

A Laboratory Quality Improvement Initiative

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THE PROBLEM

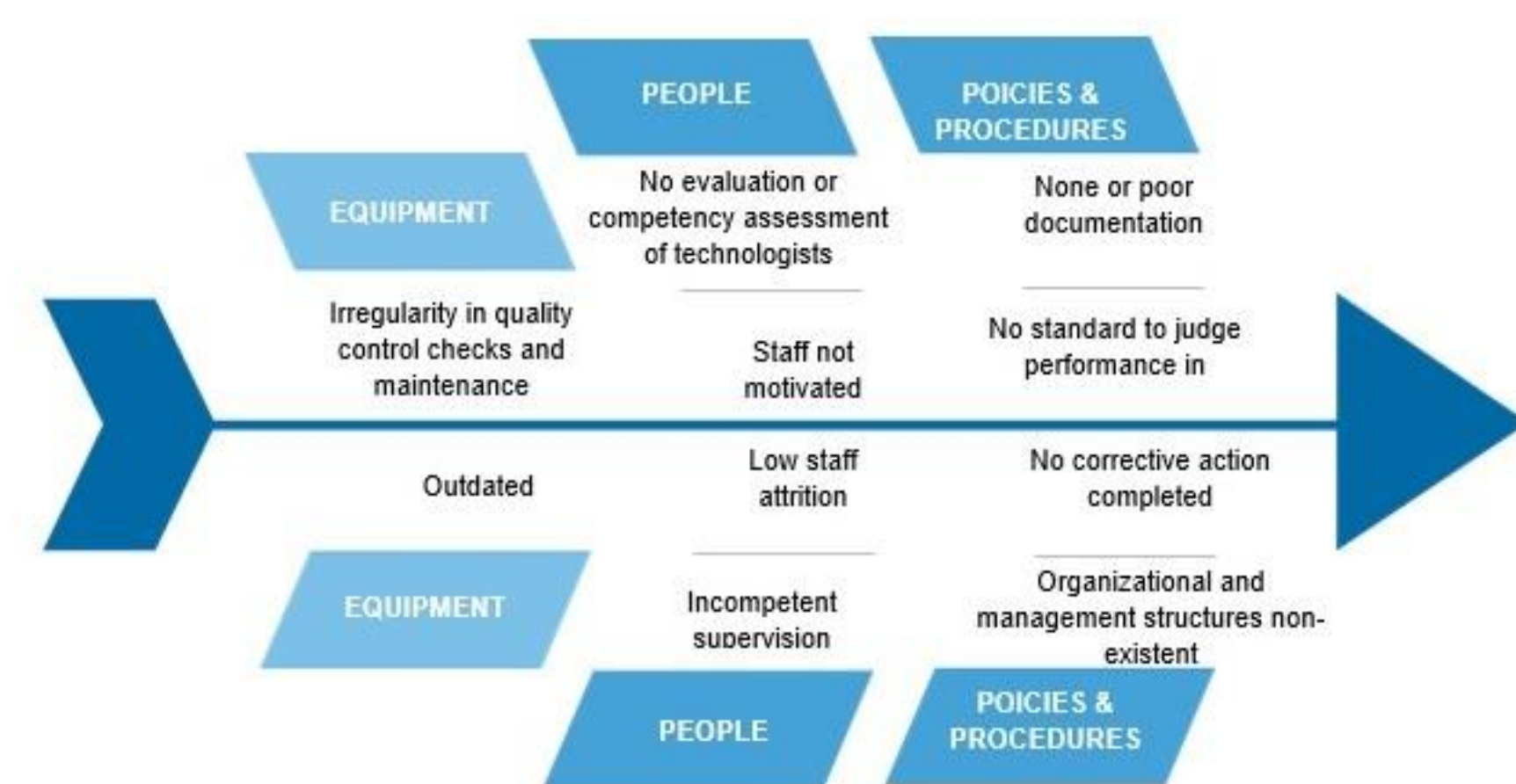
One of the key strategic activities that seemed to evade completion in the two decades in the life of Davis Memorial Hospital, was the Certification of the Laboratory. It seemed a distant achievement due in part to personnel changes, deliberate obstructions, and inadequate documentation among other challenges. The non-certification of the laboratory caused the hospital to lose significant revenue (e.g. the outsourcing of key revenue-earning tests). Customers including doctors, patients, insurance companies and other interested parties were not always confident in the institution's ability to provide reliable testing, measurement, calibration activities and the results. Physicians were not always comfortable that they could accurately provide the right medical diagnosis for patients. Patients observed that in some cases there were variations in results when compared to the results received from other facilities. Additionally, there was inadequate and in some cases no documentation of policies, procedures and standards that were required to effectively manage the operations of the Laboratory.

AIM

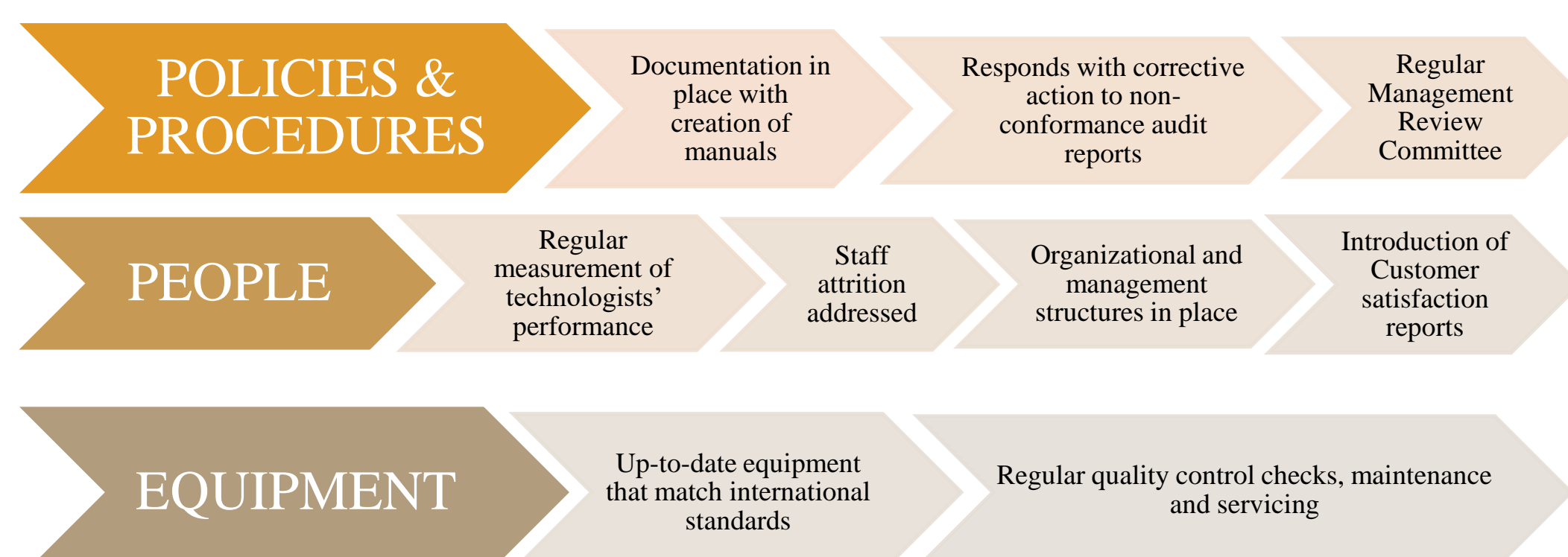
- To conform to the requirements of **Guyana Standard - GYS170:2009, "General requirements for the operation of a laboratory."** to operate a clinical laboratory for testing in areas of Biochemistry, Microbiology, Serology, Haematology and Endocrinology
- To develop a comprehensive laboratory management system that will increase the provision of accurate, reliable, trustworthy and high-quality tests and results.

Fish-bone (Ishikawa) Analysis of the Problem

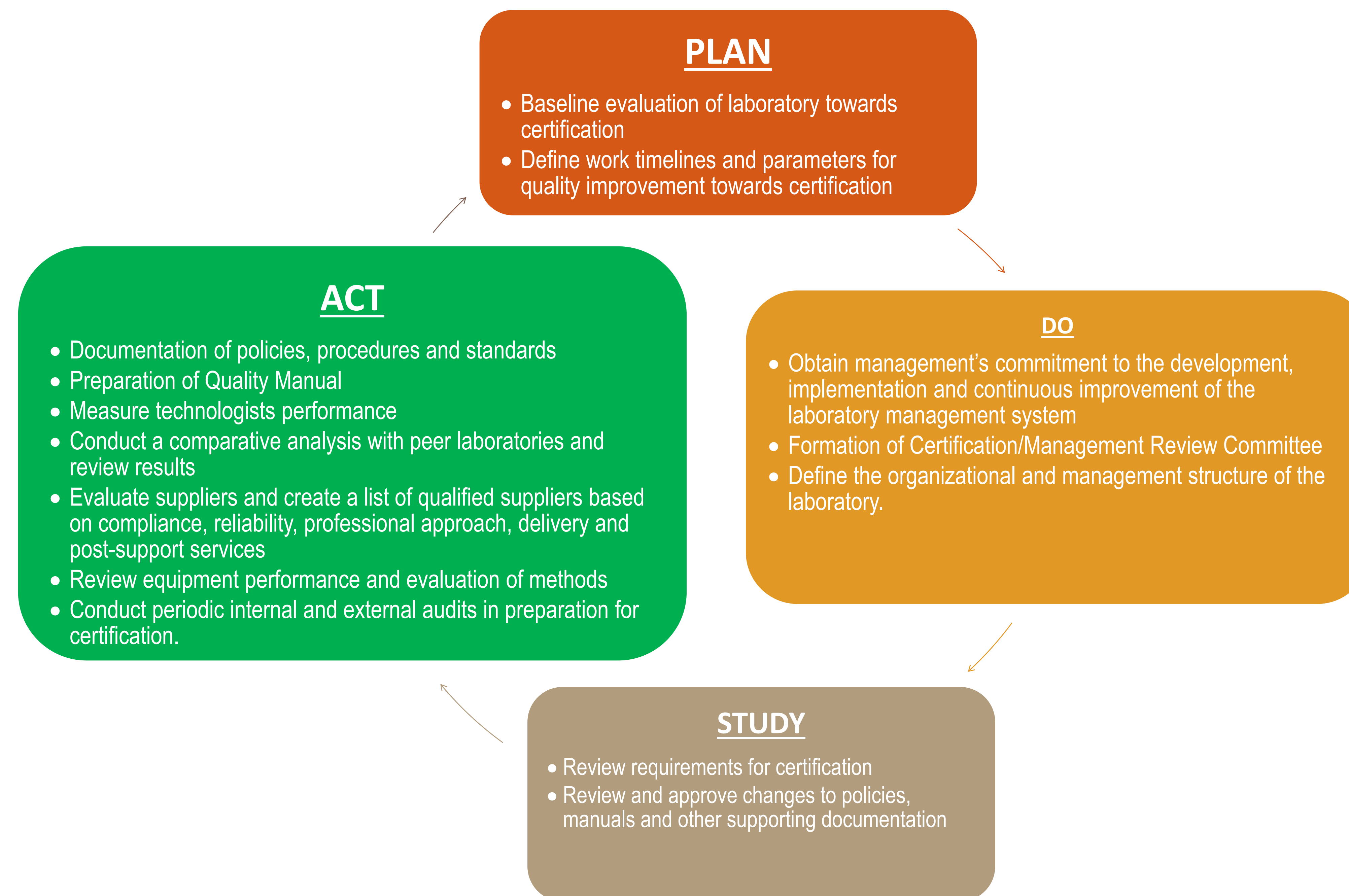
FLOW MAP OF PAST STATE



FLOW MAP OF PRESENT STATE



PLAN DO ACT STUDY CYCLE



RESULTS

- A steady increase in revenue from laboratory testing services. This is due in part to the return of onsite testing for some samples that were previously outsourced. The slight shortfall based on the projected 2022 net income is as a result of reduced patient flow.
- 26% increase in accepted results for chemistries after certification
- Although haematology experienced a slight decline of 7% in the accepted results and 10% since the procurement of a new haematology machine, the decline is attributed to the misalignment of calibration when compared to OneWorld Accuracy. Corrective action was taken immediately. The laboratory is awaiting the results of 2022 EQA results and anticipates that the results will increase.
- The Ministry of Health annual Quality Assessment of the institution was conducted in March 2022. The institution achieved a 97% onsite rating. Additionally it was awarded a 95% COVID-19 rating which certifies the institution to perform SARS-CoV-2 testing.

SUMMARY

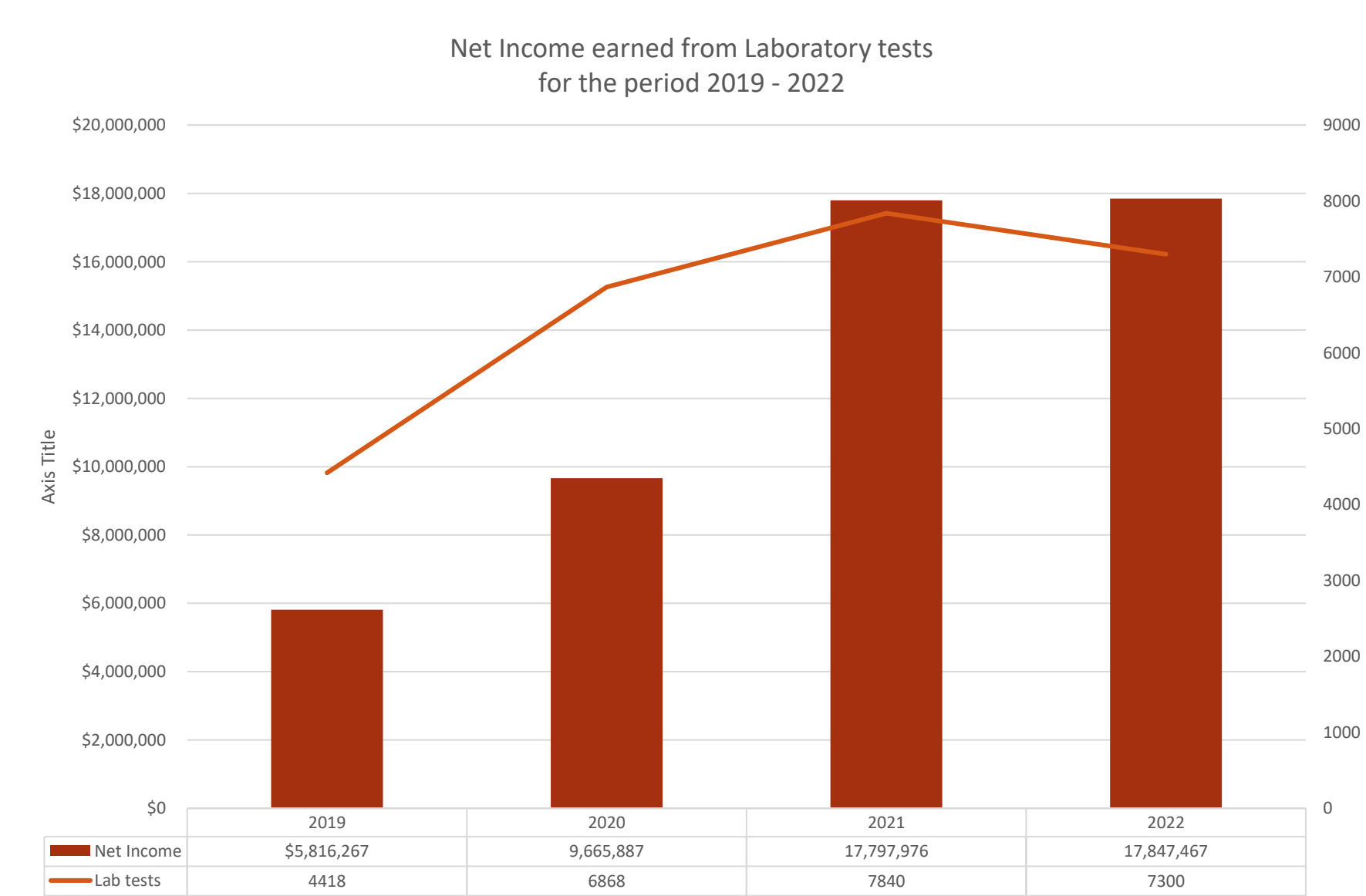
- Having achieved Certification, the laboratory now operates in accordance with established national standards in areas of management and daily operations.
- Certification is an established and effective way to indicate the competence of a laboratory and to enhance the three pillars of operations – quality assurance, clinical effectiveness and cost-effectiveness.
- The institution now has the task of maintaining the Certification by ensuring that the laboratory has supportive supervision and management, training and retraining of staff, scheduled maintenance of equipment, periodic performance evaluation and quality assurance and quality control practices (feedback from customers, physicians, staff and EQA)

FUTURE STEPS/WHAT'S NEXT

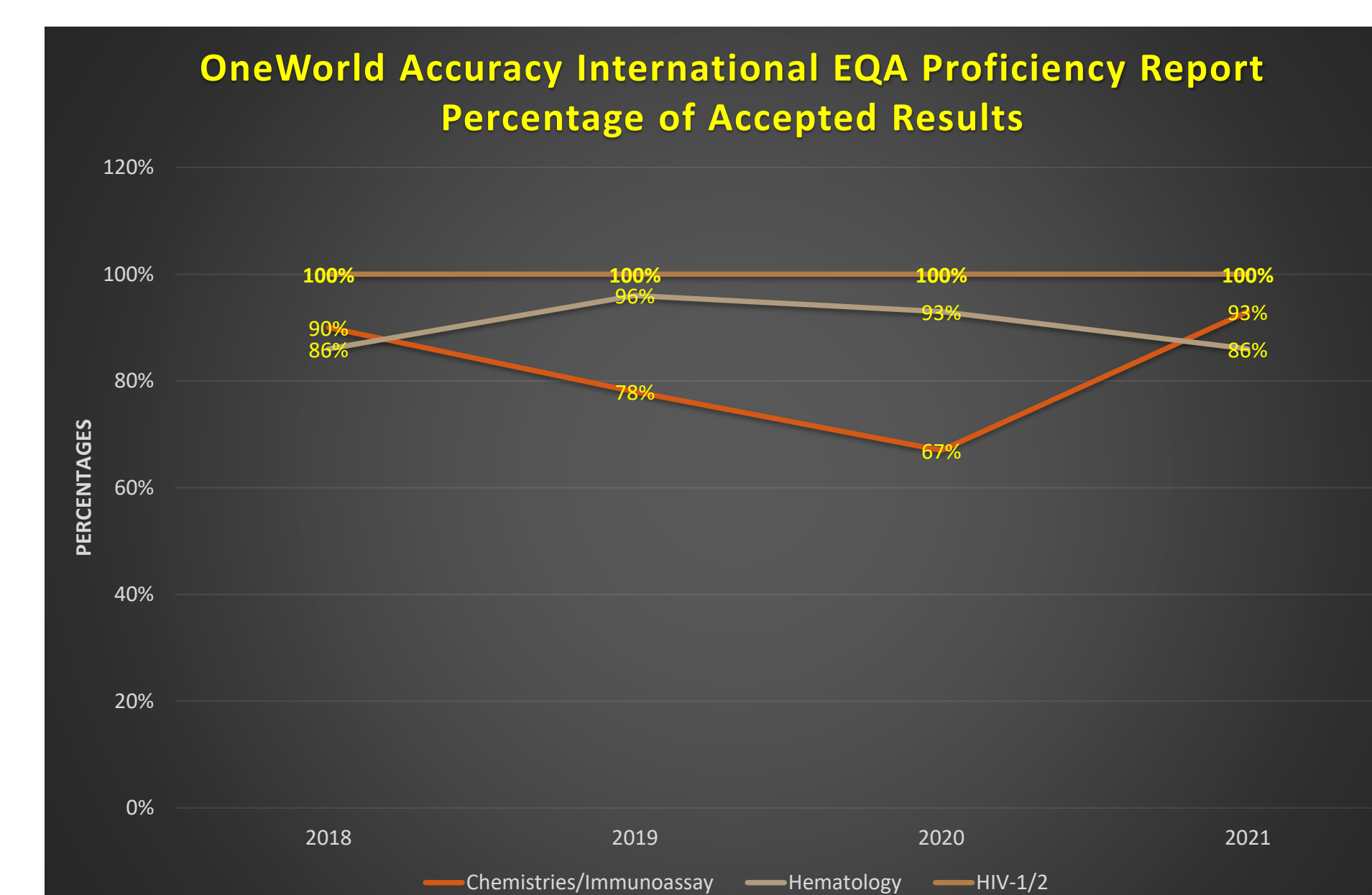
- Sourcing of parts for Bio-safety cabinet or procurement of a new cabinet if parts are unavailable
- Recertification of Laboratory: GYS170:2021 and adding COVID-19 testing to certification
- Stabilization of competent and committed staff

DATA

QUALITY IMPROVEMENT MONITORING



IMPACT INDICATOR: Revenue earned over during the year
*2022 is based on projected Income and tests using the 8 months actual revenue and testing reports



QUALITY IMPROVEMENT INDICATOR