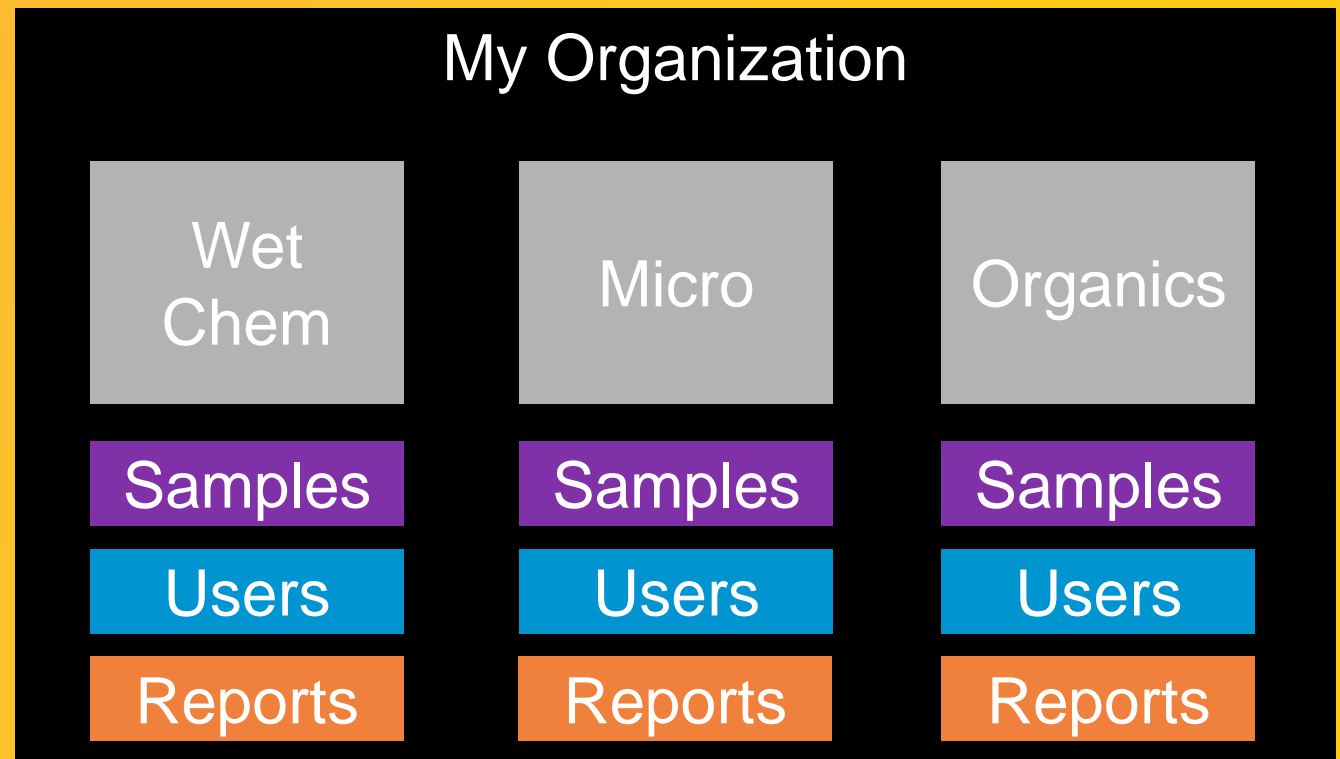
Single-Site Organizations

- Shared samples
- Cross functional users
- One reporting entity



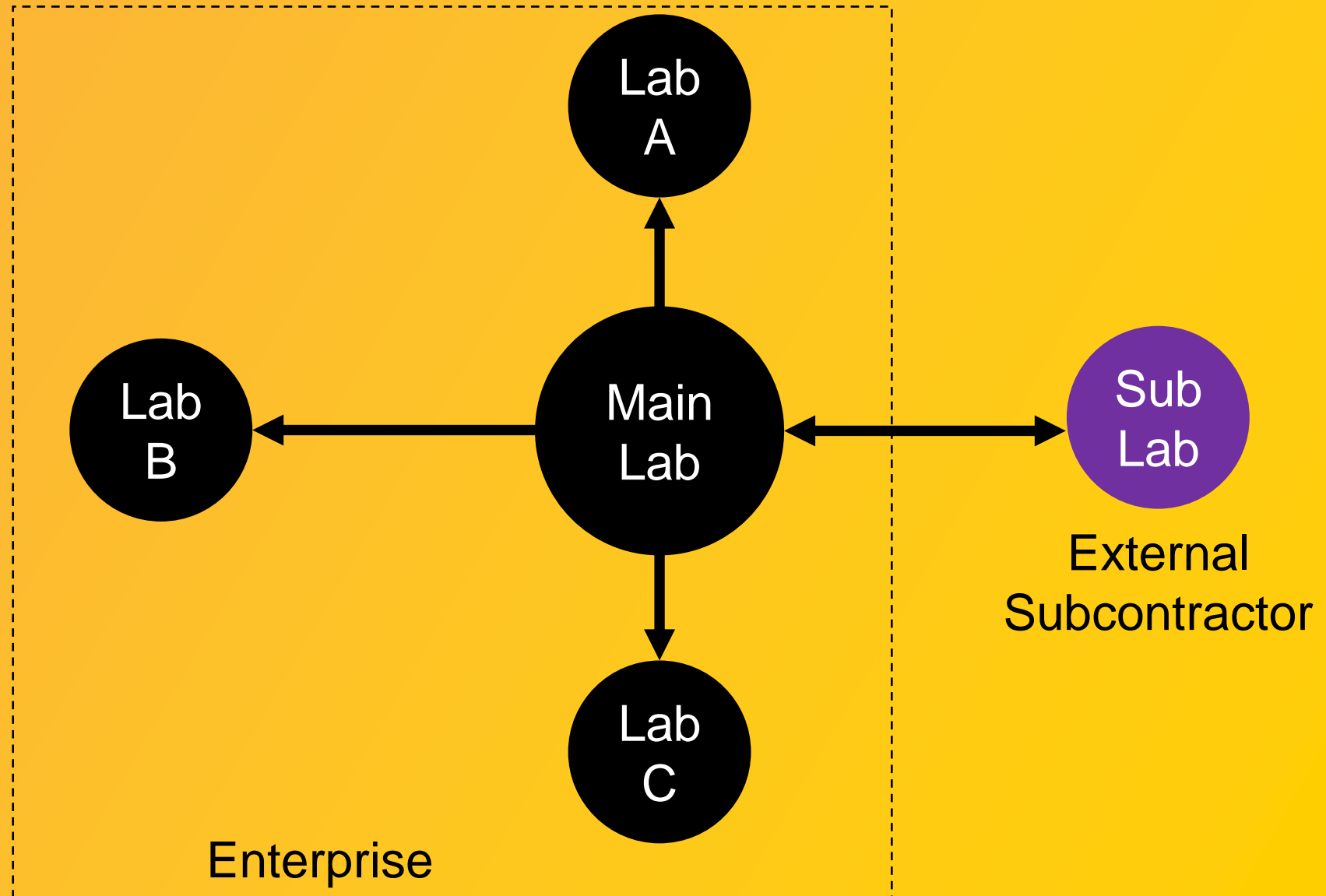
Types of Multi-Site Organizations

- Stand-alone/Hybrid
 - Non-shared samples
 - Lab-specific users
 - Reporting per lab



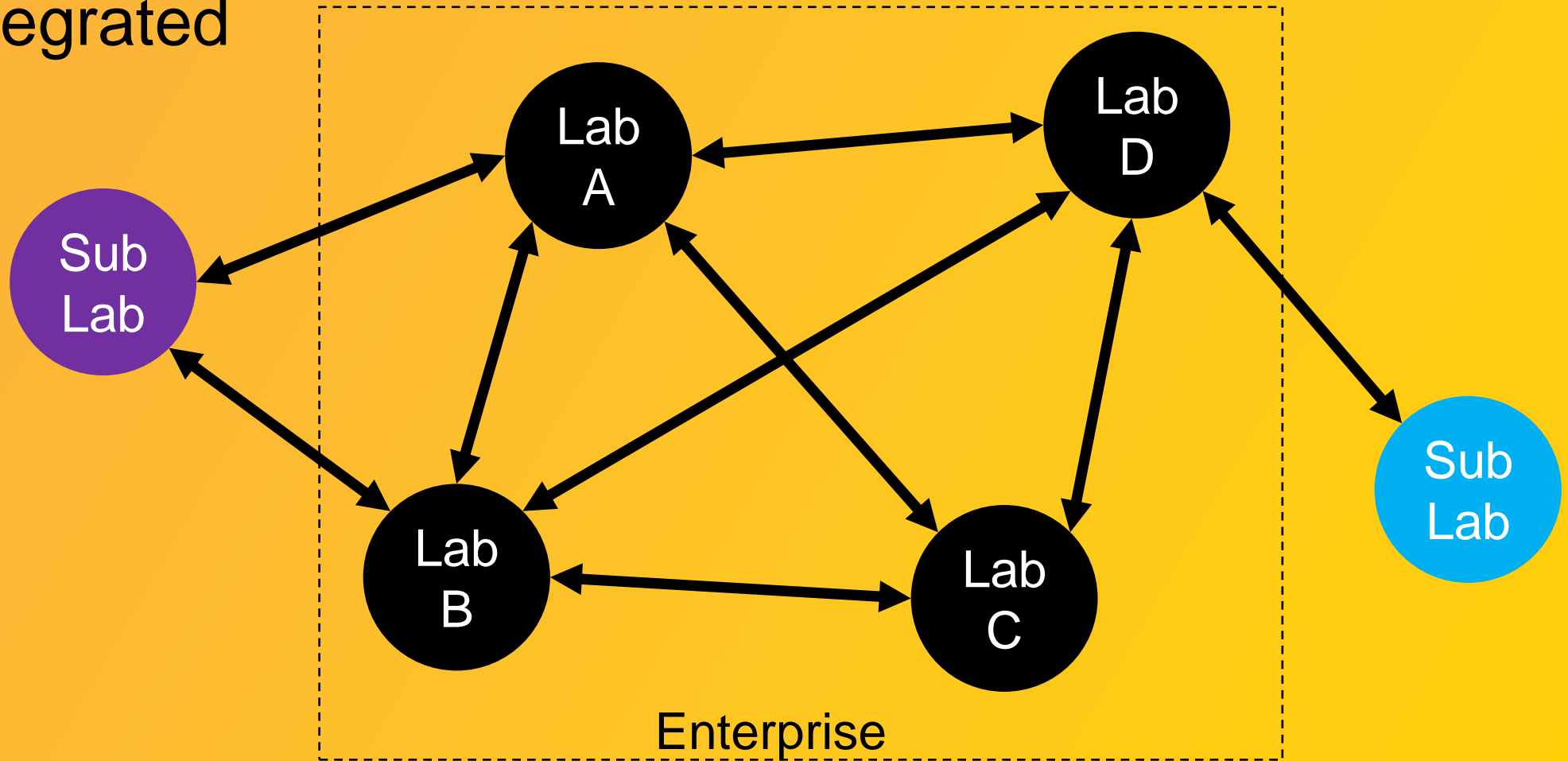
Types of Multi-Site Organizations

- Hub and Spoke



Types of Multi-Site Organizations

- Fully integrated



Multi-site Challenges

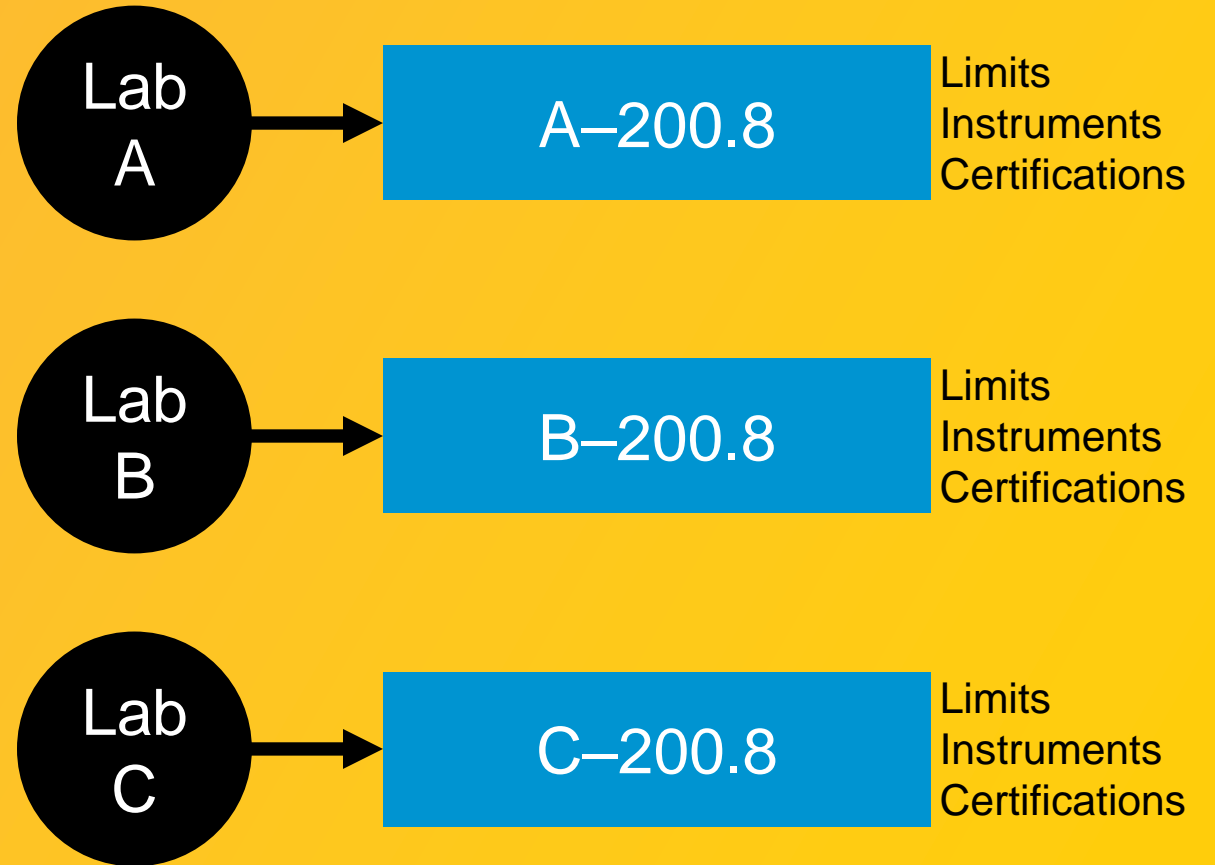
- Operational efficiency
 - Duplicate testing capabilities
 - Organizational awareness
 - Training
 - Analytics

Multi-site Challenges

- Access and Security
 - Most Users should only see “their work”
 - Some Users need to see all work
 - Authentication is granted at the Enterprise level

Multi-site Challenges

- Technical administration
 - Test Code proliferation
 - Limits
 - Instrumentation
 - Certifications
 - Sample storage locations



Multi-site Challenges

- Customer service
 - Divergent sample submission process
 - Specific testing/reporting needs
 - Lab holidays, time zones and working hours

Multi-site Challenges

- Cost
 - Hosting on-premise LIMS is no longer standard
 - Hosting and maintaining multiple LIMS is expensive
 - CapEx + OpEx
 - Individual LIMS are typically configured independently
 - Deployment cost

LIMS Product Challenges

- Continue support for true single-site labs
- Evolving to support various multi-site models
 - Stand-alone/Hybrid
 - Hub and Spoke
 - Fully integrated

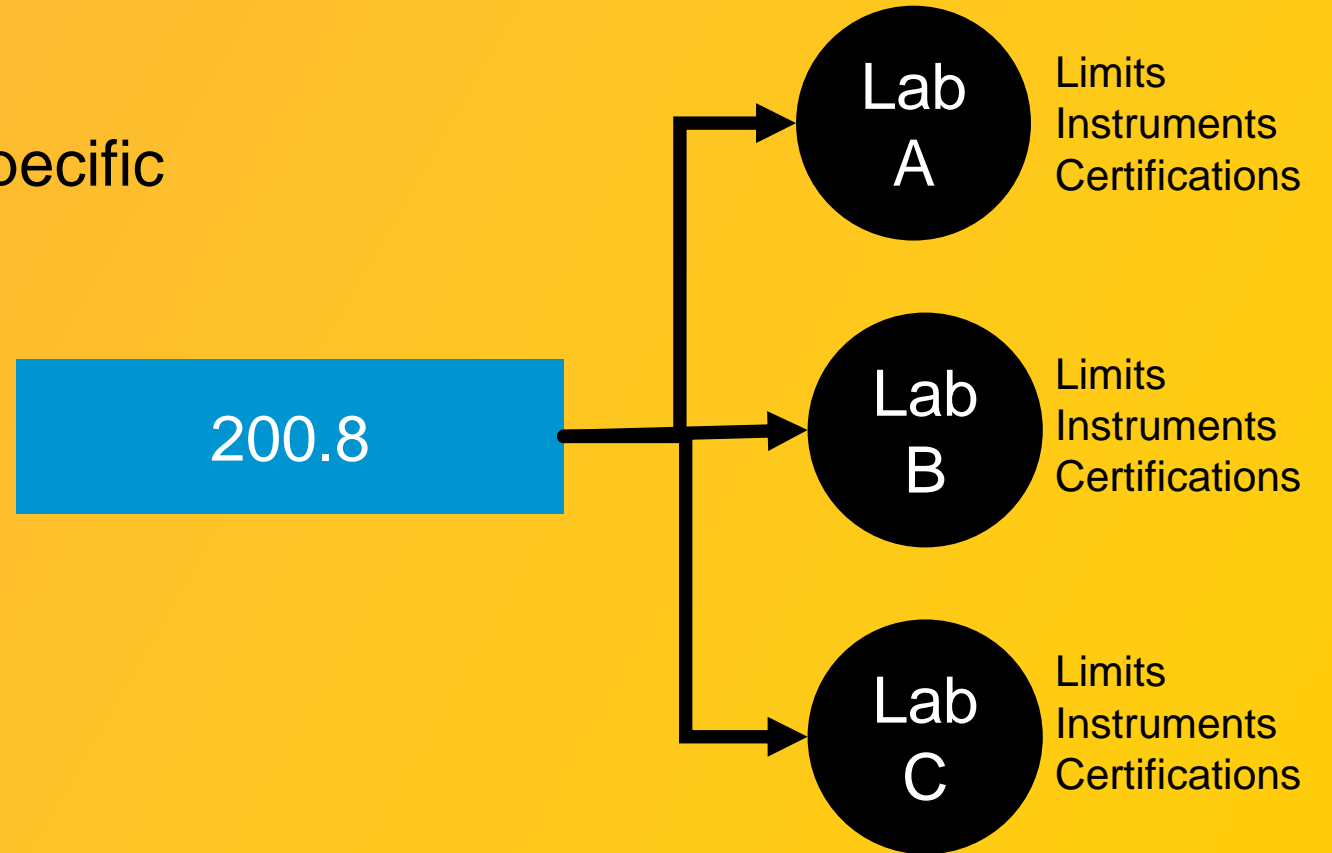
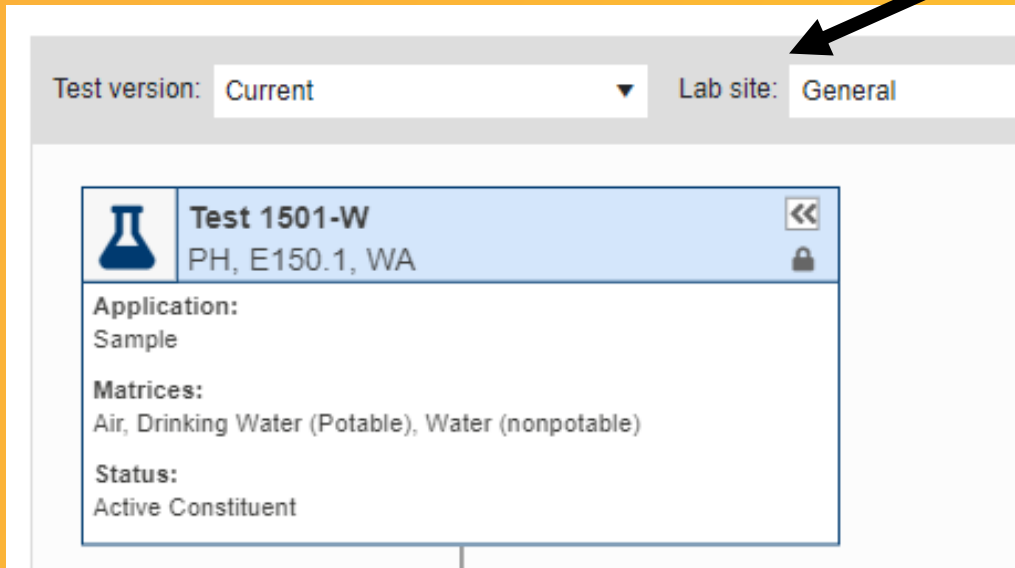
LIMS Product Trends

- Rise of the broad-based LIMS
- Cloud-based solutions
- Automation
- Mobility
- AI/ML

LIMS Solutioning

- Technical Administration

Site Specific



LIMS Solutioning

•Operational efficiency: Offloading

Lab Site Transfer

1
Search Criteria



2
Verify Certification



3
Select Containers



4
Confirm Preferences



Transfer to Lab Site



1 SEARCH CRITERIA

Test code: Drinking Water Metals (DWMetals) Lab site: Morrisville (M)

2 VERIFY CERTIFICATION

Select samples to transfer

Count: 0

System Settings

<input type="checkbox"/>	Lab ID	Client	Profile	Workorder	Analyte Certificat...	Prep Method Certificat...	Prep Method	Method Certification	Method	State Certification	State
<input type="checkbox"/>	187836024	Erica	LST demo	187836	✓	EPA 180.1	✓	EPA 180.1	EPA 200.8	✓	North Car
<input type="checkbox"/>	187836023	Erica	LST demo	187836	✓	EPA 180.1	✓	EPA 180.1	EPA 200.8	✓	North Car
<input type="checkbox"/>	187836022	Erica	LST demo	187836		EPA 180.1	✓	EPA 180.1	EPA 200.8	✓	Kansas
<input type="checkbox"/>	187836021	Erica	LST demo	187836	✓	EPA 180.1	✓	EPA 180.1	EPA 200.8	✓	Washingt
<input type="checkbox"/>	187836020	Erica	LST demo	187836	✓	EPA 180.1	✓	EPA 180.1	EPA 200.8	✓	North Car
<input type="checkbox"/>	187836019	Erica	LST demo	187836	✓	EPA 180.1	✓	EPA 180.1	EPA 200.8	✓	North Car
<input type="checkbox"/>	187836018	Erica	LST demo	187836	✓	EPA 180.1	✓	EPA 180.1	EPA 200.8	✓	North Car
<input type="checkbox"/>	187836017	Erica	LST demo	187836		EPA 180.1	✓	EPA 180.1	EPA 200.8	✓	Tennesse
<input type="checkbox"/>	187836016	Erica	LST demo	187836	✓	EPA 180.1	✓	EPA 180.1	EPA 200.8	✓	North Car
<input type="checkbox"/>	187836015	Erica	LST demo	187836	✓	EPA 180.1	✓	EPA 180.1	EPA 200.8	✓	North Car
<input type="checkbox"/>	187836014	Erica	LST demo	187836	✓	EPA 180.1	✓	EPA 180.1	EPA 200.8	✓	Tennesse

Next

LIMS Solutioning

- Access and Security

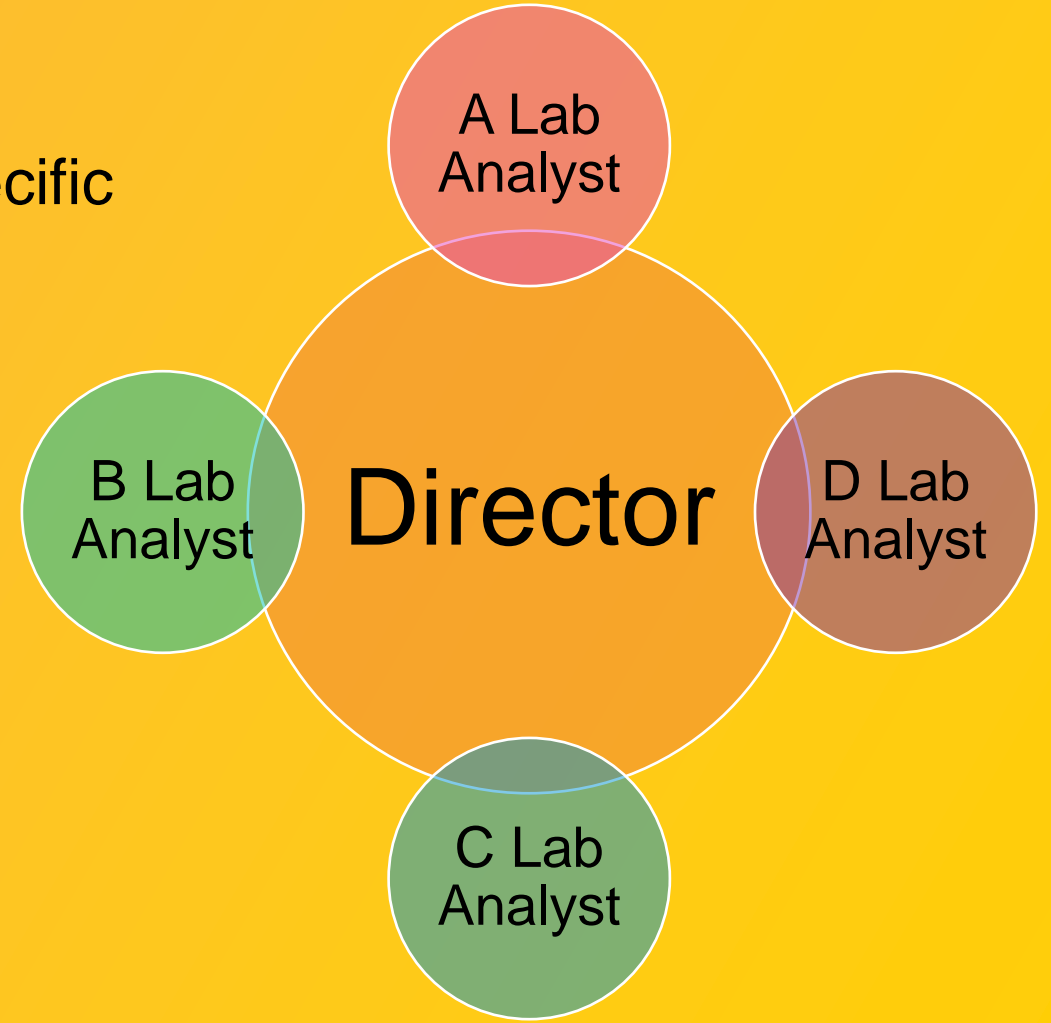
Site Specific

Samples

Filter: All In Progress Completed Reported On Hold for ENV (e)

Lab ID	Sample ID	Client	Workorder		Due
187794001	sfwfdwfs	St. Joseph's Hospital	187794		06/
187778001	Water	CLS Client	187778		05/
187706001	MM01	Coastal Equine Group	187706		04/
187695001	NGS	CLS Client	187695		04/
187683001	544544	CLS Client	187683		04/
187648001	13907	A. Epstein and Sons International Inc. 1	187648		04/
187647001	13911	A. Epstein and Sons International Inc. 1	187647		04/
187538001	444	A. Epstein and Sons International Inc. 1	187538		03/
187525001	NA	CLS Client	187525		02/

My Lab Sites
ENV (e)
Hawaii (H)
Morrisville (M)
Regression_Testing_Lab (RG)
Administrative (a)
Clinical (c)
Host / Master Lab (y)
Work In Progress



LIMS Solutioning

- Customer Service

Facility Configuration

Filter: All Active Inactive

+ Add ✖ Delete ↔ Usage

Val... ↓	Description	Time Zone	Default	Shared	Sort	Status
x	Host / Master Lab	US/Eastern	No	Yes	5	Active
u	Check	18 - US/Eastern	No	No	1	Active
e	ENV	US/Eastern	Yes	Yes	1	Active
QATe	QA TESTING LAB	Canada/Eastern	No	No	0	Active
Q	QASDX	US/Hawaii	No	No	0	Active
M	Morrisville	US/Central	No	Yes	0	Active
H	Hawaii	US/Hawaii	No	Yes	1	Active
BR	Biorepository Labsite	US/Mountain	No	Yes	15	Active

Lab Sites

- Lab Sites
- Holidays
- Working Hours
- System Settings

Container Locations

- Location Types
- Label Formats
- Additional Information

Equipment

- Instrument Classes
- Lighting Conditions
- Component Classes
- Additional Information

Inventory and Shipments

LIMS Solutioning


•Customer Service

Display Template: ENV Template

General Information **Dashboard** Template Aliases Grid Settings Query Access

Dashboard

IMAGE



ENVIRONMENTAL MEASUREMENT SYMPOSIUM
AUGUST 5-9, 2024
GARDEN GROVE, CA

Choose File ems2024-a.jpg
Ideal size of the image is 442px wide

GREETING

Title:

B I U abc x₂ x² Impact x

 <hr/> </>

NEMC conference 2024

MESSAGE

B I U abc x₂ x² (inherited f... x

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Welcome!

Order Template: Environmental

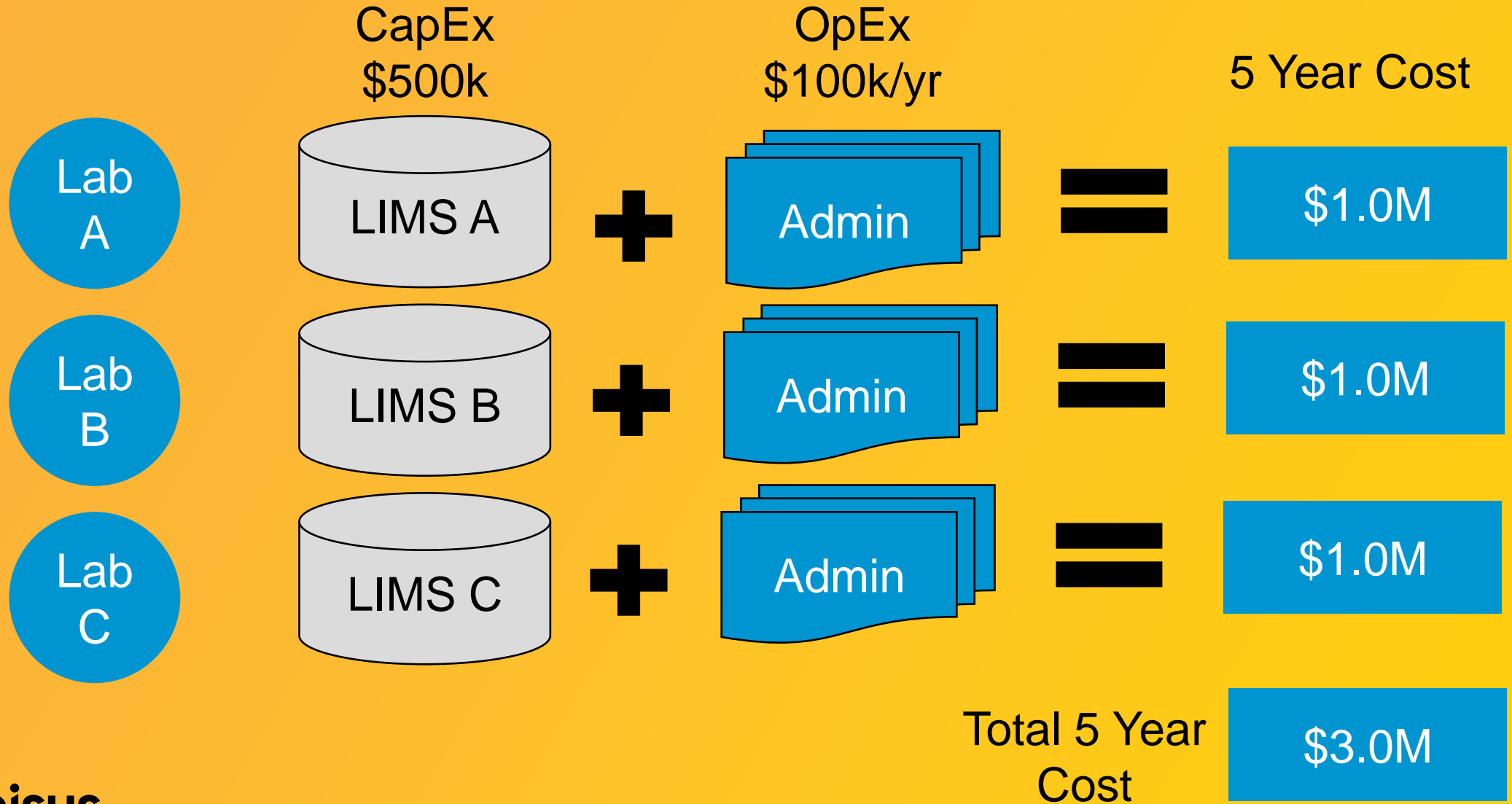
Template name: *
Environmental Default template

Template description:
Environmental Template **Type:** Environmental

Order Fields

Visible	Required	Original Field Name	New
	<input type="checkbox"/>	Select a Client and Profile	
		Client	
		Profile	
	<input type="checkbox"/>	Add Samples and Tests	
		My Workorder ID	
<input type="checkbox"/>	<input type="checkbox"/>	Test reason	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Lab site	
	<input type="checkbox"/>	Samples	
	<input checked="" type="checkbox"/>	Sample Details	
		Line Item	
		My Sample ID	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Collection Site	
		Matrix	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Collector	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Collected	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Description	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Comments	

LIMS Solutioning: Cost



LIMS Solutioning: Cost

CapEx
\$1.0M

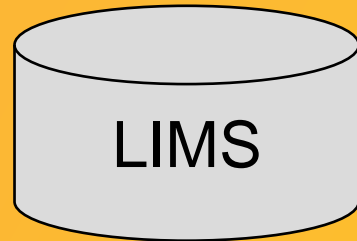
OpEx
\$150k/yr

5 Year Cost

Lab
A

Lab
B

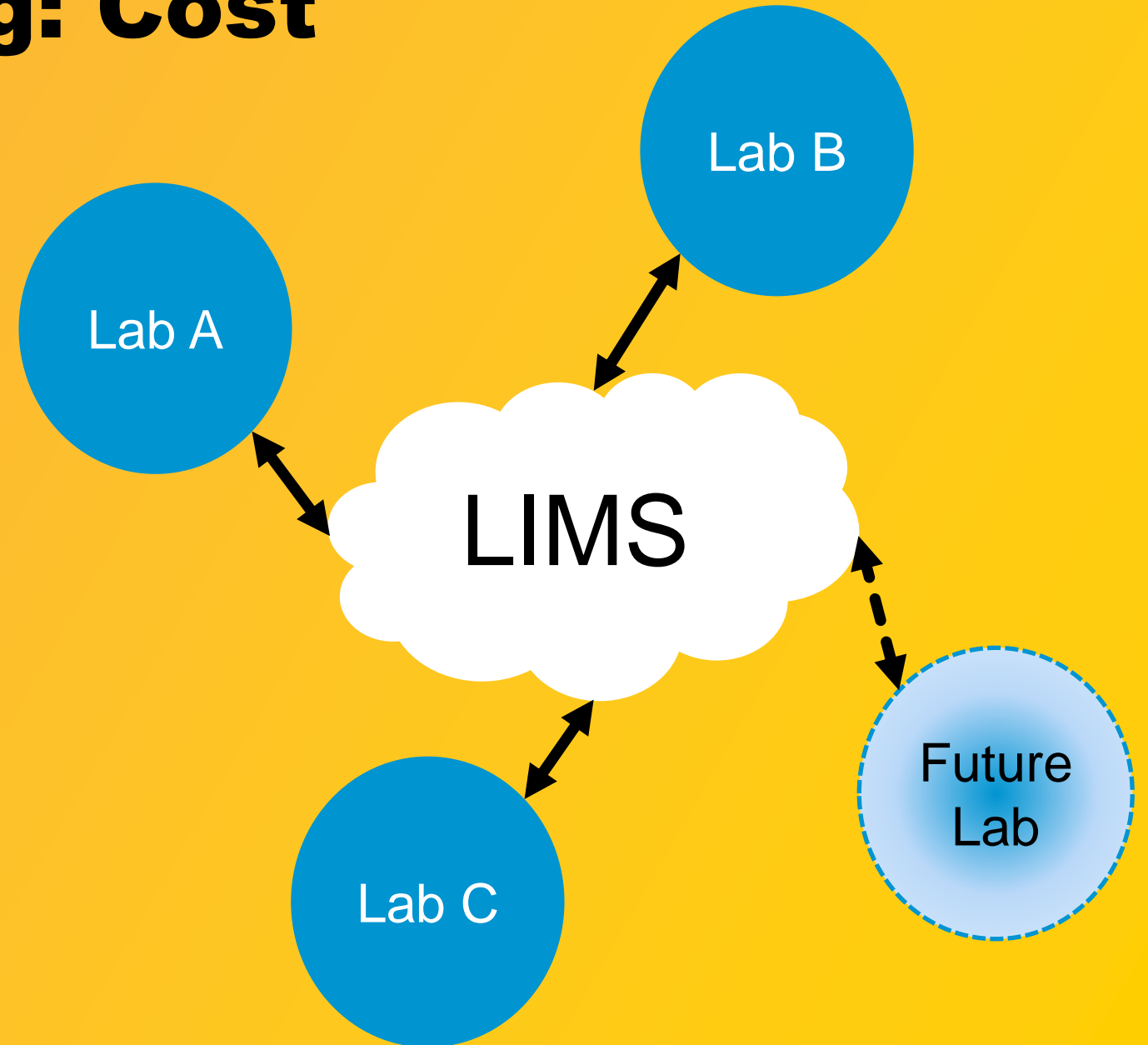
Lab
C



\$1.75M

LIMS Solutioning: Cost

- Cloud-based solutions
- Licensing structure
- Total Time to Value
- Future proofing



Practical Insights

- Organization goals?
- What multi-site model best fits?
- Change agents
- LIMS considerations

Questions?



Thank You!