

Competency Assessment as a Workforce Development Tool at Idaho Bureau of Laboratories

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IDAHO DEPARTMENT OF HEALTH & WELFARE
DIVISION OF PUBLIC HEALTH

Setting: IBL

- ∞ Within Idaho
 - Department of Health and Welfare (IDHW), Division of Public Health (DPH)
- ∞ Idaho Bureau of Laboratories (IBL)
 - State Public Health Laboratory
 - ~40 employees
 - 21 technical staff



Photo used with permission



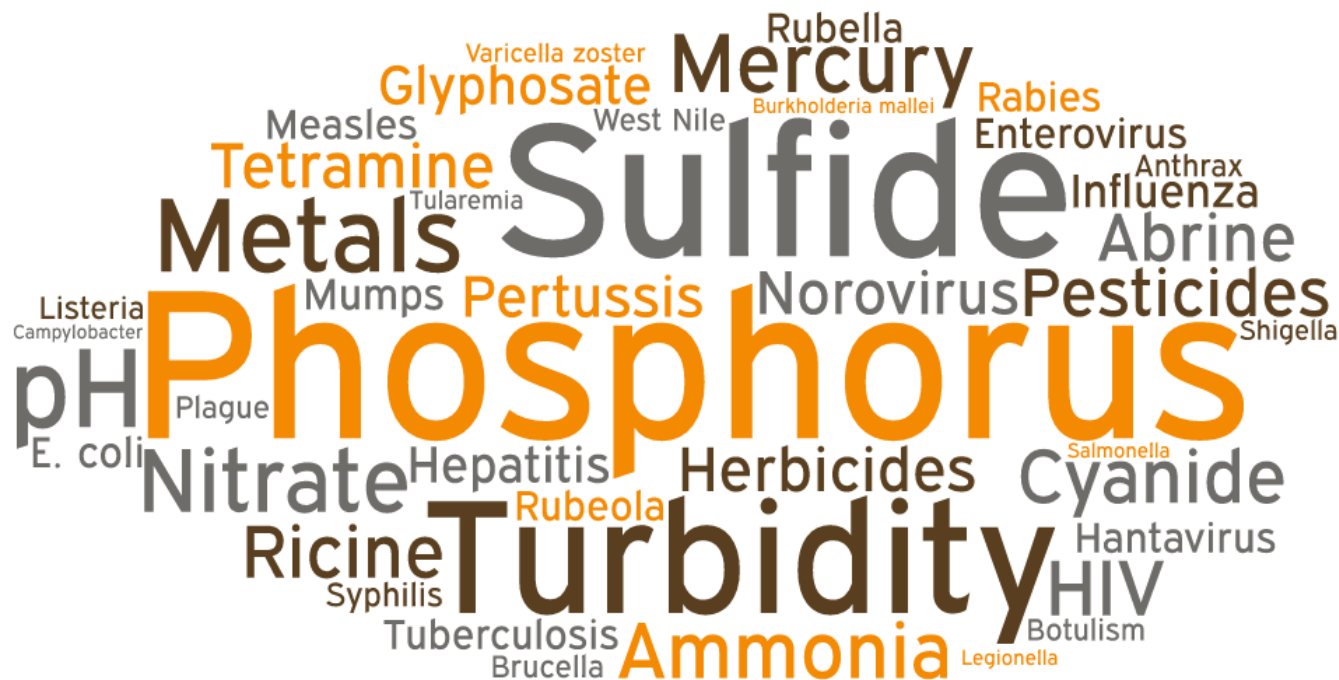
IBL Test Menu

☞ Drinking water

☞ Environmental samples

☞ Clinical samples

☞ Food samples



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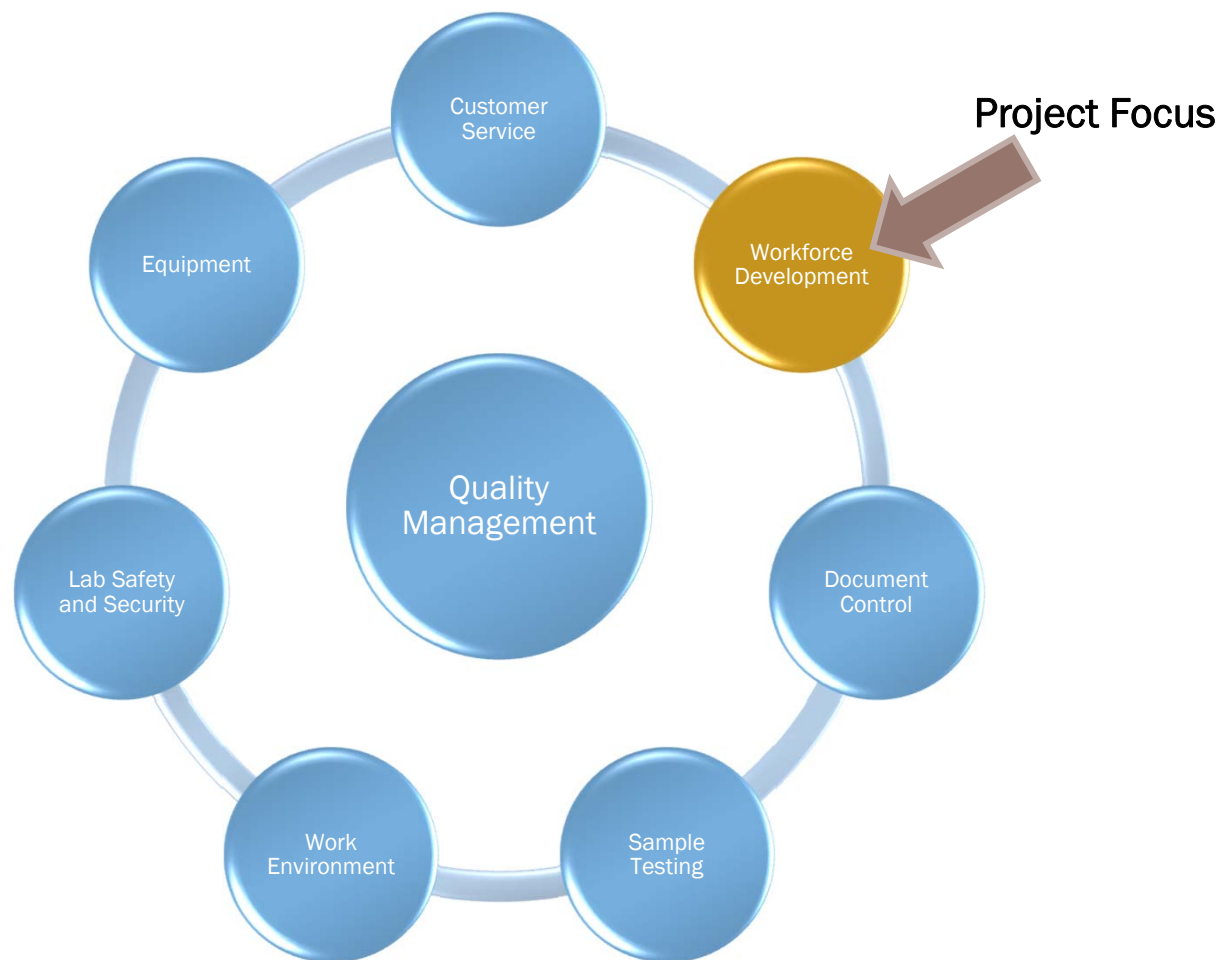
Regulatory Agencies

- ✧ Division of Select Agents and Toxins (DSAT)
- ✧ Clinical Laboratory Improvement Amendments (CLIA)
- ✧ Environmental Protection Agency (EPA)

Quality Management (QM)

- ∞ Continuous effort
- ∞ Measurable improvements
- ∞ Improves efficiency, effectiveness, performance
- ∞ Ultimately improve health outcomes
- ∞ Formal QI documentation
 - Accreditation
 - Increased accountability

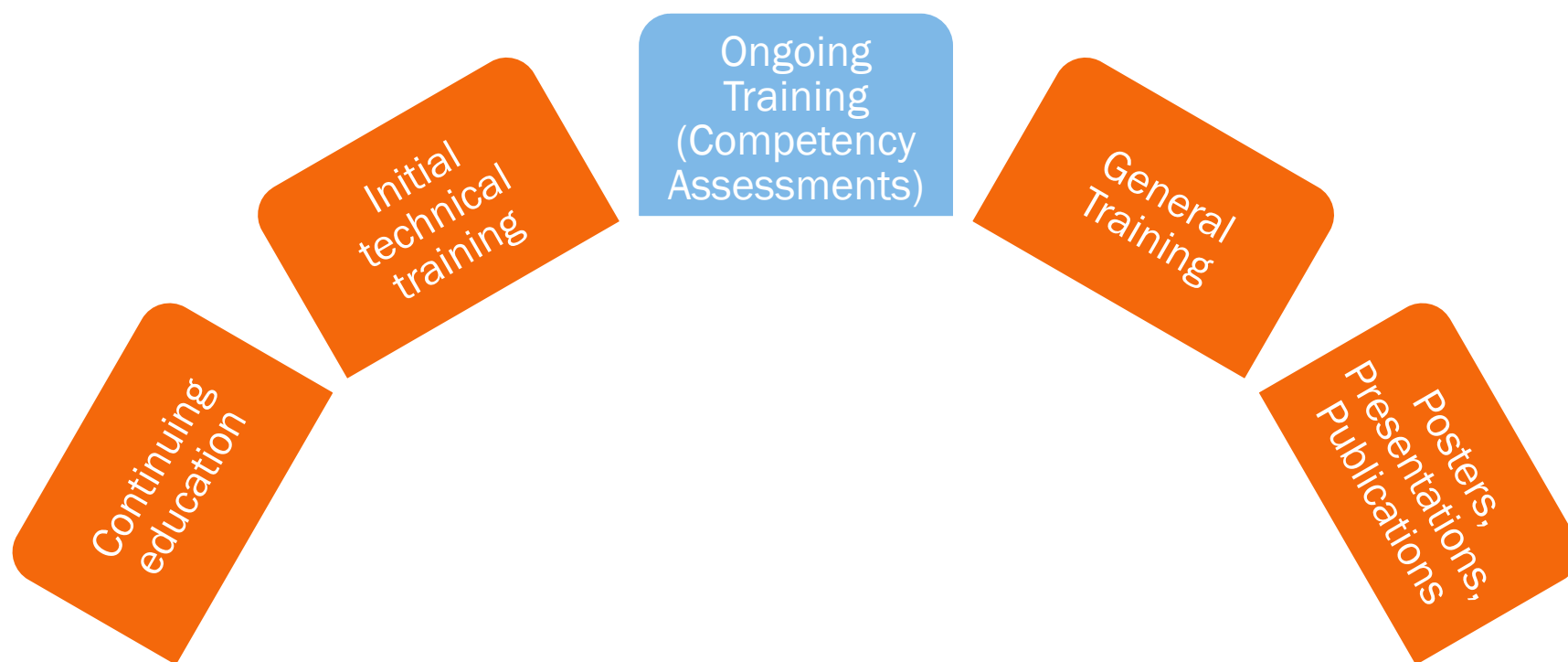
QM Focus Areas at IBL



Workforce Development

- ✧ Ongoing
- ✧ Continuing education
- ✧ Process oriented
- ✧ Institutional knowledge
- ✧ Competency assessments (CAs) for technical staff
- ✧ Develops current and future skills
- ✧ Standardized but flexible

Workforce Development



Laboratory Competency Assessments

- ✧ Verify initial training
- ✧ Required by CLIA
 - 6 months after initial training and annually thereafter
- ✧ Can group based on similar testing methodology
 - Platforms
- ✧ All IBL technical staff to complete

CA Scope at IBL

67 annual
assessments
for 2016

21 technical staff

40 platforms

107 test
methods at IBL



Clinical Section Snapshot

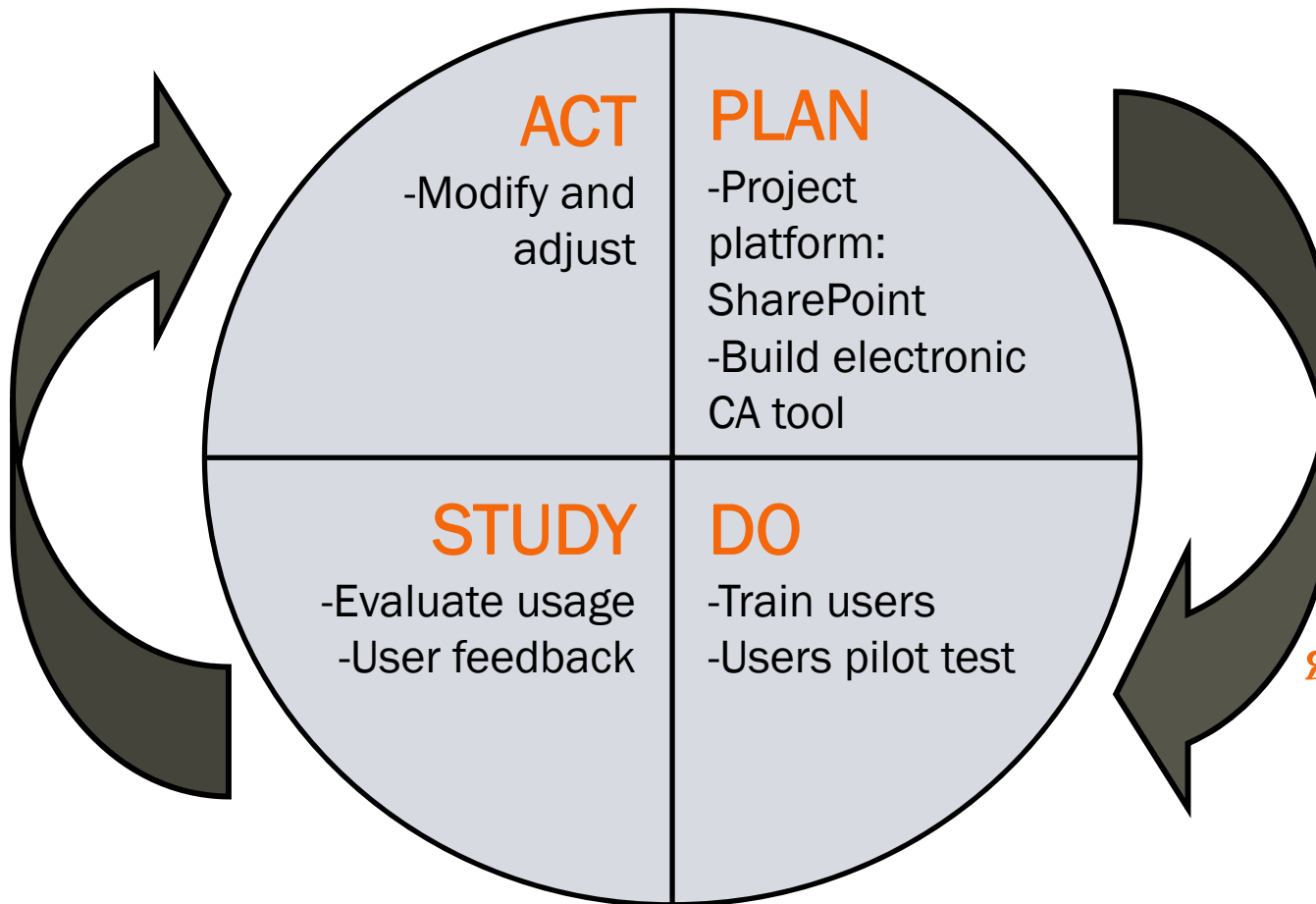
- ✎ Six employees: 5 analysts, 1 manager
- ✎ 33 methods
- ✎ 13 platforms
- ✎ Assessments:
 - Average completion time: 1 hour each X 2 staff = 2 personnel hours
 - Without grouping: 111 assessments/year X 2 = 222 personnel hours
 - With grouping: 48 assessments/year X 2 = 96 personnel hours
 - Grouping is 2.3 times more efficient!

The Problem

- ⌘ Previous process
- ⌘ Large scope
- ⌘ Diverse test menu
- ⌘ Multiple regulatory agencies
 - Different requirements
- ⌘ Impacts staff



The Solution

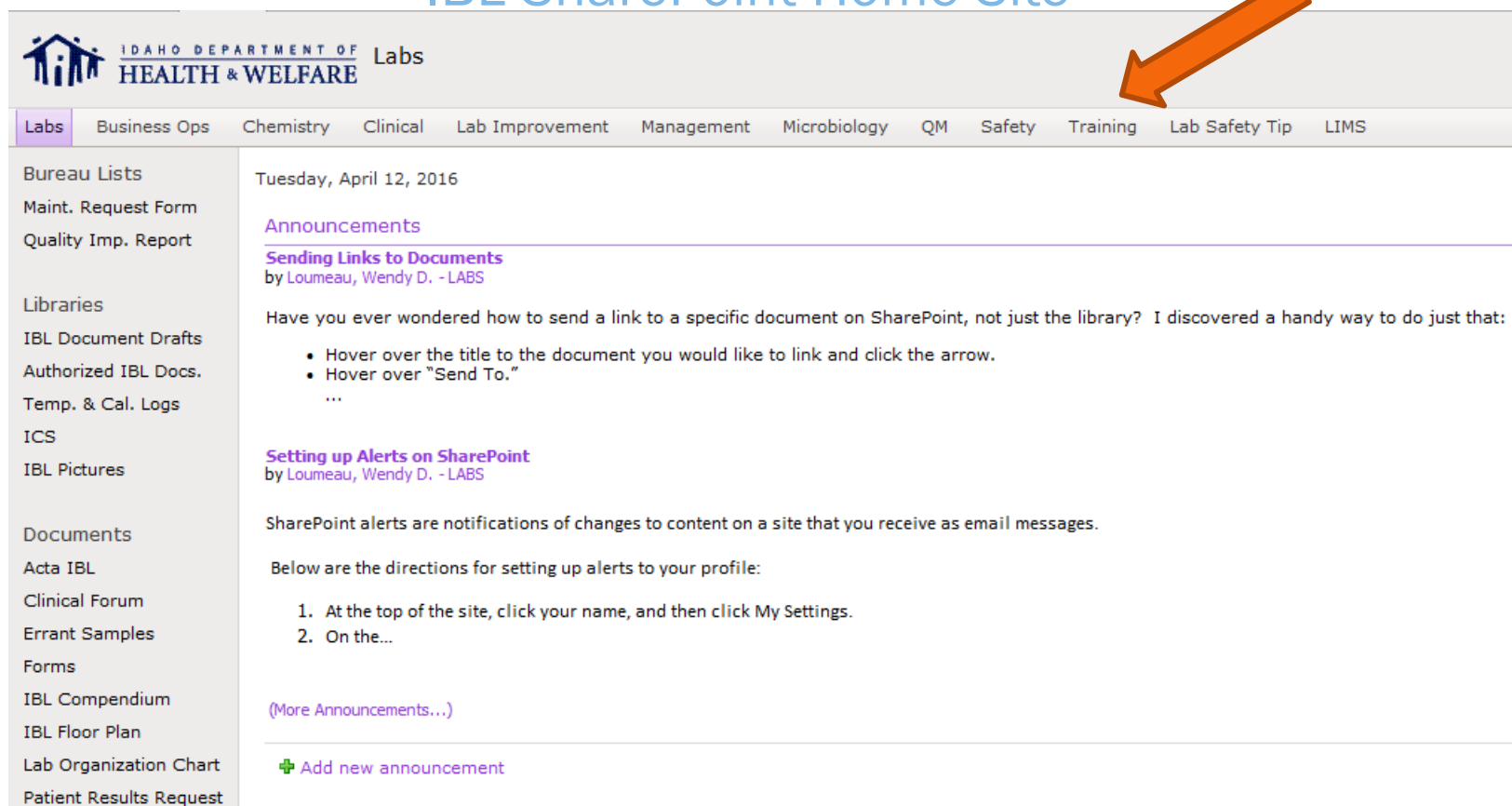


∞ Intent:
simple
process,
improve
compliance



Microsoft SharePoint 2010 at IBL

IBL SharePoint Home Site



The screenshot shows the IBL SharePoint Home Site interface. At the top, there is a header bar with the Idaho Department of Health & Welfare logo and the text "IDaho DEPARTMENT OF HEALTH & WELFARE Labs". Below this is a navigation bar with links: Labs, Business Ops, Chemistry, Clinical, Lab Improvement, Management, Microbiology, QM, Safety, Training, Lab Safety Tip, and LIMS. An orange arrow points to the "Labs" link. On the left side, there is a sidebar menu with categories: Bureau Lists, Libraries, Documents, and Patient Results Request. The main content area displays the date "Tuesday, April 12, 2016" and a section titled "Announcements". The first announcement is "Sending Links to Documents" by Loumeau, Wendy D. - LABS, which discusses how to send links to specific documents on SharePoint. The second announcement is "Setting up Alerts on SharePoint" by Loumeau, Wendy D. - LABS, which provides instructions on how to set up alerts. At the bottom of the announcements section, there is a link to "(More Announcements...)" and a button to "Add new announcement".

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[Labs](#) [Business Ops](#) [Chemistry](#) [Clinical](#) [Lab Improvement](#) [Management](#) [Microbiology](#) [QM](#) [Safety](#) [Training](#) [Lab Safety Tip](#) [LIMS](#)

Bureau Lists
Maint. Request Form
Quality Imp. Report

Libraries
IBL Document Drafts
Authorized IBL Docs.
Temp. & Cal. Logs
ICS
IBL Pictures

Documents
Acta IBL
Clinical Forum
Errant Samples
Forms
IBL Compendium
IBL Floor Plan
Lab Organization Chart
Patient Results Request

Tuesday, April 12, 2016

Announcements

[Sending Links to Documents](#)
by Loumeau, Wendy D. - LABS

Have you ever wondered how to send a link to a specific document on SharePoint, not just the library? I discovered a handy way to do just that:

- Hover over the title to the document you would like to link and click the arrow.
- Hover over "Send To."
- ...

[Setting up Alerts on SharePoint](#)
by Loumeau, Wendy D. - LABS

SharePoint alerts are notifications of changes to content on a site that you receive as email messages.

Below are the directions for setting up alerts to your profile:

1. At the top of the site, click your name, and then click My Settings.
2. On the...

[\(More Announcements...\)](#)

[Add new announcement](#)

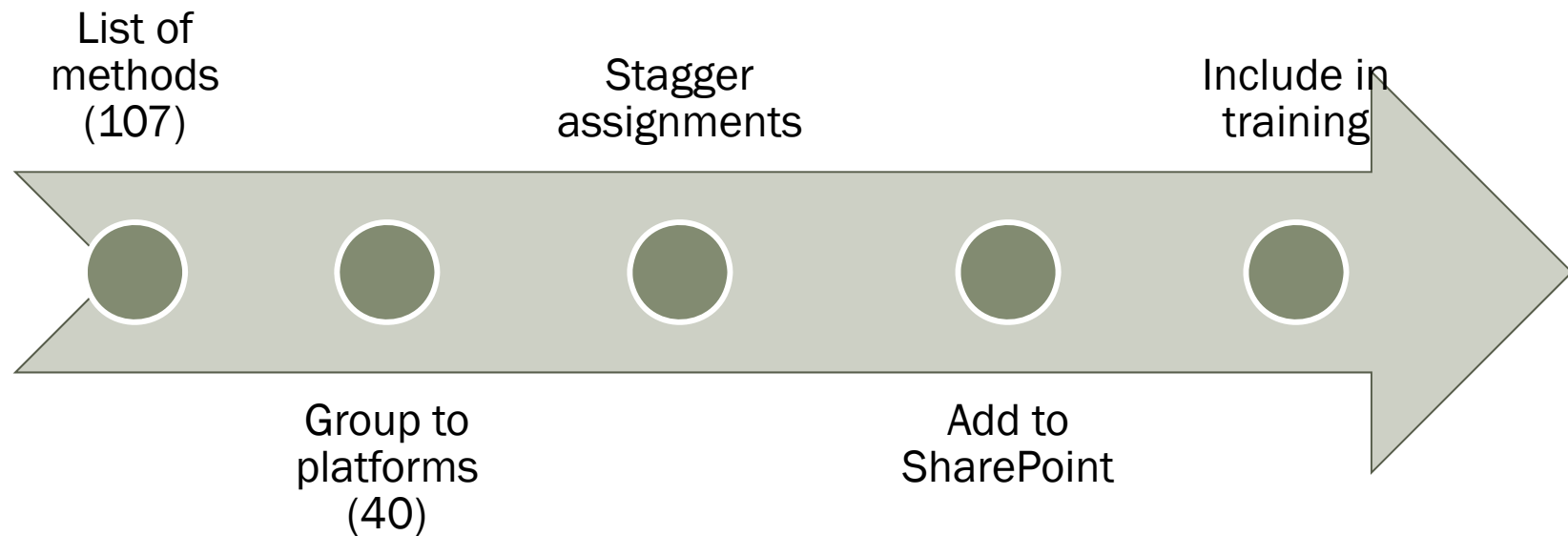


Step #1: Build tool

1. Schedule annual assessments
2. Paper-based competency assessment (CA) form
3. Electronic documentation and approval process
4. User-friendly interface



Step #1: Outline Annual CA Schedule



Step #1: Paper-Based CA Form

- ∞ 1 page
- ∞ Same for all technical assessments
- ∞ To be electronically stored when complete



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Idaho Bureau of Laboratories Competency Assessment

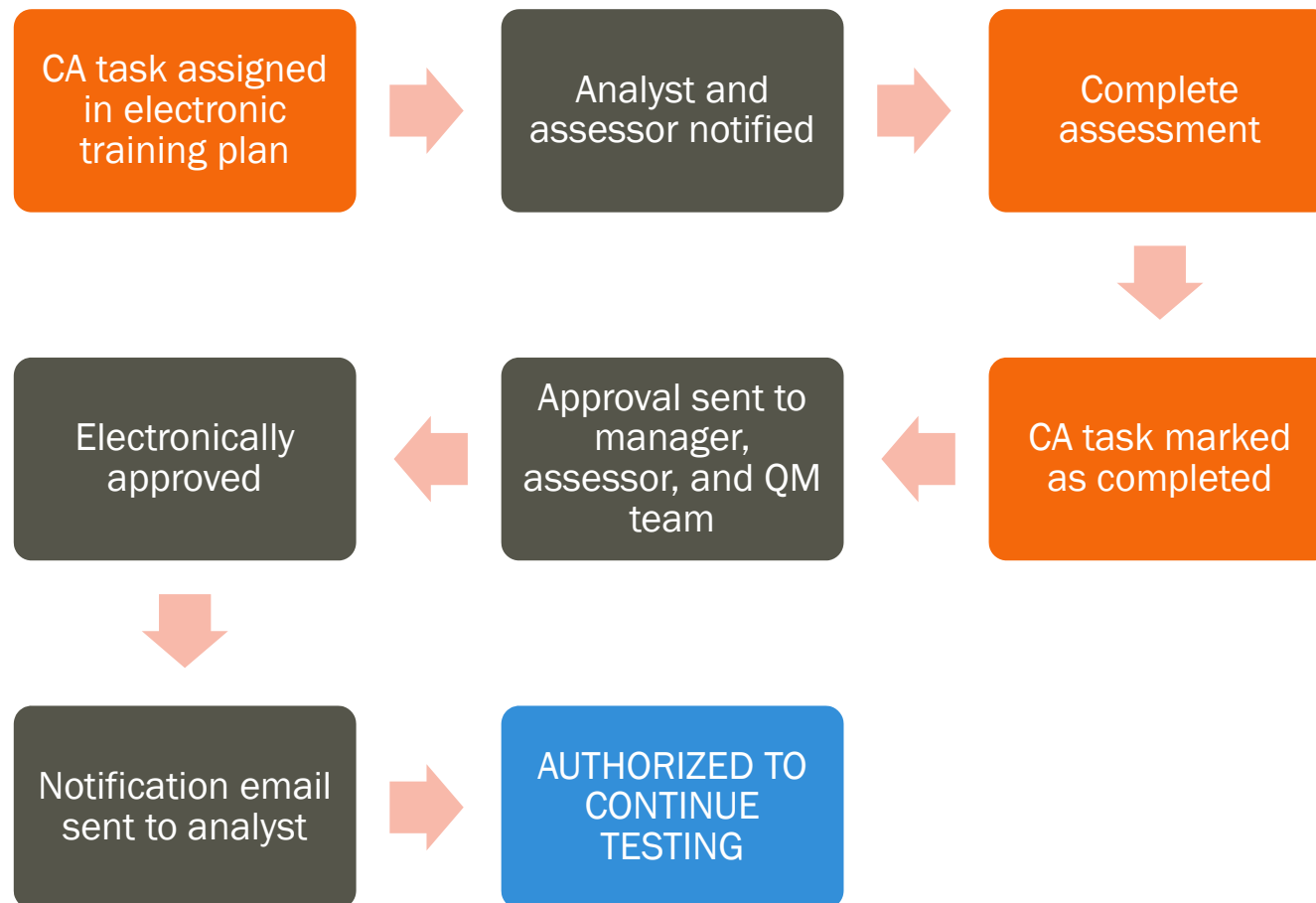
Platform: _____ SOP: _____

Analyst name: _____ Assessor name: _____

Date completed: _____ Type of assessment: 6 month / Annual Section: Clinical / Chemistry / Microbiology

	Notes	Meets standard?*
Pre-analytic (i.e., sample handling and storage, LIMS management)		
• Sample/LIMS – direct observation (1)		Y / N / NA
Analytic (i.e., sample preparation and testing to test result posted in LIMS)		
• Preventative maintenance logbook – documentation review (3)		Y / N / NA
• Instrument maintenance and function checks – direct observation (4)		Y / N / NA
• Sample preparation and testing – direct observation (1)		Y / N / NA
• Intermediate test results – documentation review (3)		Y / N / NA
• Review and record test results – direct observation (1)		Y / N / NA
Post-analytic (i.e., tasks performed after test result posted in LIMS)		

Step #1: Electronic documentation and approval



Step #1: List Feedback

“...it’s helpful to be able to quickly look it up at your computer rather than sift through binders...”



Step #1: User-friendly Interface

- 🌀 To do list filters tasks assigned to user
- 🌀 Chronological order
- 🌀 Assigned tasks not completed, status symbol, and countdown

My Competency Assessment Tasks

☐ Edit

Analyst PCN	SOP Title	Platform	☐ Analyst	☐ Assessor
4708	SM 9215B Heterotrophic Plate Count	Enumeration by Plate Count	Eck, Russell	Voermans, Robert L.

My Competency Assessment Tasks

☐ Edit	Analyst PCN	SOP Title	Platform	☐ Analyst	☐ Assessor	Status	Time Until Due
	4708	SM 9215B Heterotrophic Plate Count	Enumeration by Plate Count	Eck, Russell	Voermans, Robert L.	Not Started	30d 11h
	4708	SM 9221 B, E, & F Multiple Tube Fermentation for the Detection or Enumeration of Total Coliform, Fecal Coliform and Escherichia coli	Multiple Tube Fermentation	Eck, Russell	Voermans, Robert L.	Not Started	30d 10h
	4708	Defined Substrate (Colisure ®) for the Simultaneous Detection of Total Coliform and Escherichia coli	Defined Substrate (Environmental Samples)	Eck, Russell		Not Started	91d 10h

Add new item

Status	Time Until Due
Not Started	30d 11h
Not Started	30d 10h
Not Started	91d 10h

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Step #1: Interface Feedback

“I love that I can look up and see everything pending for the whole year in one screen.”
–CA user

“We have a plan and we can see the plan.”
–CA user

“My competency assessment task progress chart is a great function as an assessor and analyst.”
-CA user



Step #2: Train Users and Evaluate Usage

1. Job aids for users
2. Training
3. Evaluate assessment completion
4. Electronic survey to users for feedback
5. Interviews for feedback



Step #2: Develop Job Aids for Users

Staff Reference Guide for Competency Assessments

1 Schedule

6 Month Assessment

Enter initial training in Training Records list

Click *Add* on 6 Month Review Task => Click *Edit icon* => Complete all fields in Competency Assessment Assignment section => Click *Save* => Complete fields for Training Record => Click *Save*

Annual Assessment

Assessments scheduled by Section Manager and added by Business Analyst in CA Tasks list for upcoming year

Start date is first day of assigned month and due date is last day of assigned month

2 Complete

Upcoming assessments appear on Training home page with status indicator and countdown (red if overdue, green if not overdue) to the due date.

Emails sent to **analyst** and **assessor** on start date, due date, and every two weeks thereafter if not completed

Analyst and **assessor** schedule date and time for competency assessment

Assessor completes competency assessment form, saves in Competency Assessment Forms document library, and notifies **analyst**.

3 Document

Analyst edits Competency Assessment Task

Training home page => My Competency Assessment Tasks => Click *Edit icon* => Change *Status* to *Completed* => Enter Completion Date => Check *Run?* On Create a training record => Click *Add Link* on CA form field to attach CA form => Select file => Click *OK* => Click *Save*

Training Record automatically created

Definitions

Catalog list: a listing of trainings and SOPs offered at IBL; includes title, category, platform, and description of training

Competency Assessment (CA) Tasks list: a repository for scheduling and tracking completion of competency assessments; electronic reminders are sent to analyst and assessor on the first day of the scheduled month, the last day of the scheduled month, and every 2 weeks thereafter if assessment has not been completed; titled My Competency Assessment Tasks on Training home page

Training Records list: a repository for entering and viewing training records; trainee/analyst adds records for technical trainings; electronic approval requests generated when Overall Grade equals Pass; titled My Training Records on Training home page

Competency Assessment Forms document library: a library that contains the template for competency assessment forms and houses completed forms

Training home page: landing page for training information for IBL staff; shows assigned tasks for the user, the user's training records, and pending approvals assigned to the user

Platform: a subcategory within the training category

Approval: assigned users are electronically sent requests to approve records; approval authorizes staff to perform test or procedure

6 month competency assessment: required for all technical sections; must be performed 6 months after initial demonstration of competency for each test

Annual competency assessment: required for all technical sections; performed annually for each platform

Step #2: Train Users

1-hour training

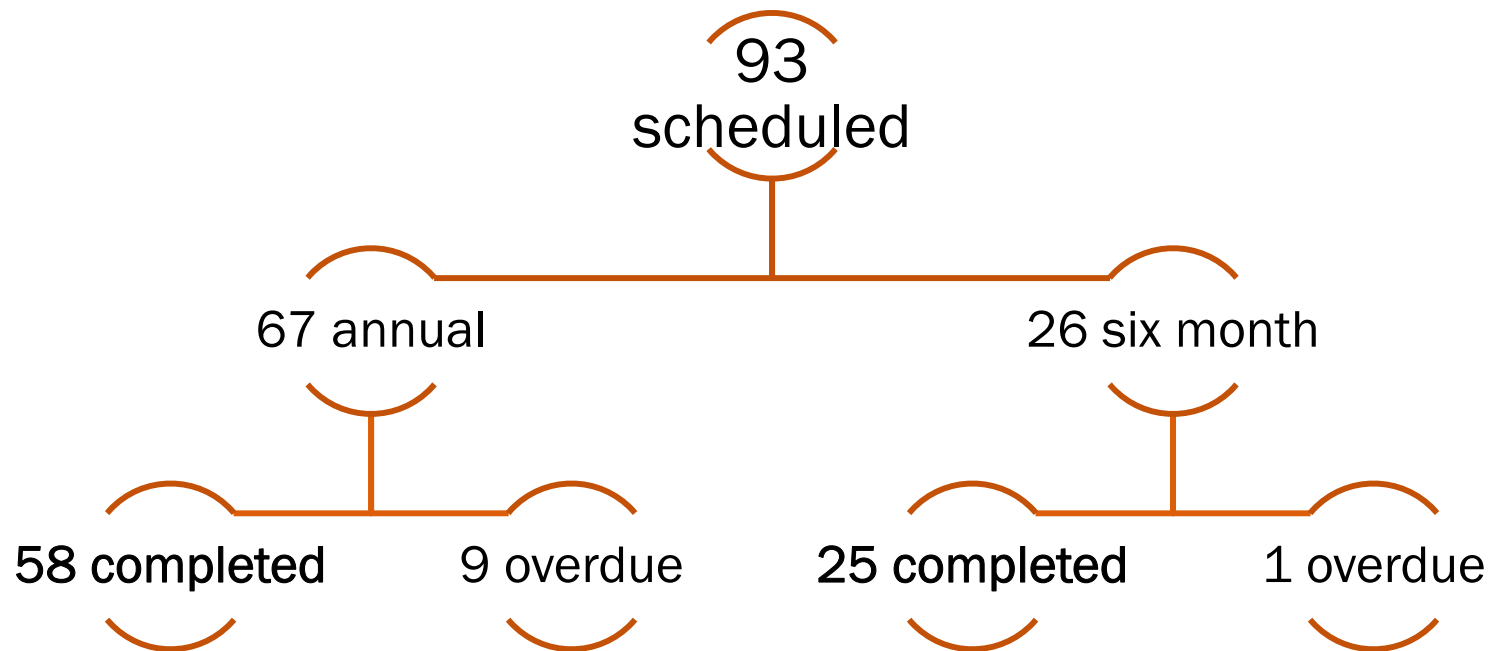
Objectives:

- ☞ Describe 2016 changes to training database
- ☞ Distinguish the differences between initial training, 6 month CA, and annual CA and documentation
- ☞ Demonstrate process for documenting CAs



Step #2: Evaluate Assessment Completion

Scheduled Assessments, January to December 2016

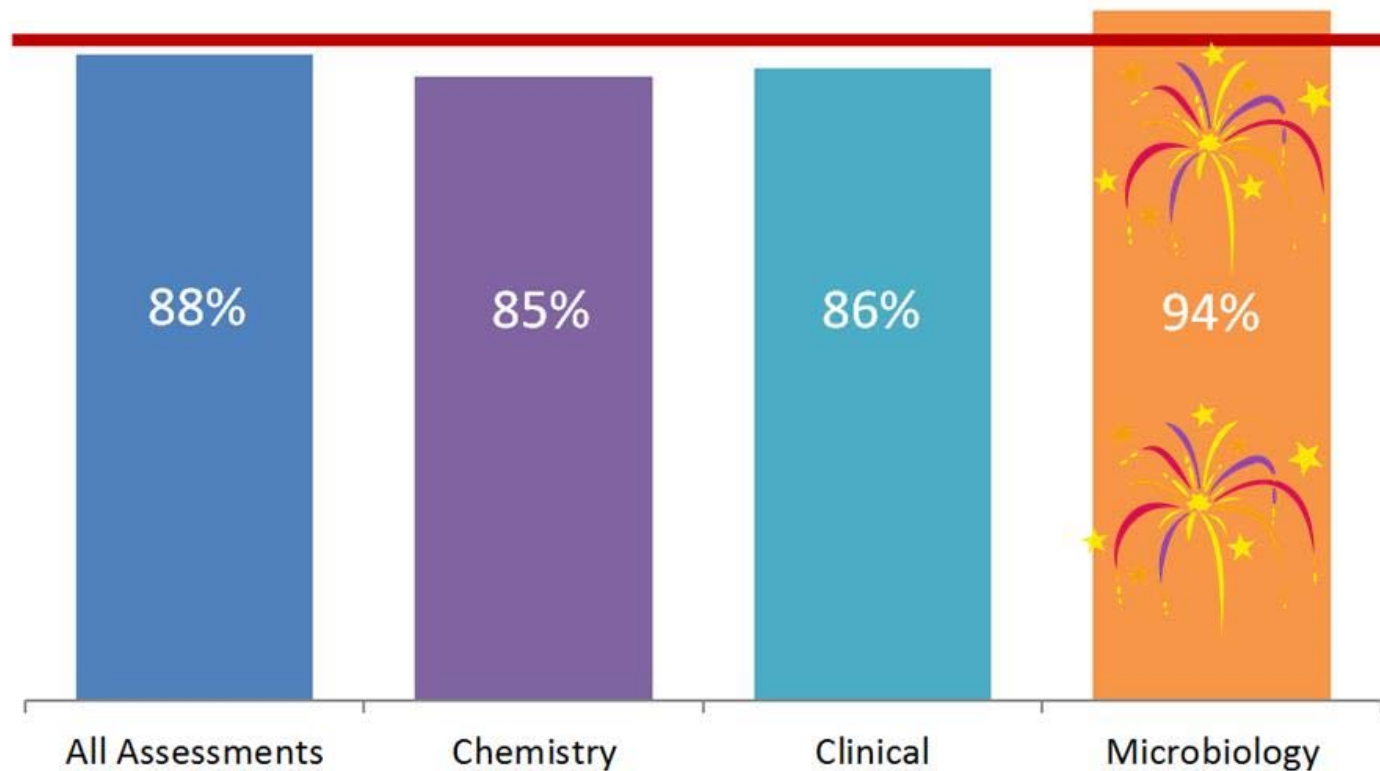


Overall: 89% completion rate in the first year



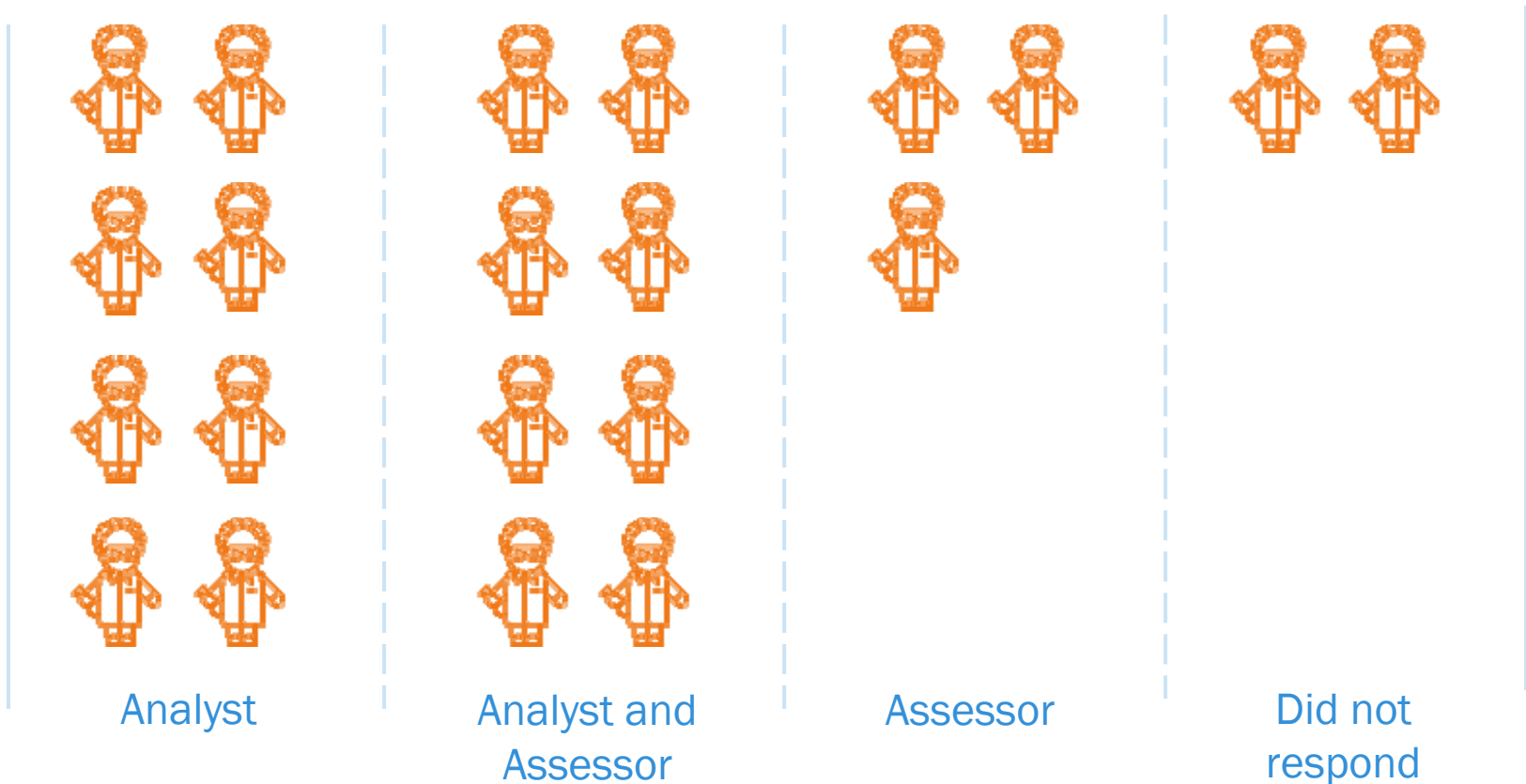
Step #2: Evaluate Assessment Completion

2016 Completed Competency Assessments



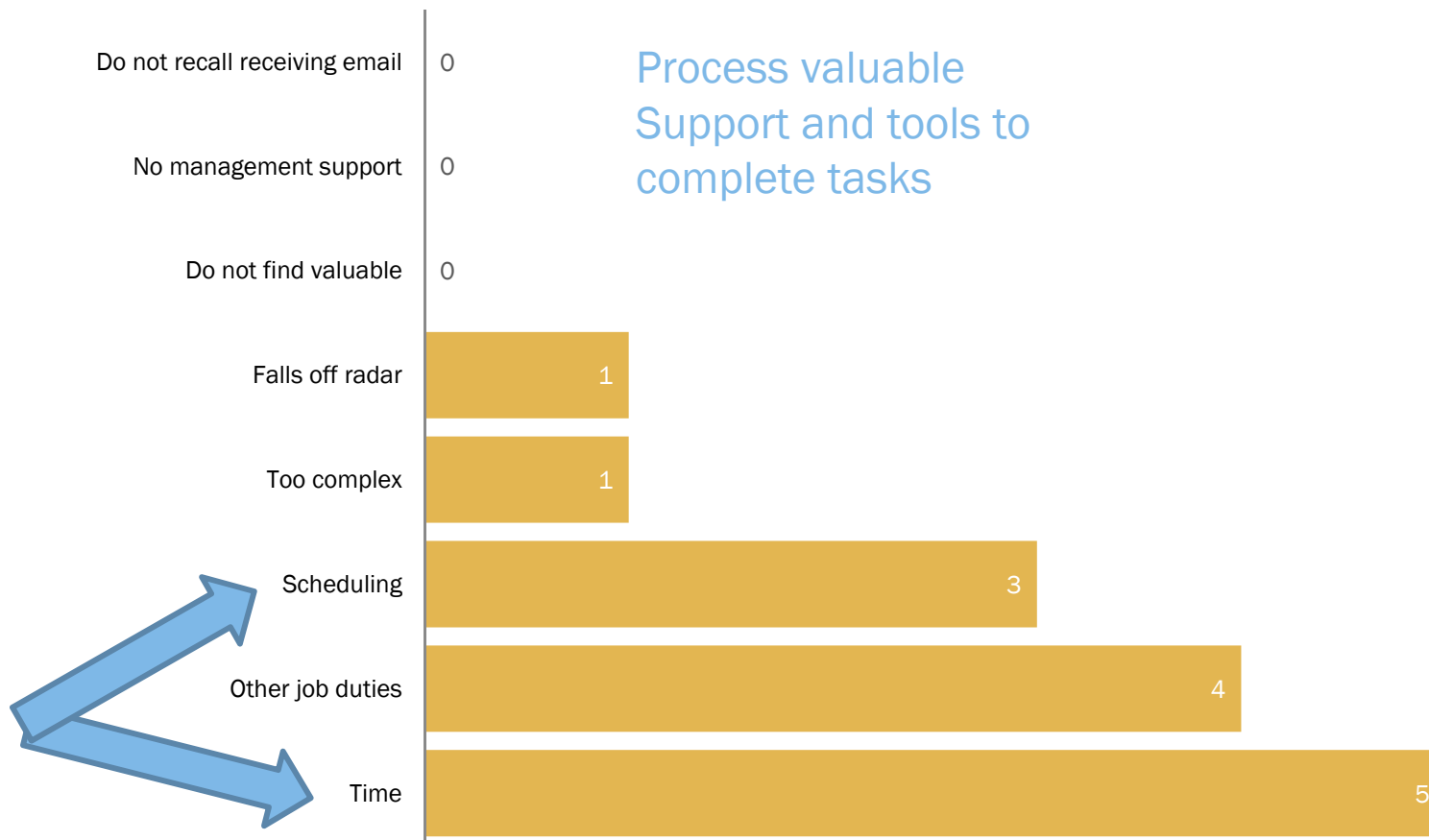
Step #2: Electronic Survey for Feedback

Responsibilities of pilot users



Step #2: Evaluate Assessment Completion

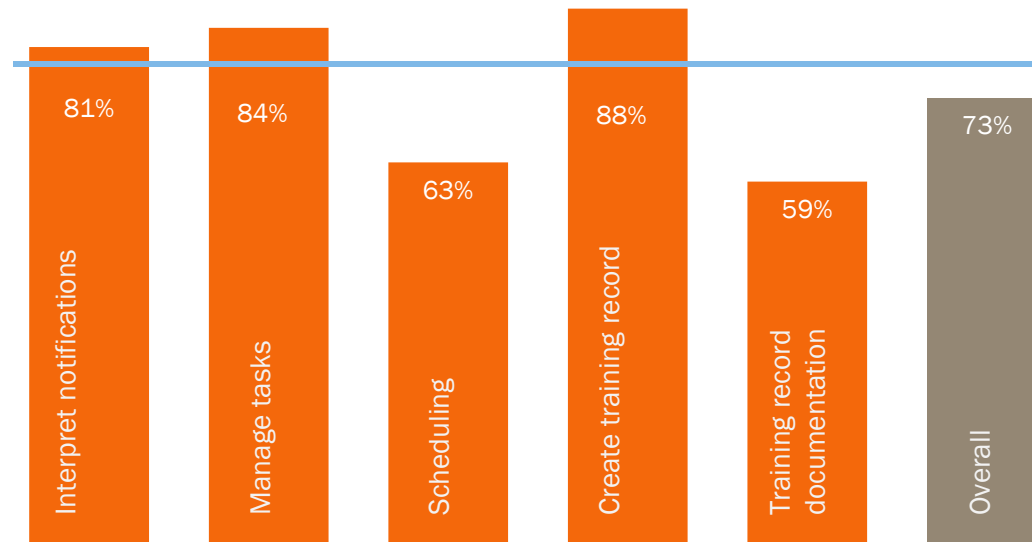
Reasons for Overdue Assessments



Step #2: Electronic Survey for Feedback

- Survey collected data in early 2016
- Target of 80% determined from IBL managers

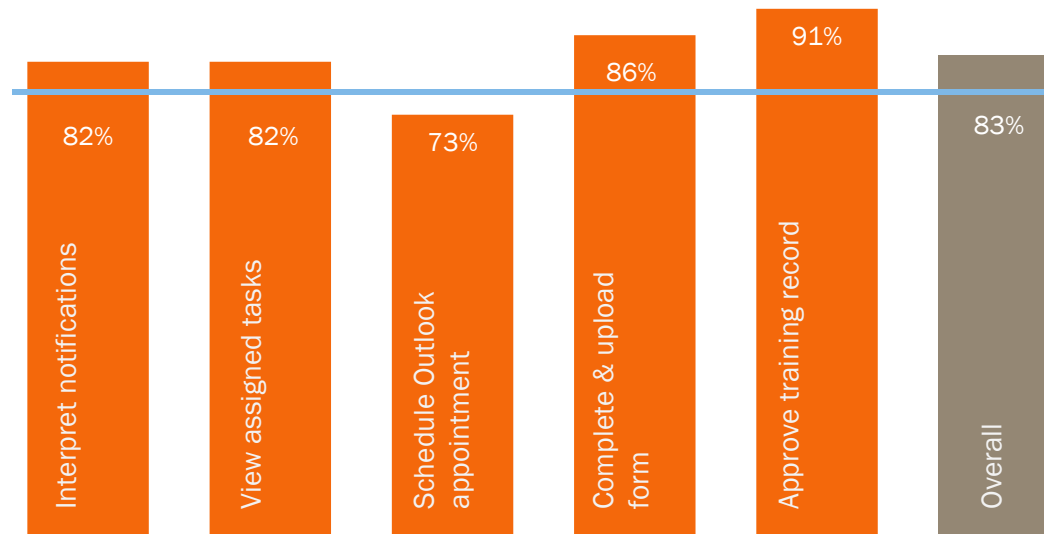
Analyst "Very Comfortable" in Tasks



Step #2: Electronic Survey for Feedback

🌀 Target of 80% determined from IBL managers

Assessor "Very Comfortable" in Tasks



Step #2: Key Informant Interviews

∞ March 2016

∞ 6 interviews

- o 1 analyst only
- o 3 analysts and assessors
- o 2 managers and assessors

∞ 10 questions



Step #2: Interviews: Previous process

“It was made **way too complicated** and a **huge hassle** so we never followed up with it.”

-CA user

“Most annual assessments were **behind schedule.**”

-CA user

Competency assessments were “6-8 pages, clunky, **inefficient.**”

-CA user



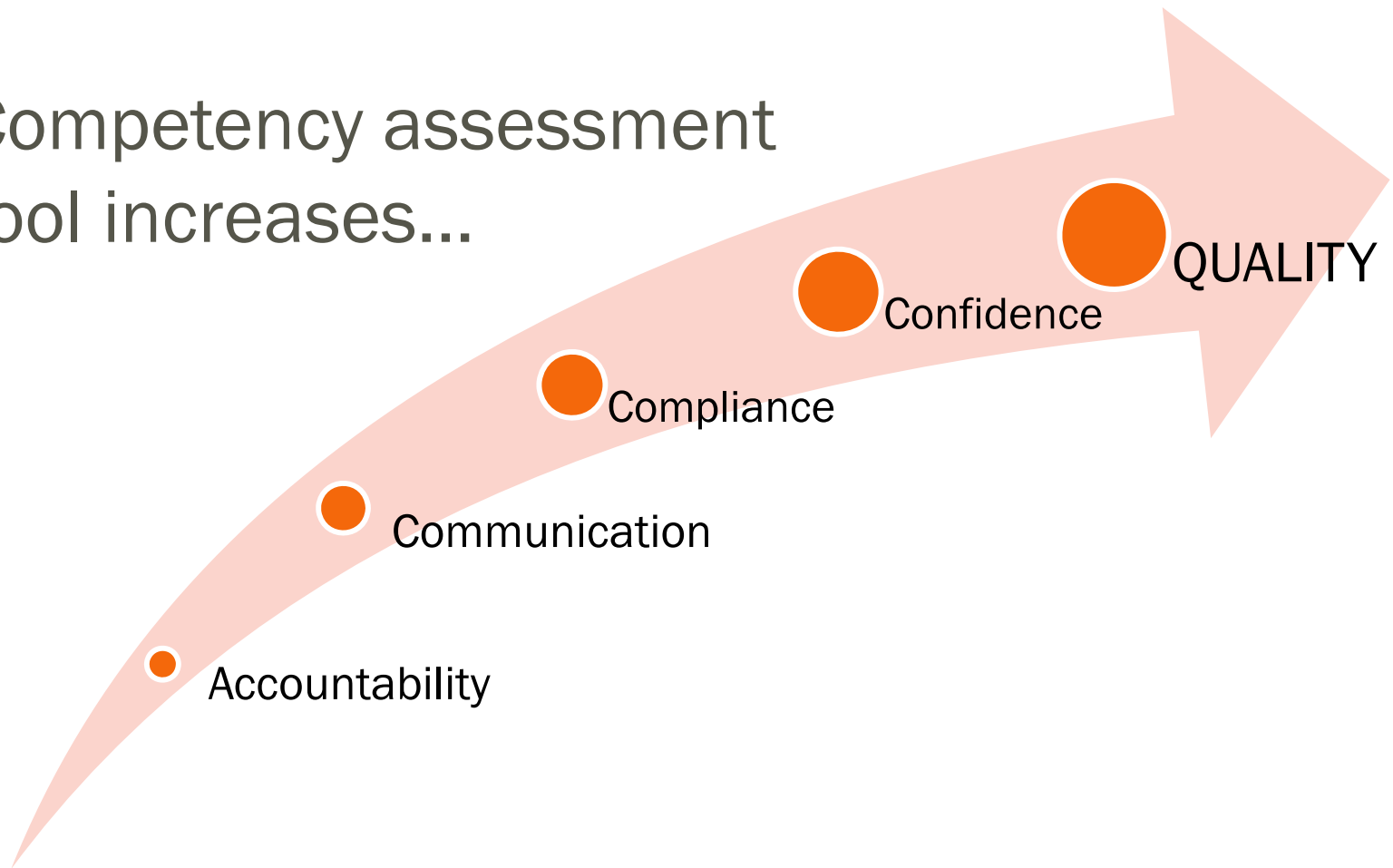
Step #2: Interviews: Current process

helpful
streamlined • user friendly all-inclusive
simple
efficient consistency
advance notification
automated
clear paperwork
structured



Step #2: Interviews: Impact

Competency assessment
tool increases...



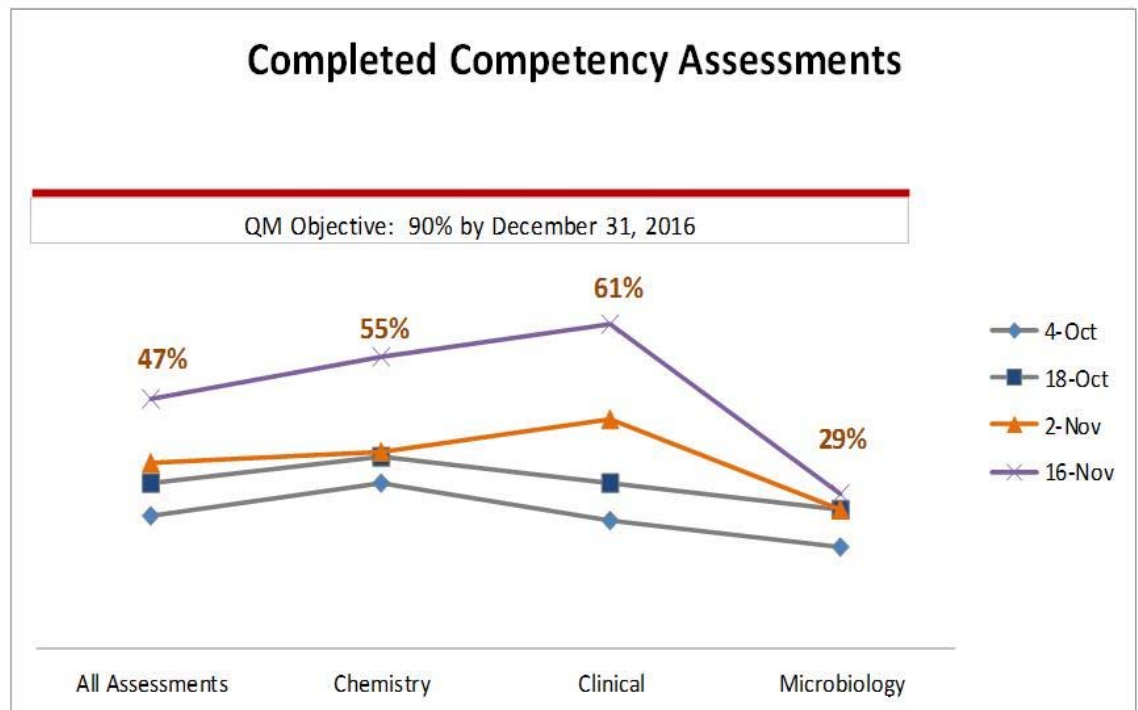
Step #2: Interviews: Trends

- ☞ Automatic email reminders
- ☞ Procedure drift
- ☞ More consistent completion
- ☞ Set schedule for the year
- ☞ Learning curve



Step #3: Lessons Learned

- Management support
- Establish goal and make it known
- New process = training + ongoing support
- Frequent reminders
- Monthly updates to lab with visuals



Significance

- ∞ In compliance with CLIA regulations
- ∞ March 2016 (current process in place): no deficiencies
- ∞ Increased efficiency
- ∞ Reduction of variability in end product
- ∞ Increased productivity
- ∞ Illuminate systemic issues
- ∞ Improved employee morale, confidence, and retention



Where Do I Start? 6 Steps

1. Meet with key players and/or impacted staff
2. Reach out to other resources
3. Build tool/project/process
4. Create training materials
5. Train users
6. Provide ongoing support

Solicit feedback in all stages!

1. Meet With Key Players and Impacted Staff

- ✎ Get management support
- ✎ Send questions prior to meeting, if possible:
 - What is your current process?
 - What is your goal for this project?
 - How will it improve/impact business practices?
 - Who will be impacted?
 - What components do you need?
 - What components do you want?
 - Obtain flowchart/diagram from requester, if possible.
- ✎ Determine scope of project: time commitment for development and maintenance, applicability, timeline (expectations vs. reality)



2. Reach Out to Other Resources

- ☞ Has this or something similar been done?
 - If so, can I have access to view it?
- ☞ Who is available/has interest to assist?
- ☞ Can something that has already been built be adapted for this project?

3. Build Tool/Process/Process

- ∞ Test independently
- ∞ Test with other users
- ∞ Demo to key players and impacted staff
 - o What changes are needed?
- ∞ Update accordingly
- ∞ Consider the end user
- ∞ Engage early adopters to pilot process

4. Create Training Materials

- ✎ PowerPoint presentation (recommended)—demo not recommended for training
- ✎ Staff Reference Guide (e.g., flowchart; 1 page handout for staff to take to desks)
- ✎ Hands-on component/homework assignment (users need to test to feel comfortable)
- ✎ Add instructions/support guide for backup staff



5. Train Users

- ∞ Offer multiple training sessions if possible
- ∞ Provide timely support
- ∞ Record feedback (can improve future versions, opportunities to improve training, etc.)

6. Provide Ongoing Support

- ✎ Respond to inquiries quickly (screenshots with instructions often helpful for future reference)
- ✎ Check for maintenance needs monthly or quarterly (set up tasks/reminders)
- ✎ Revisit annually (set up tasks/reminders)
 - Is it still relevant?
 - What needs to be updated?

Conclusion

- ✧ CA tool beneficial
- ✧ CAs to benefit individual analysts and overall quality of testing—Workforce Development and QM
- ✧ Identified areas for improvement
- ✧ Users generally positive and receptive to change
- ✧ Solicit feedback from users
- ✧ Centralized system streamlines processes
- ✧ Planning is critical!



Questions?

∞ 46 ∞

Thank you for your time!



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