SEAD

HEALTH STRATEGY INSIGHT IMPLEMENTATION

"RTCQI+"

Rapid Testing Quality Improvement

TA meets

Digital Transformation

ASLM

AFRICAN SOCIETY FOR LABORATORY MEDICINE

JULY 2022

SEAD

University of Cape Town • iYunivesithi yaseKapa • Universiteit van Kaapstad
SPES BONA

Acknowledgements - SEAD leadership

Acknowledgements - funders

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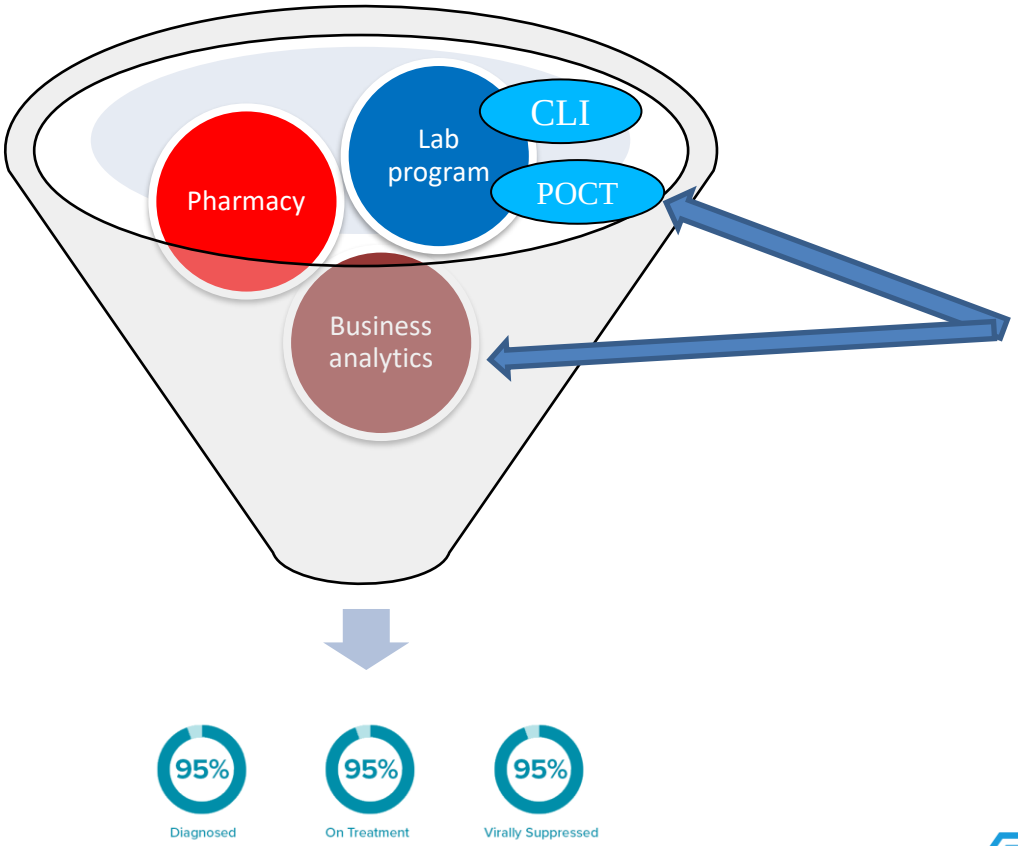
SEAD

Who are SEAD Consulting?

- Niche public health consultancy – est. 2005



RTCQI+

"RTCQI meets digital transformation"

1. Journey
   - 12 years of improving HTS quality

2. Describe the move to "RTCQI+"
   - The importance of digital health
   - From traditional approach to seamless digital platform

3. RTCQI+ and Health Systems Strengthening:
   - Digitally-assisted TA tools
   - Distance-based learning tools
   - RTCQI+ given as a model – platform available for many HSS programs

Why did SA need to address HIV Rapid Test QI?

Integrated Clinical- Laboratory System Interface Analysis:

Analysis Findings: HIV Testing

August 2010

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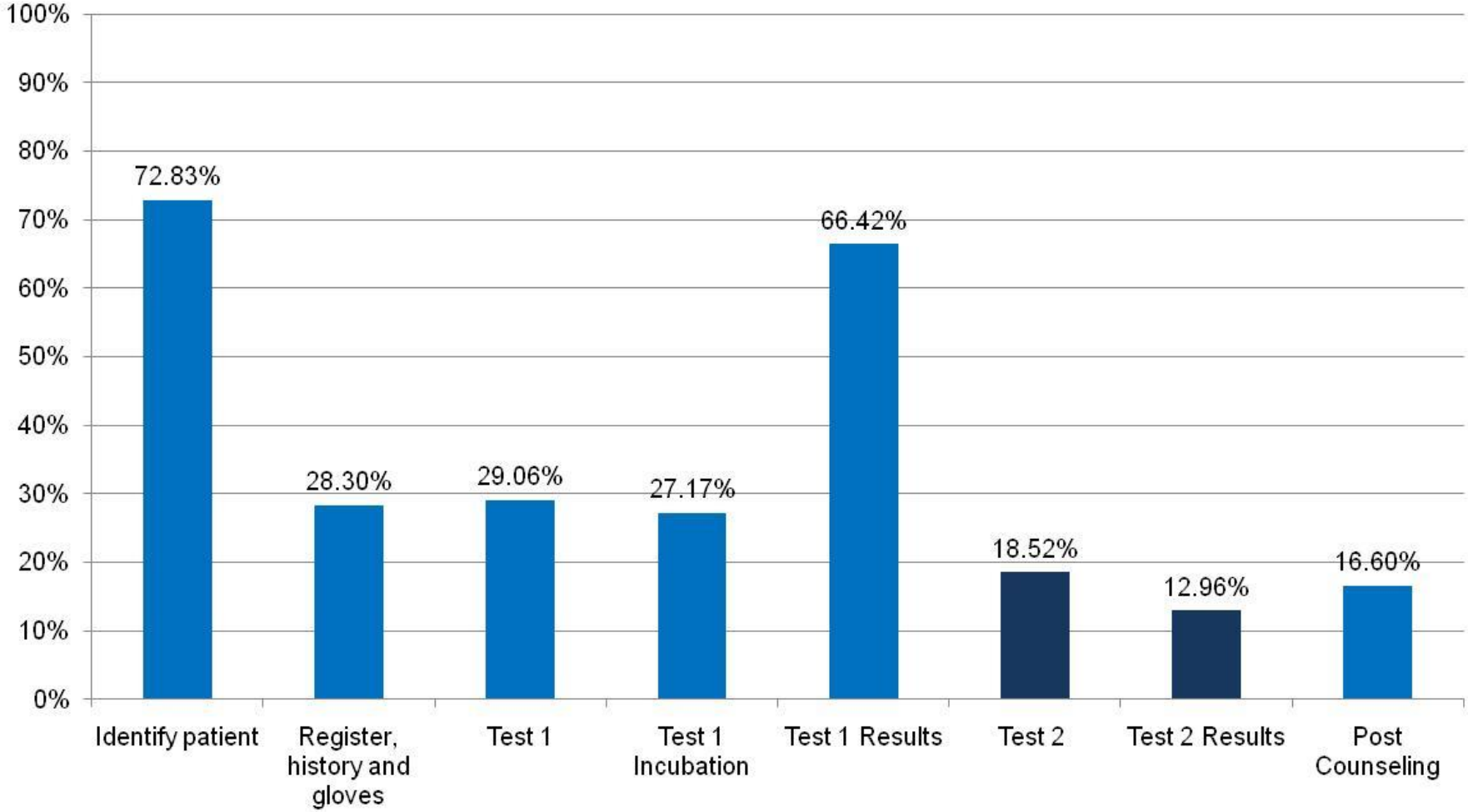
Strategic Evaluation, Advisory & Development Consulting (Pty) Ltd

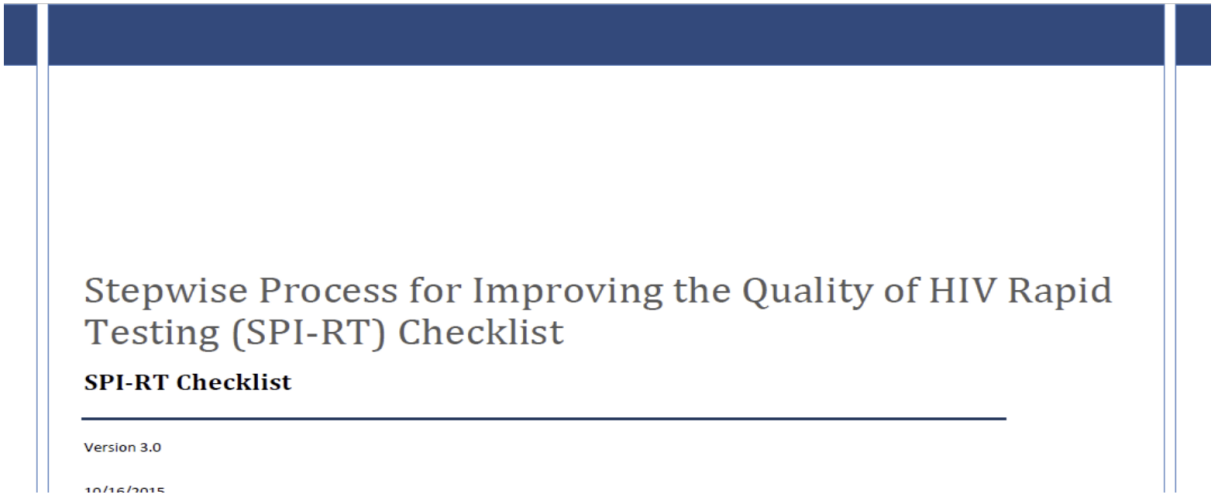
SOUTH AFRICA AND THE UNITED STATES
WORKING IN PARTNERSHIP

HIV VCT Rapid Test Process Compliance
- at Activity Group level (National)
Test 2 Analysed - when actually performed



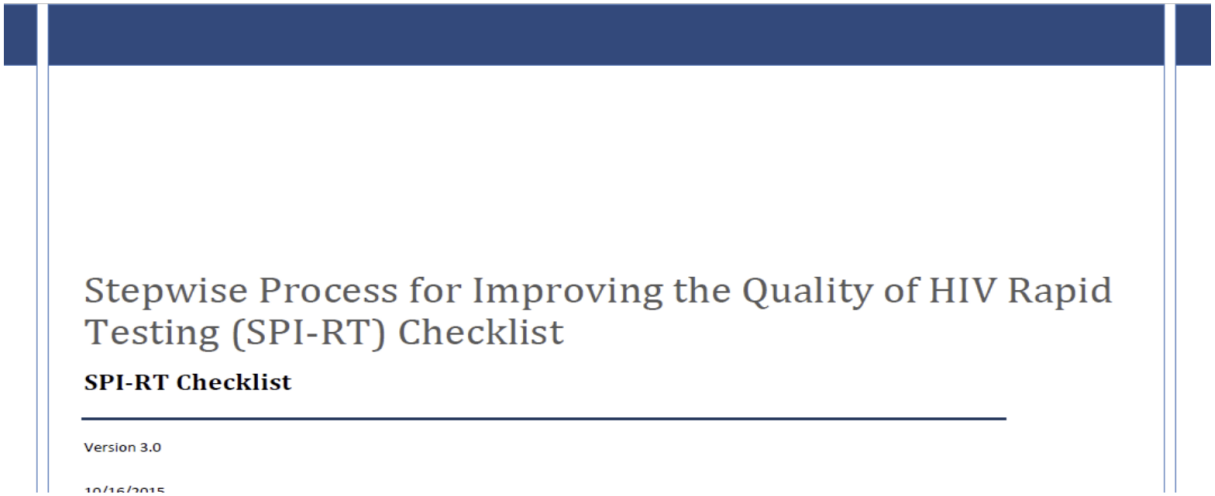
Codifying elements of HTS quality

Key elements of HTS quality



Assessment Score Sheet		
Section	Section Name	Total Points
Section 1	Personnel Training and Certification	10
Section 2	Physical Facility	5
Section 3	Safety	11
Section 4	Pre-Testing Phase	12
Section 5	Testing Phase	9
Section 6	Post-Testing Phase and Document and Record	9
Section 7	External Quality assessment	14
TOTAL SCORE		70

Key elements of HTS quality



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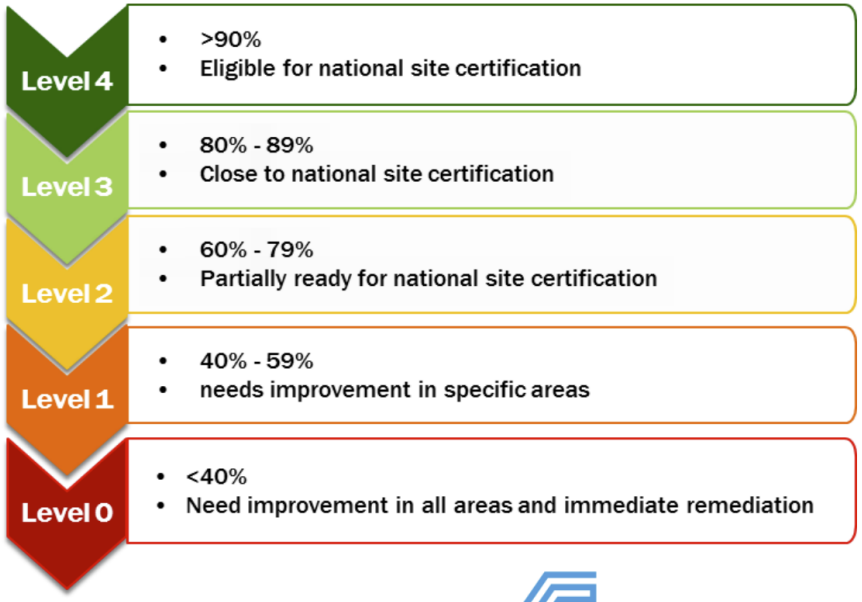

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Structured, standardized intervention model - RTCQI

RTCQI methodology

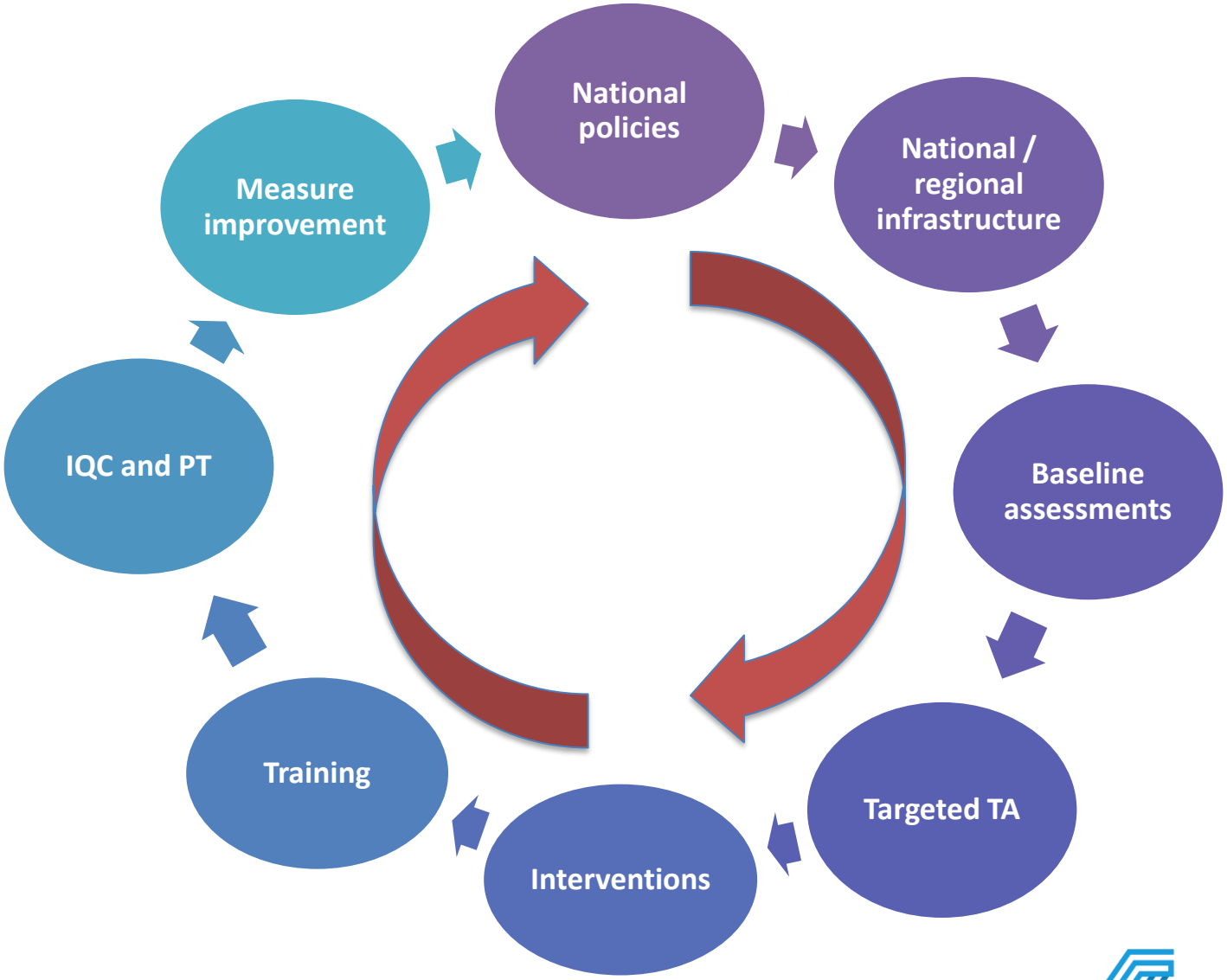
Ensuring improved HIV testing quality

RTCQI is a comprehensive package of QI activities that support accurate rapid HIV testing.

Includes:

- Guidelines and policies on QI of rapid HIV testing
- A certification program for testers and sites
- Scaling up proficiency testing programs
- Improving uptake of the standardized HIV testing logbook
- Strengthening capacity to assure the quality of rapid HIV test kits

SEAD applying RTCQI methodology

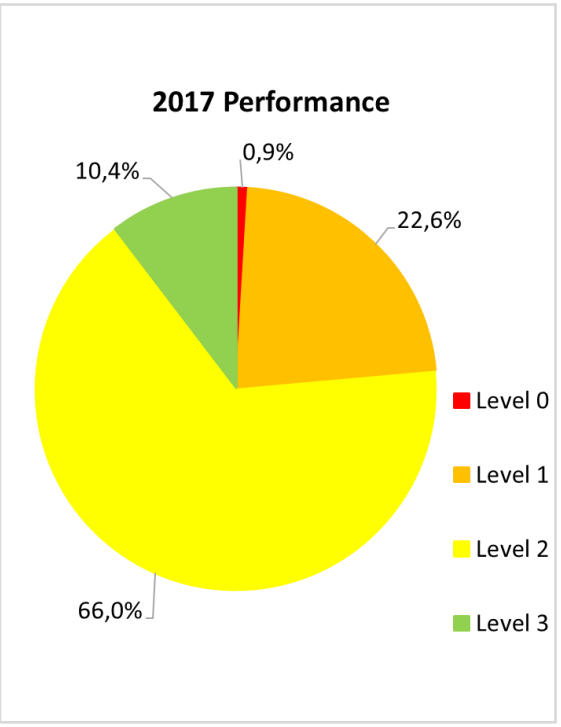


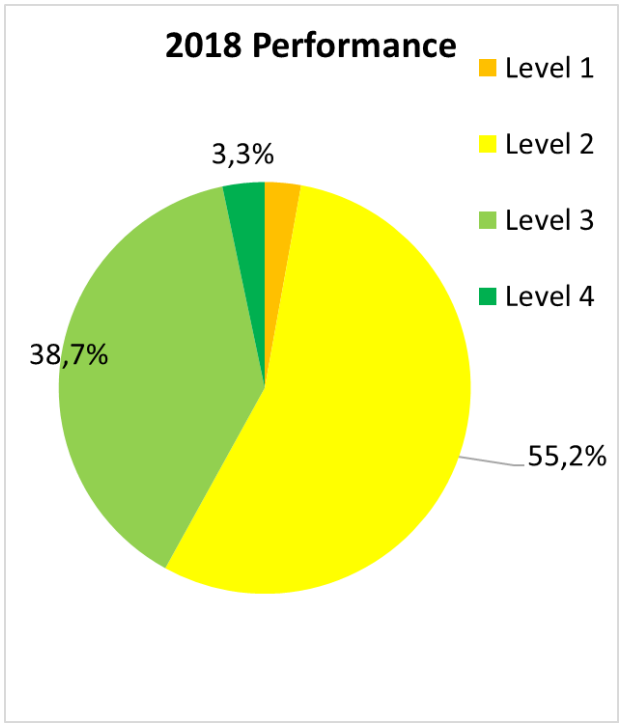
RTCQI – does quality improve with TA?

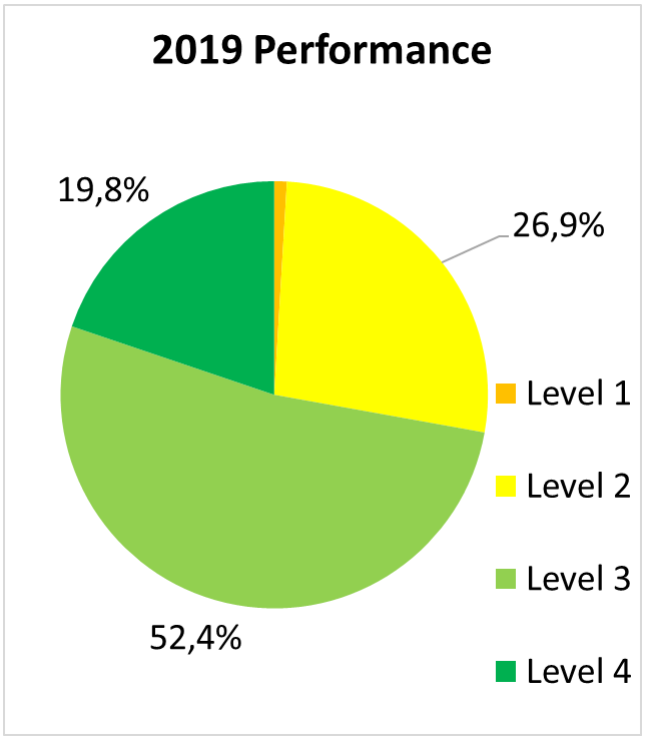
Project:

- PEPFAR/CDC award
- Country-wide
- Assist all provinces and Implementing Partners

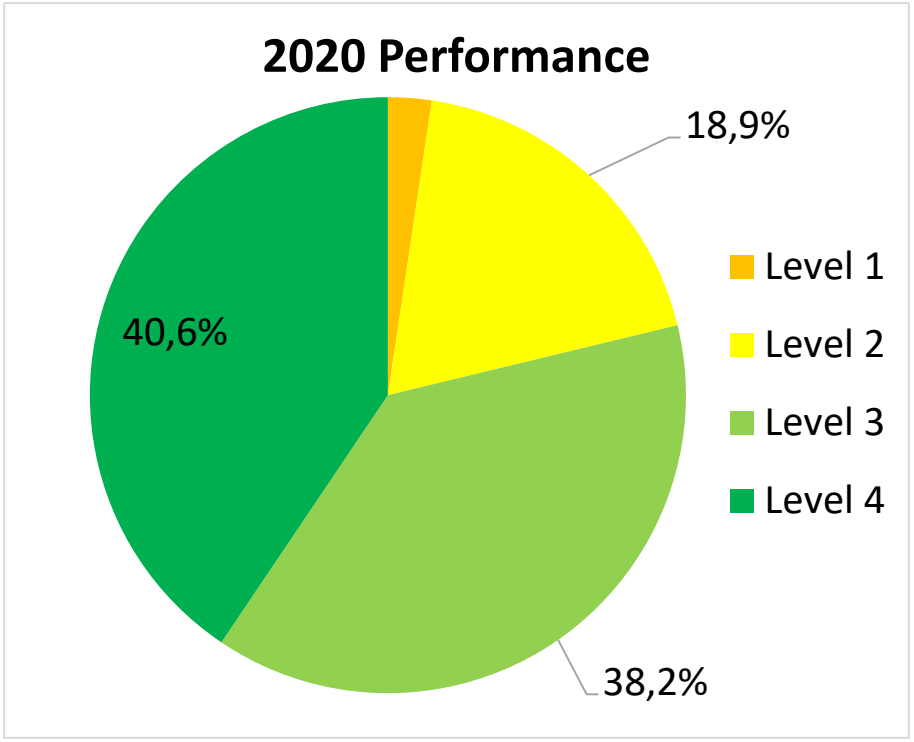
OVERALL PERFORMANCE PROGRESS
2017 - 2019

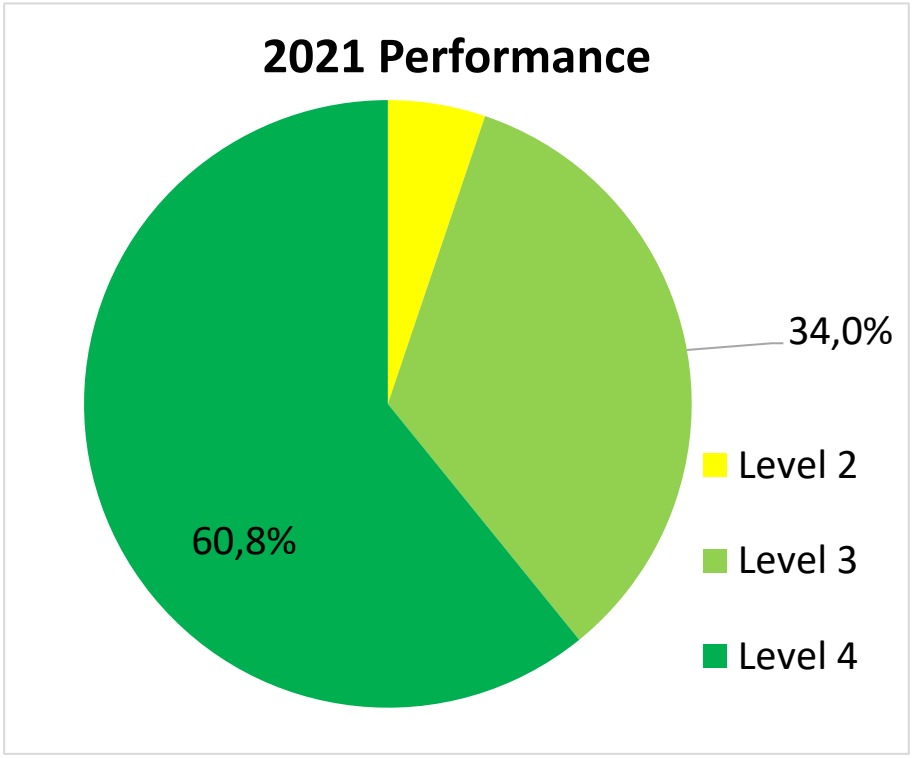






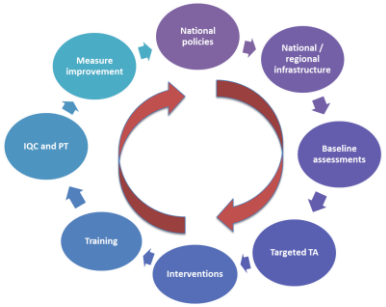
SPI-RT PERFORMANCE PROGRESS
2020 - 2021





RTCQI+

What is SEAD's Digitally-Assisted TA Platform?



RTCQI+

"RTCQI meets digital transformation"

What problem were we trying to solve?

1. Not "precision public health"
2. Move away from paper-based
3. Not enough support to field staff
4. Standardized formats for interventions
5. Reporting was cumbersome
6. Need for greater efficiencies

SEAD's journey to RTCQI+

RTCQI+

At organization level

- Took institutional knowledge, evaluation tools and existing training resources
- Converted into
  - state-of-the-art evaluation, support and educational content
  - Video lectures, tutorials, infographics, assessment apps, etc.
- Used by
  - our HSS staff and
  - recipient health care workers and administrators
- Automated analysis systems for data

What problem did it solve?

RTCQI+

SEAD moved to:

- **Digitally transformed** HSS programs
- Enhanced ability to deliver **high quality, standardized** interventions
- Do this **at scale**
- **Without large increases** in specialist **HR** field resources
- **Reporting** on program defined objectives/indicators are
  - Standardized and automated
- Comparability **of data** and **measure of impact**

The result - RTCQI+

RTCQI+

SEAD's Digitally-Assisted TA Apps form:

- A **seamless** program **management platform**
- The ability to **rapidly implement and scale** health TA and capacity building programs across value chain

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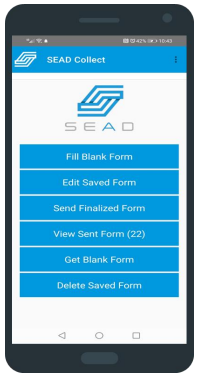
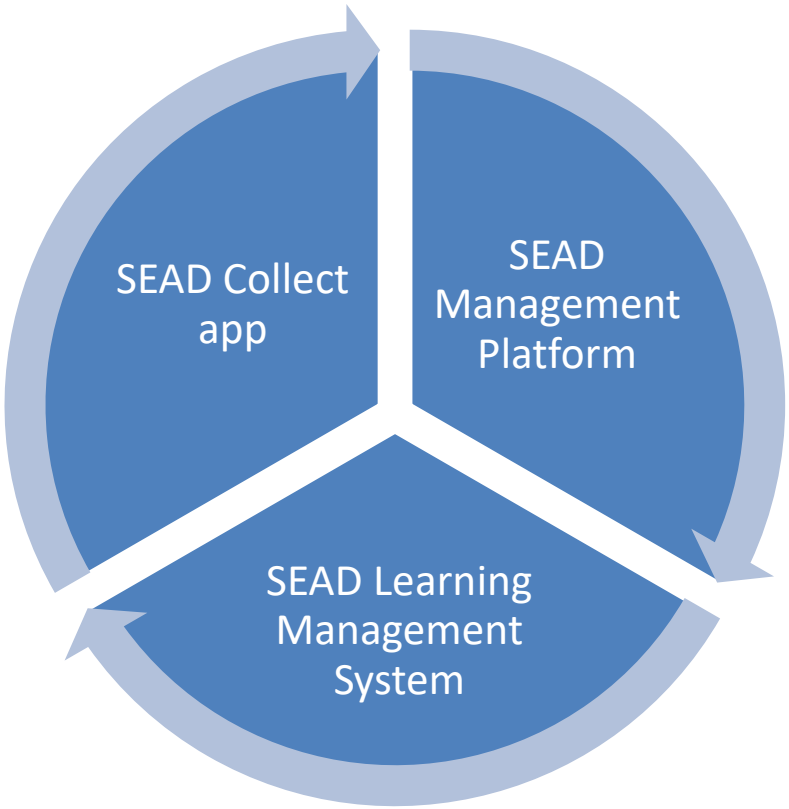
SEAD's journey to RTCQI+

Needed 3 components:





The journey to RTCQI+

RTCQI+

Needed to support different levels

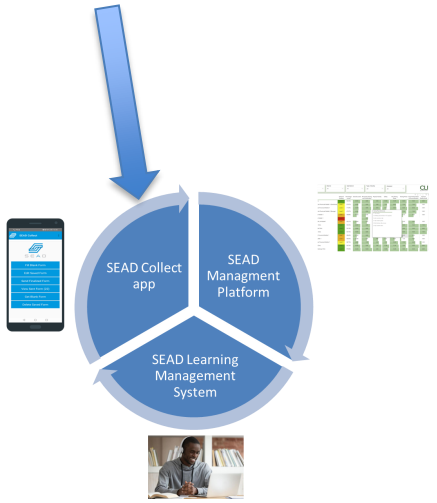
- Field staff
- Managers
- M&E staff
- Donors and governments

Supporting field staff

RTCQI+

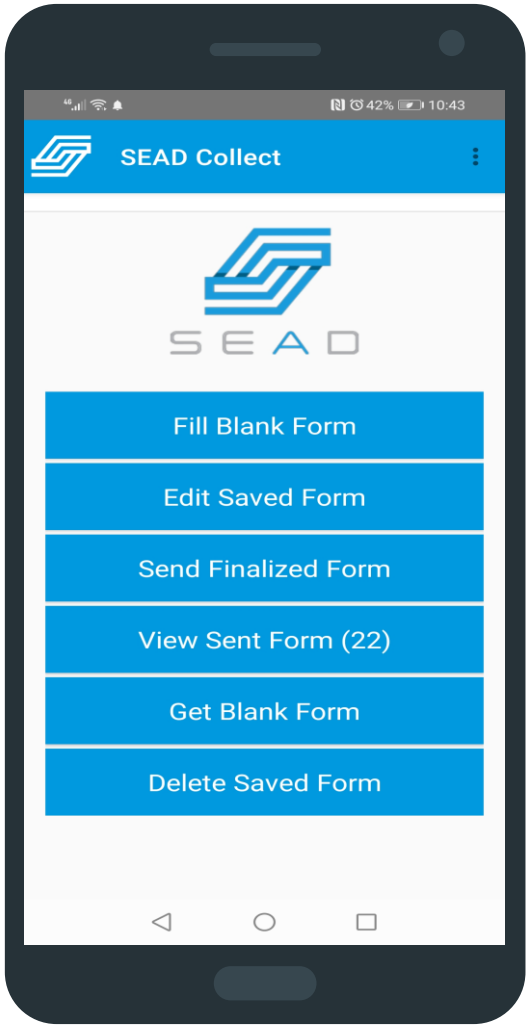
At field staff level

- **Customized apps** for use on **basic smartphones**, tablets or laptops
- Apps **do not require a live internet** connection on-site
- **Support them** during site visits by allowing them to
  - analyze an environment
  - conduct capacity building interventions
  - communicate with their managers
  - document their activities and findings
  - track progress

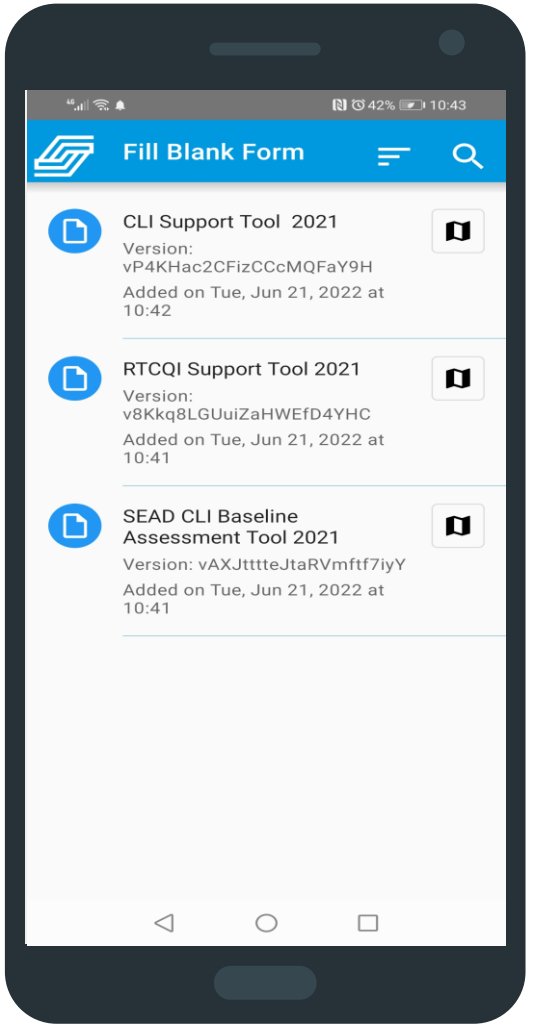


SEAD COLLECT APP

Android based app

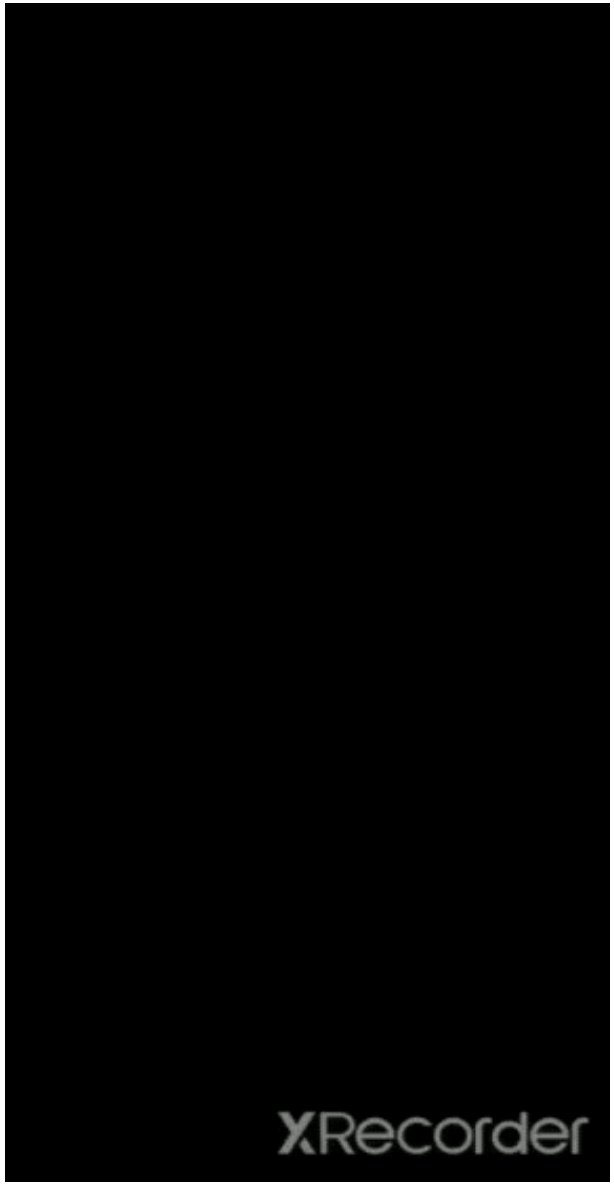


- Designed tools are assigned to users
- Submit data when tools are filled in/completed.
- Appears on SEAD platform for manager



Supporting field staff

RTCQI+



Supporting managers

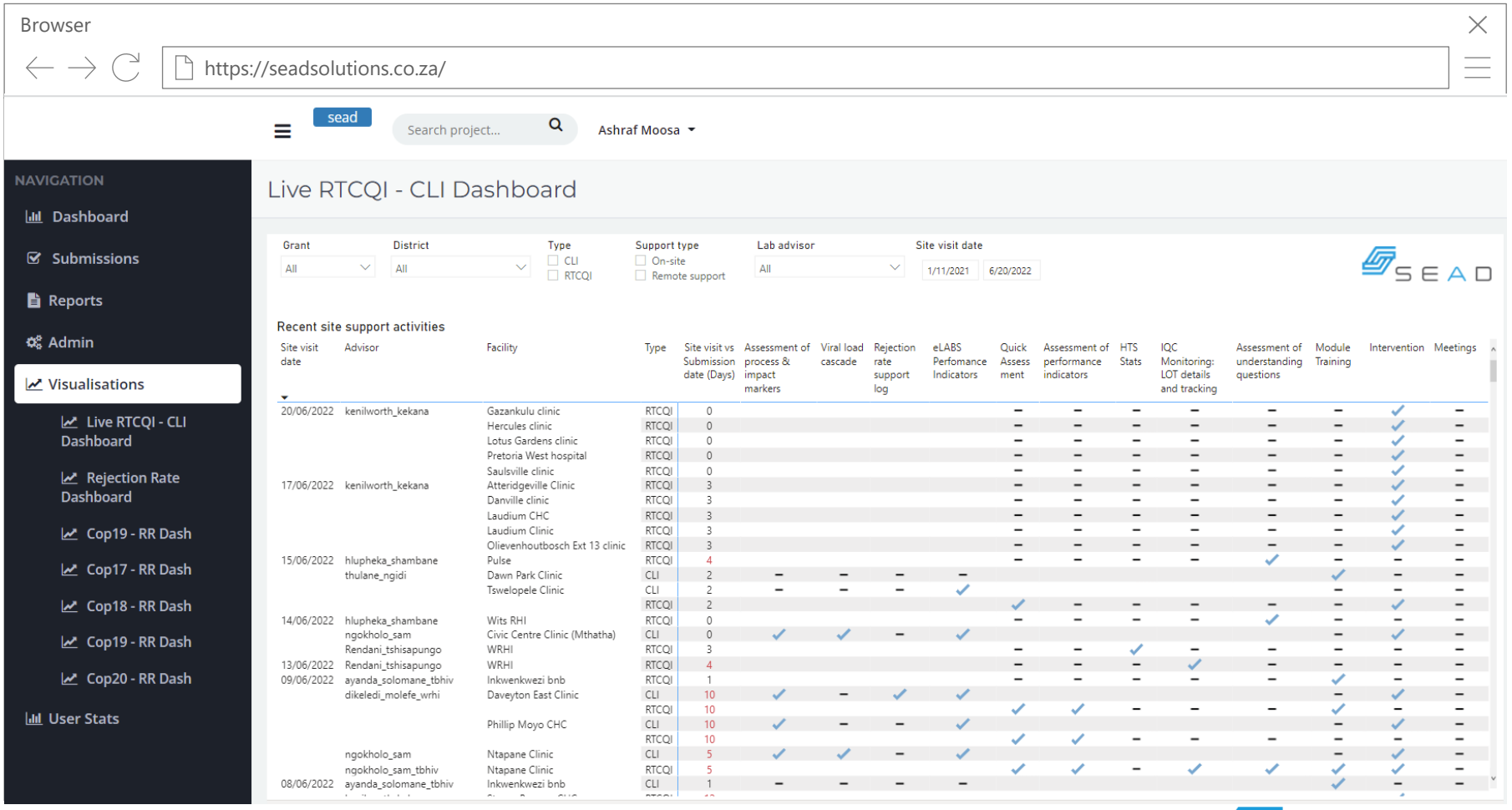
RTCQI+

- Managers **support staff** and **guide interventions**
  - Access to **comprehensive dashboards**
  - **Live,** remote **monitoring and management** of implementing teams
  - **Data** and **business intelligence visualizations**
  - Program **M&E and reporting**

Management platform

Submission data from app appears on platform

“Live ticker”



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RTCQI+ -- Converting data into intelligence

RTCQI+

At managerial level

- Where to go and what to do

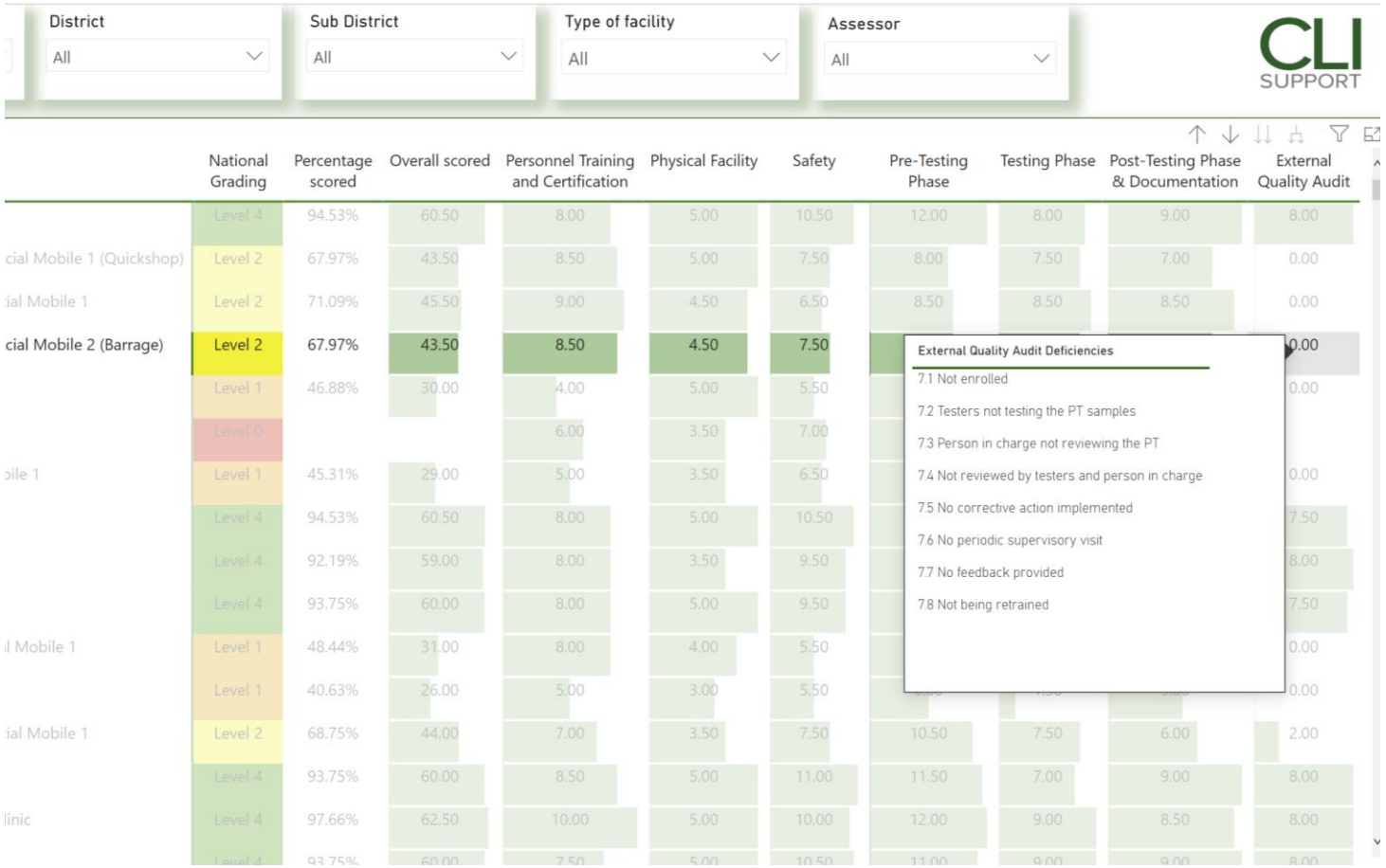
	National Grading	Percentage scored	Overall scored	Personnel Training and Certification	Physical Facility	Safety	Pre-Testing Phase	Testing Phase	Post-Testing Phase & Documentation	External Quality Audit
	Level 4	94.53%	60.50	8.00	5.00	10.50	12.00	8.00	9.00	8.00
cial Mobile 1 (Quickshop)	Level 2	67.97%	43.50	8.50	5.00	7.50	8.00	7.50	7.00	0.00
ial Mobile 1	Level 2	71.09%	45.50	9.00	4.50	6.50	8.50	8.50	8.50	0.00
cial Mobile 2 (Barrage)	Level 2	67.97%	43.50	8.50	4.50	7.50	8.50	7.50	7.00	0.00
	Level 1	46.88%	30.00	4.00	5.00	5.50	7.50	3.50	4.50	0.00
	Level 0			6.00	3.50	7.00	6.50			
ɔile 1	Level 1	45.31%	29.00	5.00	3.50	6.50	5.50	3.00	5.50	0.00
	Level 4	94.53%	60.50	8.00	5.00	10.50	11.50	9.00	9.00	7.50
	Level 4	92.19%	59.00	8.00	3.50	9.50	12.00	9.00	9.00	8.00
	Level 4	93.75%	60.00	8.00	5.00	9.50	12.00	9.00	9.00	7.50
l Mobile 1	Level 1	48.44%	31.00	8.00	4.00	5.50	6.00	3.00	4.50	0.00
	Level 1	40.63%	26.00	5.00	3.00	5.50	6.00	1.50	5.00	0.00
ial Mobile 1	Level 2	68.75%	44.00	7.00	3.50	7.50	10.50	7.50	6.00	2.00
	Level 4	93.75%	60.00	8.50	5.00	11.00	11.50	7.00	9.00	8.00
inic	Level 4	97.66%	62.50	10.00	5.00	10.00	12.00	9.00	8.50	8.00
	Level 4	93.75%	60.00	7.50	5.00	10.50	11.00	9.00	9.00	8.00

RTCQI+ -- Converting data into intelligence

RTCQI+

At managerial level

- Where to go and what to do



RTCQI+ training

RTCQI+ - Learning management system

Three levels

1. In person training
2. Online training
3. On-site training

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RTCQI+ - Learning management system

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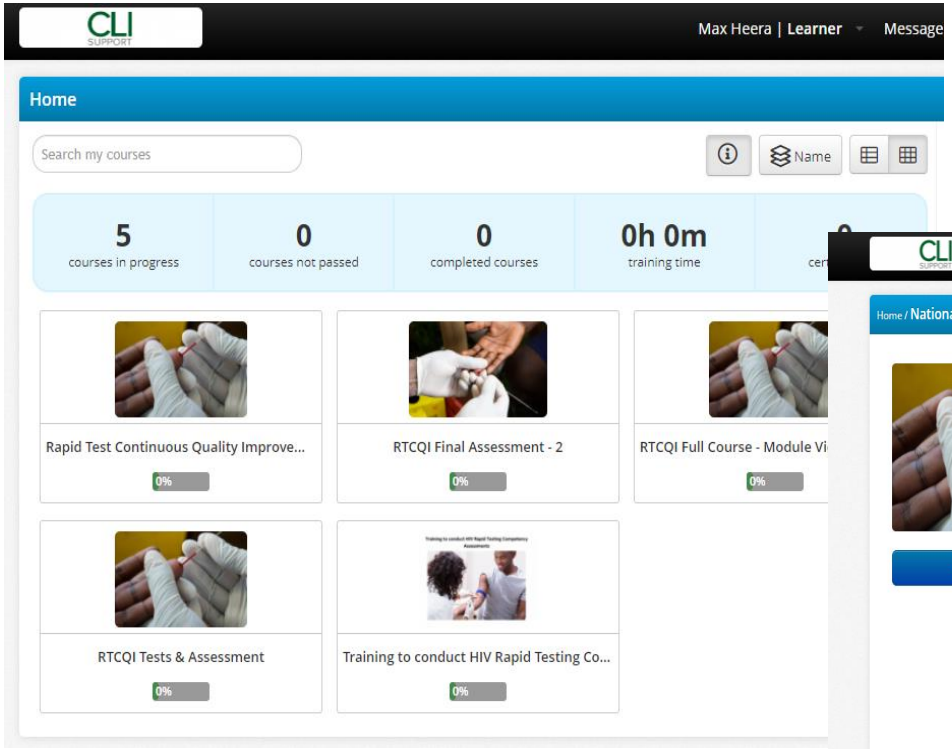
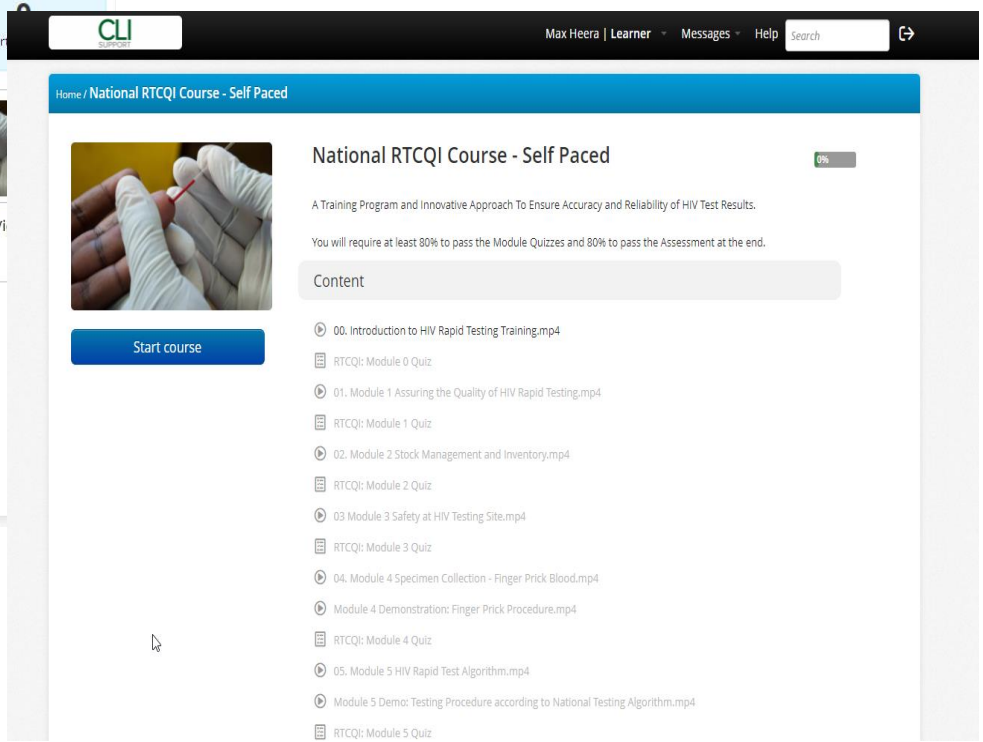
Lab courses assigned to learners enrolled



COURSE CONTENT



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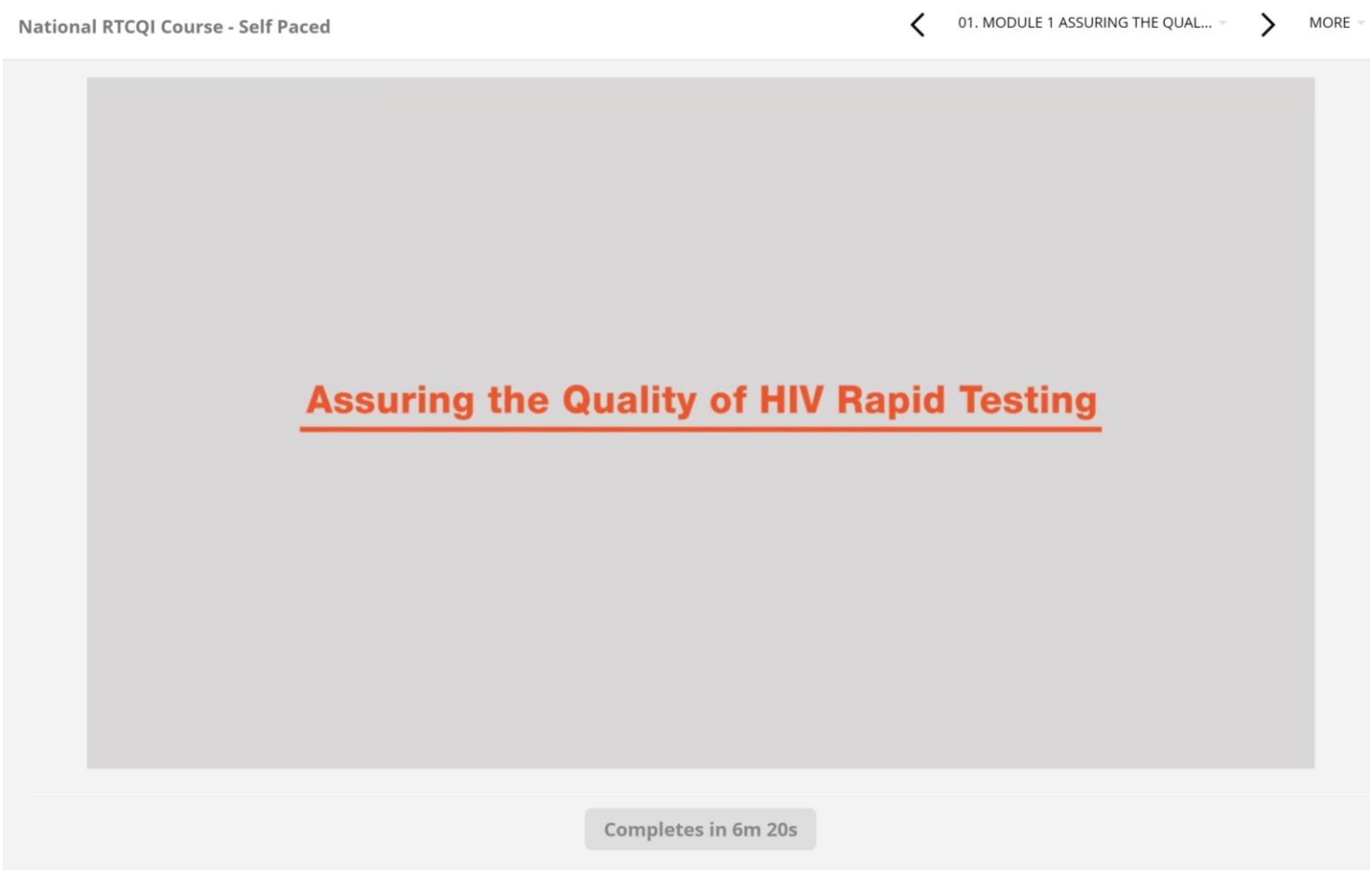
RTCQI+ modules

- Enrollment
- 00. Introduction to HIV Rapid Testing Training.mp4
- RTCQI: Module 0 Quiz
- 01. Module 1 Assuring the Quality of HIV Rapid Testing.mp4
- RTCQI: Module 1 Quiz
- 02. Module 2 Stock Management and Inventory.mp4
- RTCQI: Module 2 Quiz
- 03 Module 3 Safety at HIV Testing Site.mp4
- RTCQI: Module 3 Quiz
- 04. Module 4 Specimen Collection - Finger Prick Blood.mp4
- Module 4 Demonstration: Finger Prick Procedure.mp4
- RTCQI: Module 4 Quiz
- 05. Module 5 HIV Rapid Test Algorithm.mp4
- Module 5 Demo: Testing Procedure according to National Testing Algorithm.mp4
- RTCQI: Module 5 Quiz

- 06. Module 6 Record Keeping.mp4
- RTCQI: Module 6 Quiz
- 07. Module 7 Quality Control.mp4
- Module 7 Demo: Independent Quality Control Procedure and Trouble Shooting.mp4
- RTCQI: Module 7 Quiz
- 08. Module 8 Introduction to Proficiency Testing.mp4
- Module 8 Demonstration: Proficiency Testing Procedure and Corrective Action.mp4
- RTCQI: Module 8 Quiz
- 09. Module 9 HIV-RT Tester Competency and Certification.mp4
- RTCQI: Module 9 Quiz
- 10. Module 10 SPI-RT Assessment.mp4
- RTCQI: Module 10 Quiz
- 11. RTCQI: Module 11 Professional Ethics
- RTCQI: Module 11 Quiz
- RTCQI Course Evaluation

RTCQI+ - Learning management system



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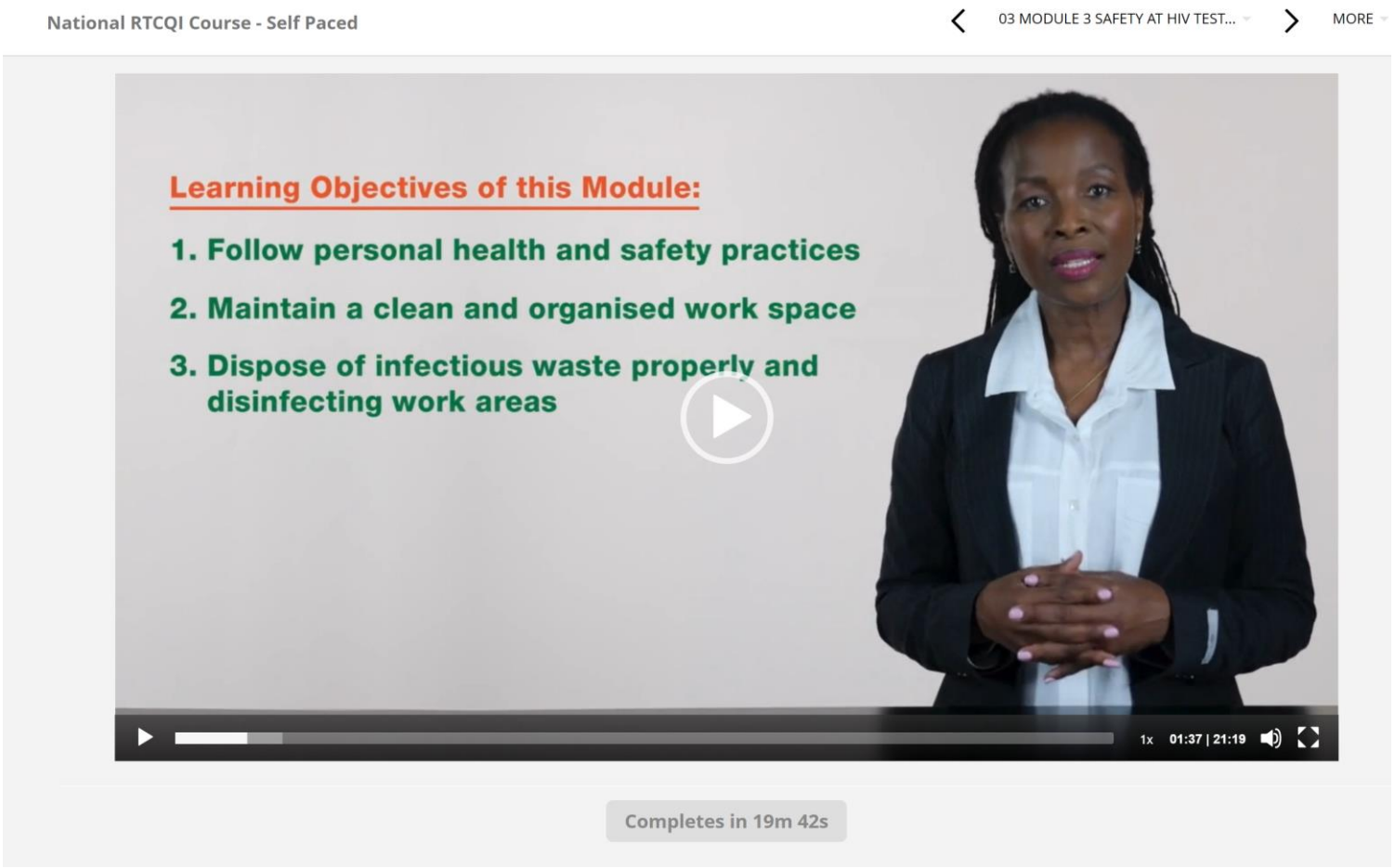

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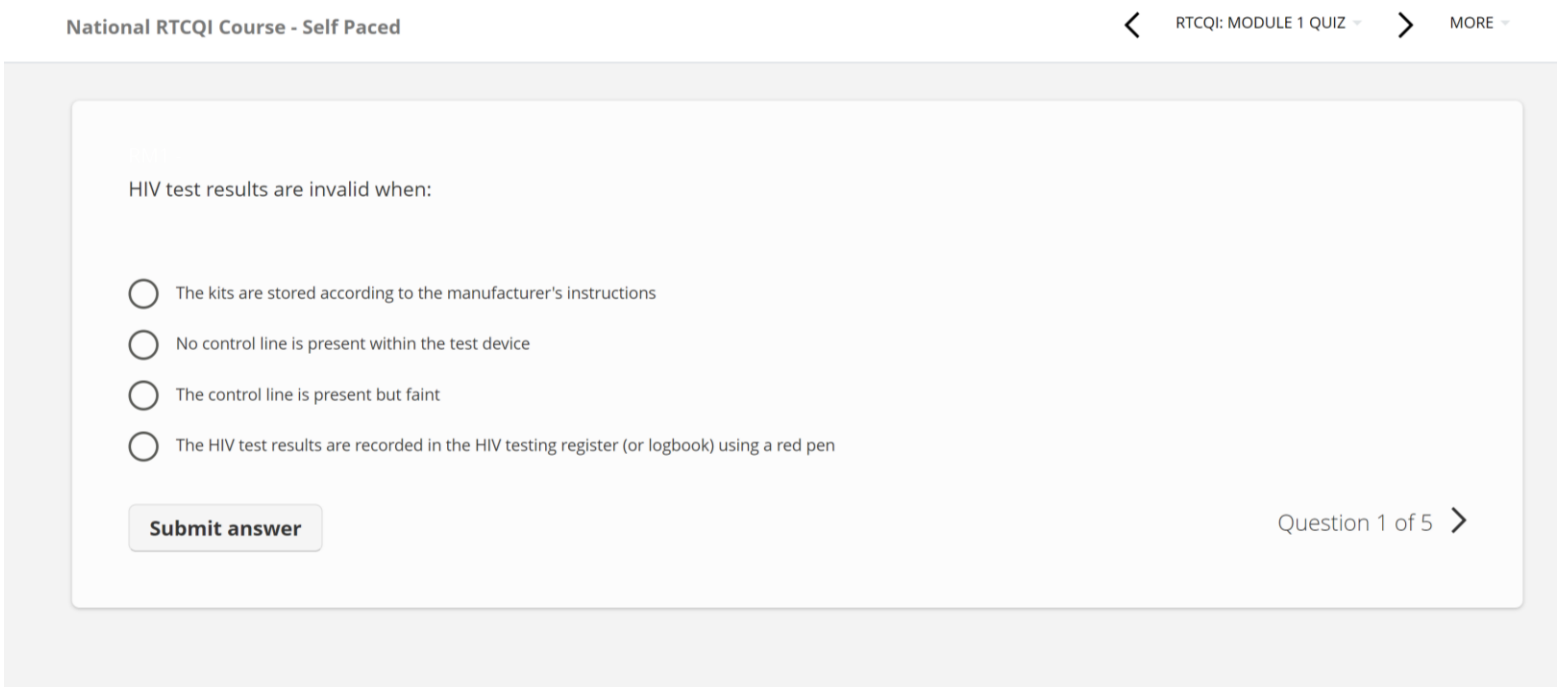

RTCQI+ - Learning management system

Three levels

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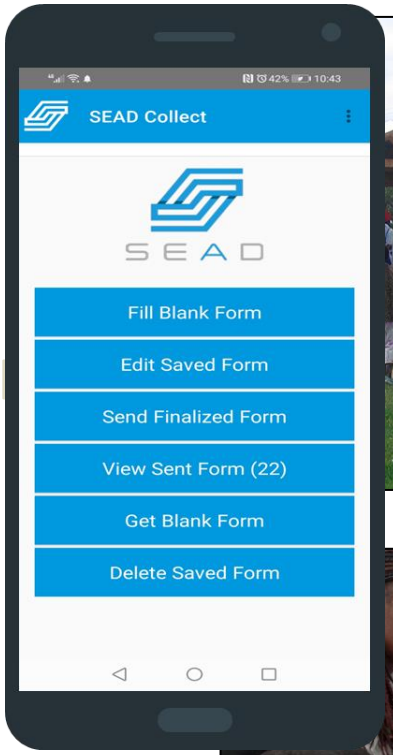
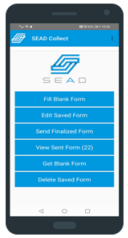
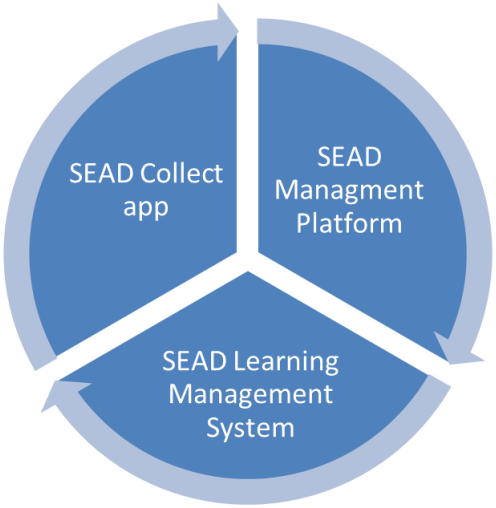


SEAD RTCQI+ - Progress tracking





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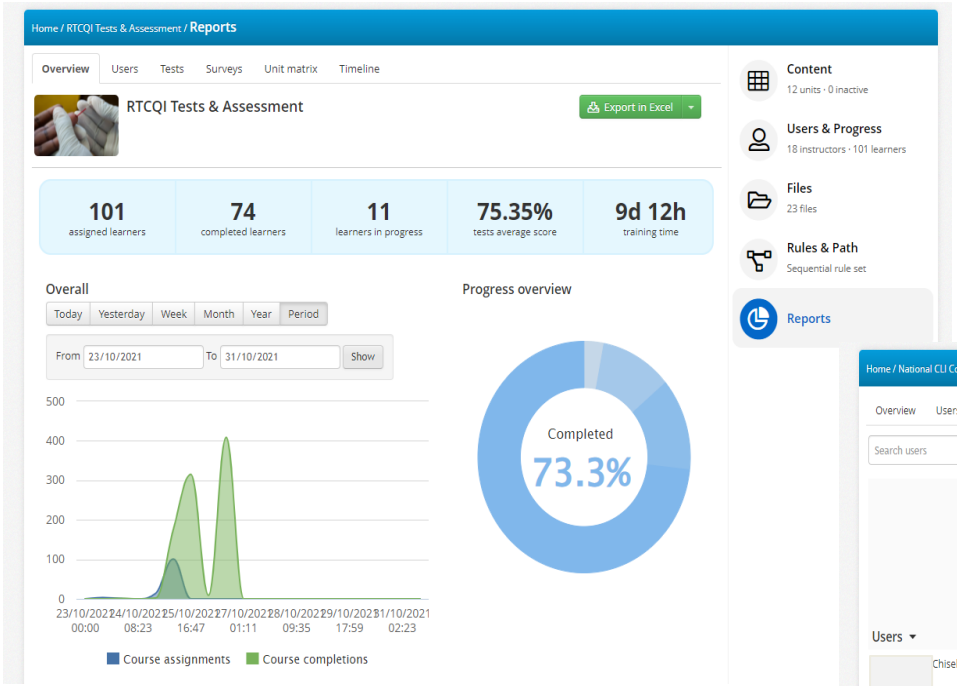
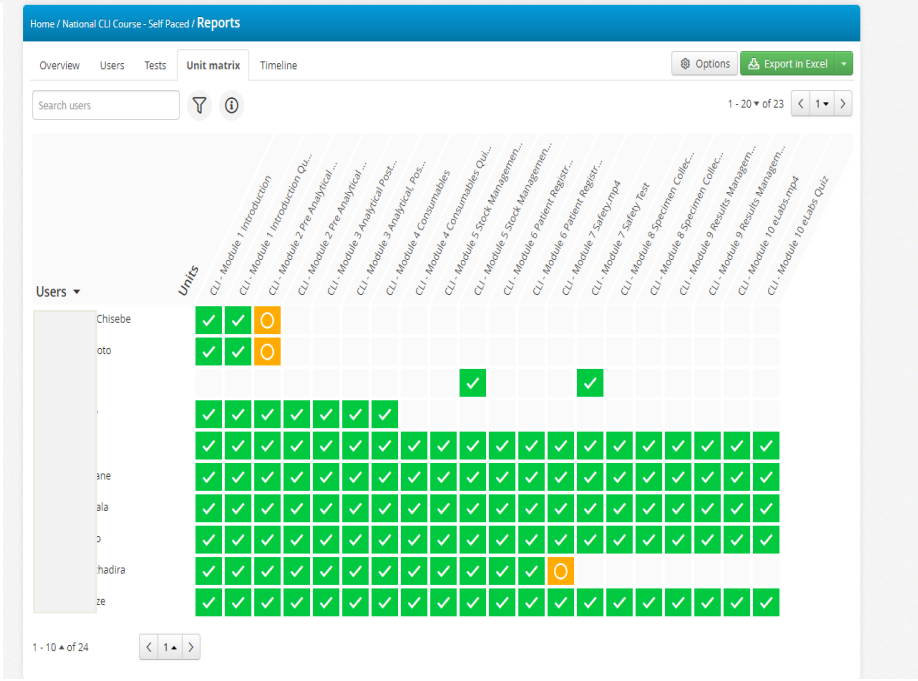
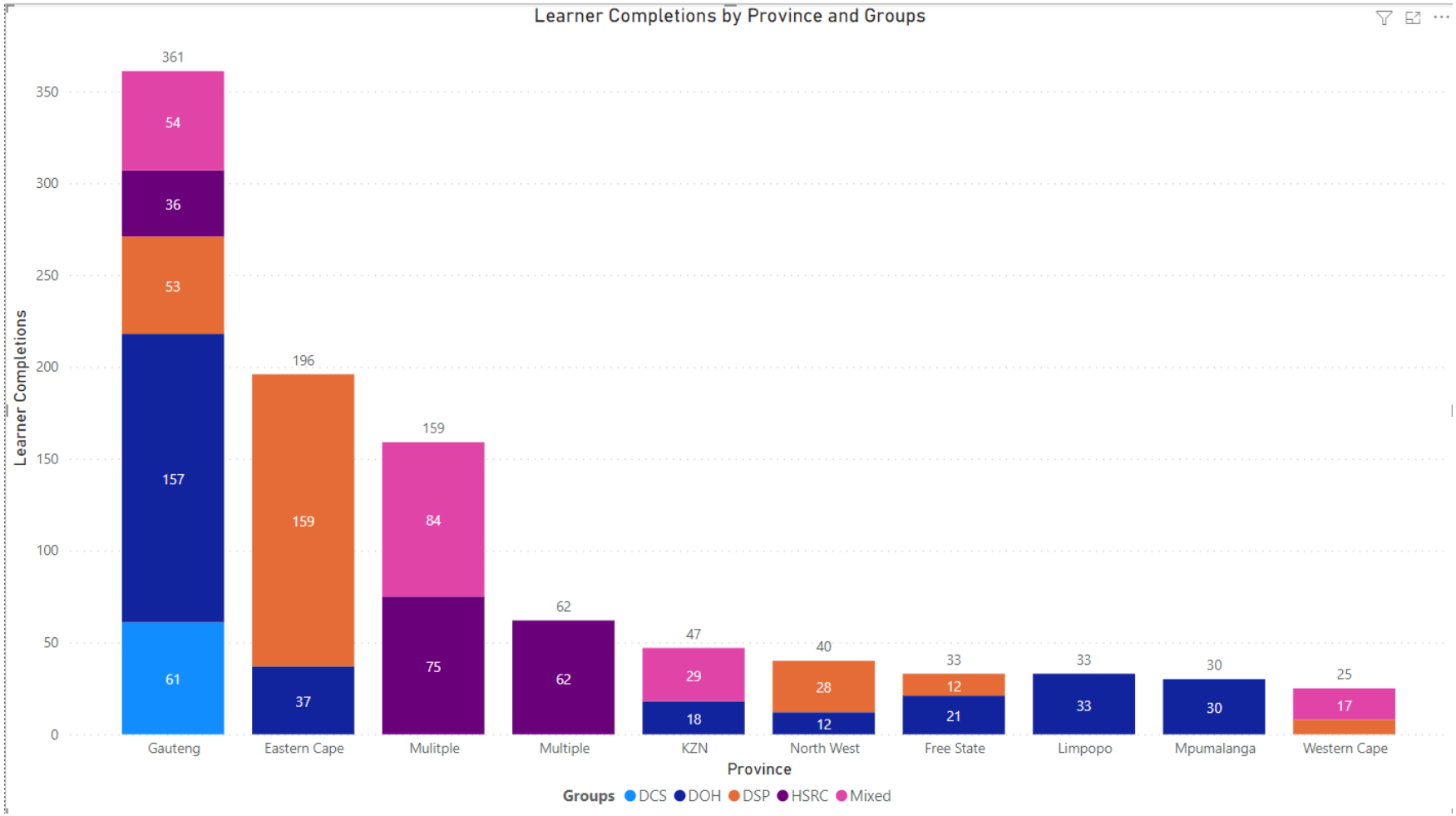




SEAD RTCQI+ Reporting



SEAD RTCQI+ Reporting

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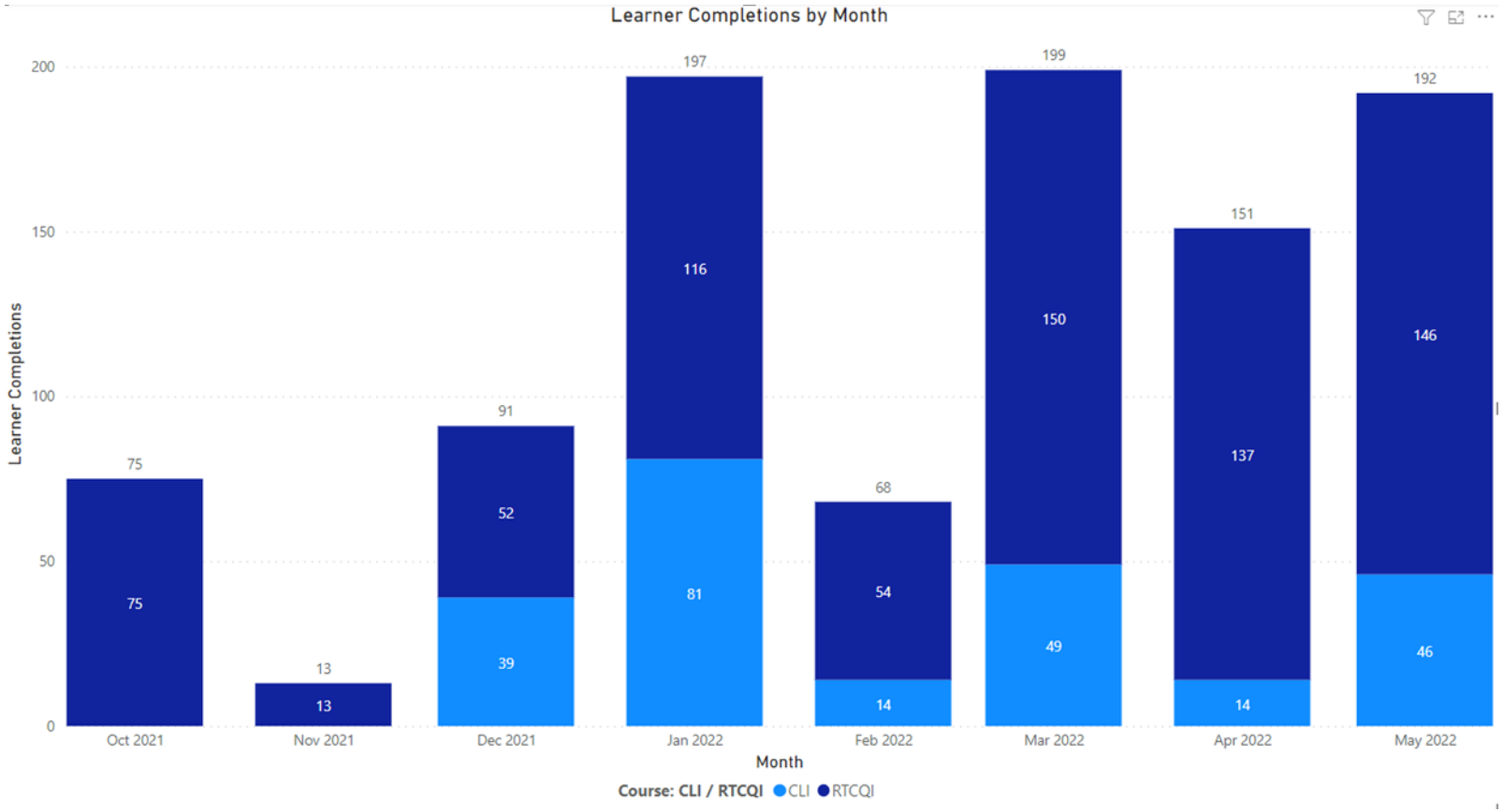

Donor/Government reporting

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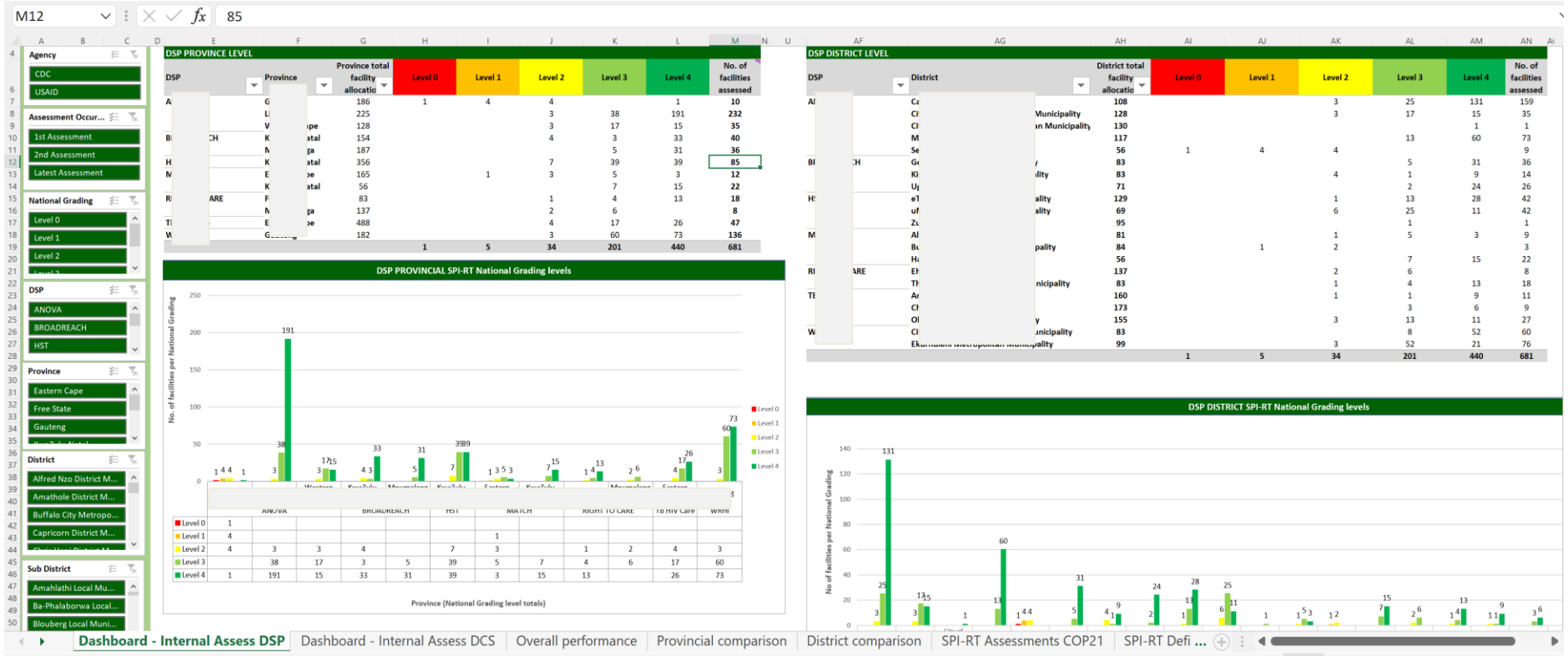

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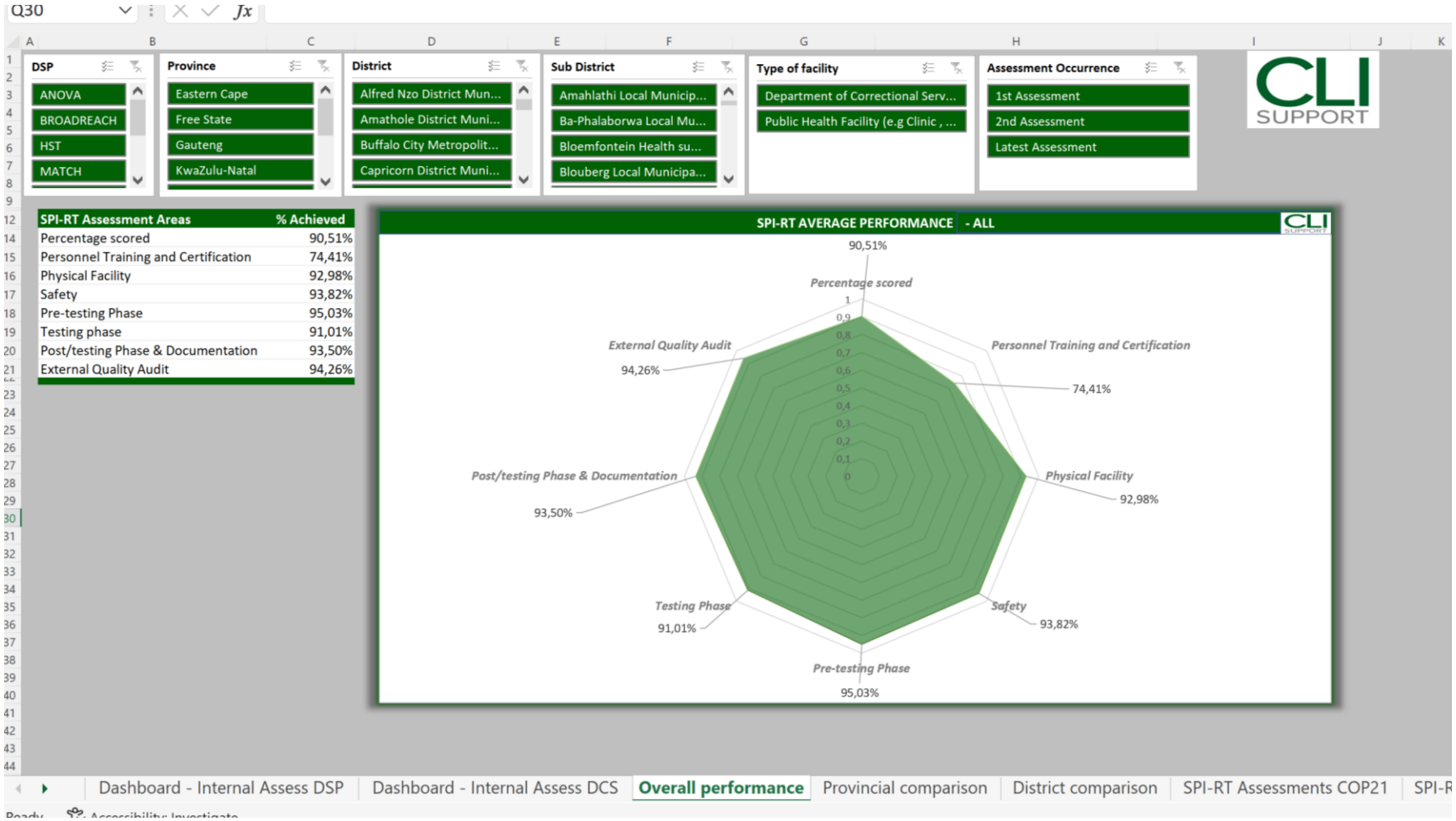


Donor/Government reporting

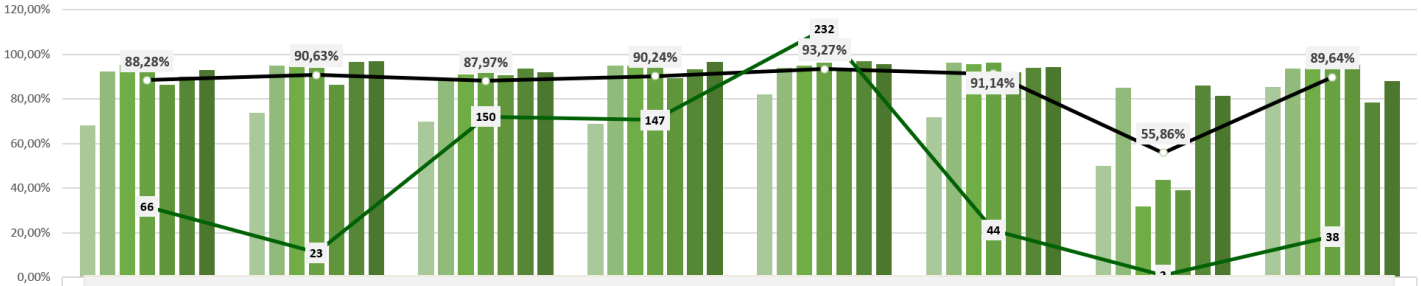
DSP	Province	District	Sub District	Type of facility	Assessment Occurrence
ANOVA	Eastern Cape	Alfred Nzo District Muni...	Amahlathi Local Municip...	Department of Correctional Services	1st Assessment
BROADREACH	Free State	Amathole District Munic...	Ba-Phalaborwa Local Mu...	Public Health Facility (e.g Clinic , CHC...	2nd Assessment
HST	Gauteng	Buffalo City Metropolita...	Bloemfontein Health sub...		Latest Assessment
MATCH	KwaZulu-Natal	Capricorn District Munic...	Blouberg Local Municipa...		

CLI SUPPORT

PROVINCIAL COMPARISON

Province	Assessments conducted	Percentage scored	Personnel Training and Certification	Physical Facility	Safety	Pre-testing Phase	Testing Phase	Post/testing Phase & Documentation	External Quality Audit
E	66	88,28%	67,95%	92,12%	95,25%	94,51%	86,28%	89,81%	92,90%
F	23	90,63%	73,70%	94,78%	94,66%	94,02%	86,23%	96,38%	97,01%
G	150	87,97%	69,63%	88,93%	91,03%	92,83%	90,44%	93,41%	91,79%
K	147	90,24%	68,67%	94,76%	94,77%	96,68%	89,12%	93,08%	96,51%
L	232	93,27%	81,96%	93,88%	94,79%	96,10%	93,97%	97,03%	95,69%
M	44	91,14%	71,82%	96,36%	95,45%	96,21%	92,05%	93,94%	94,32%
N	2	55,86%	50,00%	85,00%	31,82%	43,75%	38,89%	86,11%	81,25%
V	38	89,64%	85,26%	93,42%	93,54%	93,53%	95,18%	78,51%	87,83%
Grand Total	**702**	**90,51%**	**74,41%**	**92,98%**	**93,82%**	**95,03%**	**91,01%**	**93,50%**	**94,26%**

PROVINCIAL AVERAGE COMPARISON - ALL



	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Limpopo	Mpumalanga	Northern Cape	Western Cape
Personnel Training and Certification	67,95%	73,70%	69,63%	68,67%	81,96%	71,82%	50,00%	85,26%
Physical Facility	92,12%	94,78%	88,93%	94,76%	93,88%	96,36%	85,00%	93,42%
Safety	95,25%	94,66%	91,03%	94,77%	94,79%	95,45%	31,82%	93,54%
Pre-testing Phase	94,51%	94,02%	92,83%	96,68%	96,10%	96,21%	43,75%	93,53%
Testing Phase	86,28%	86,23%	90,44%	89,12%	93,97%	92,05%	38,89%	95,18%
Post/testing Phase & Documentation	89,81%	96,38%	93,41%	93,08%	97,03%	93,94%	86,11%	78,51%
External Quality Audit	92,90%	97,01%	91,79%	96,51%	95,69%	94,32%	81,25%	87,83%
Percentage scored	88,28%	90,63%	87,97%	90,24%	93,27%	91,14%	55,86%	89,64%
Assessments conducted	66	23	150	147	232	44	2	38

Dashboard - Internal Assess DSP | Dashboard - Internal Assess DCS | Overall performance | **Provincial comparison** | District comparison | SPI-RT

SEAD

RTCQI – Is it still relevant?

6.3.1.1 HIV Rapid Testing Continuous Quality Improvement

Improving the quality of laboratory and point of care HIV testing to reduce error and ensure efficient delivery of services is a critical, but often neglected aspect of global public health

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Why RTCQI+…… conclusions

Seamless digital health platform

1. Greater understanding - business intelligence
2. Greater precision
3. Greater support in real time
4. Greater availability of focussed training
5. Scalable
6. Reduced pro-rata cost
7. RTCQI+ one example
   - Applicable to other programs too

THANK YOU

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HEALTH STRATEGY INSIGHT IMPLEMENTATION