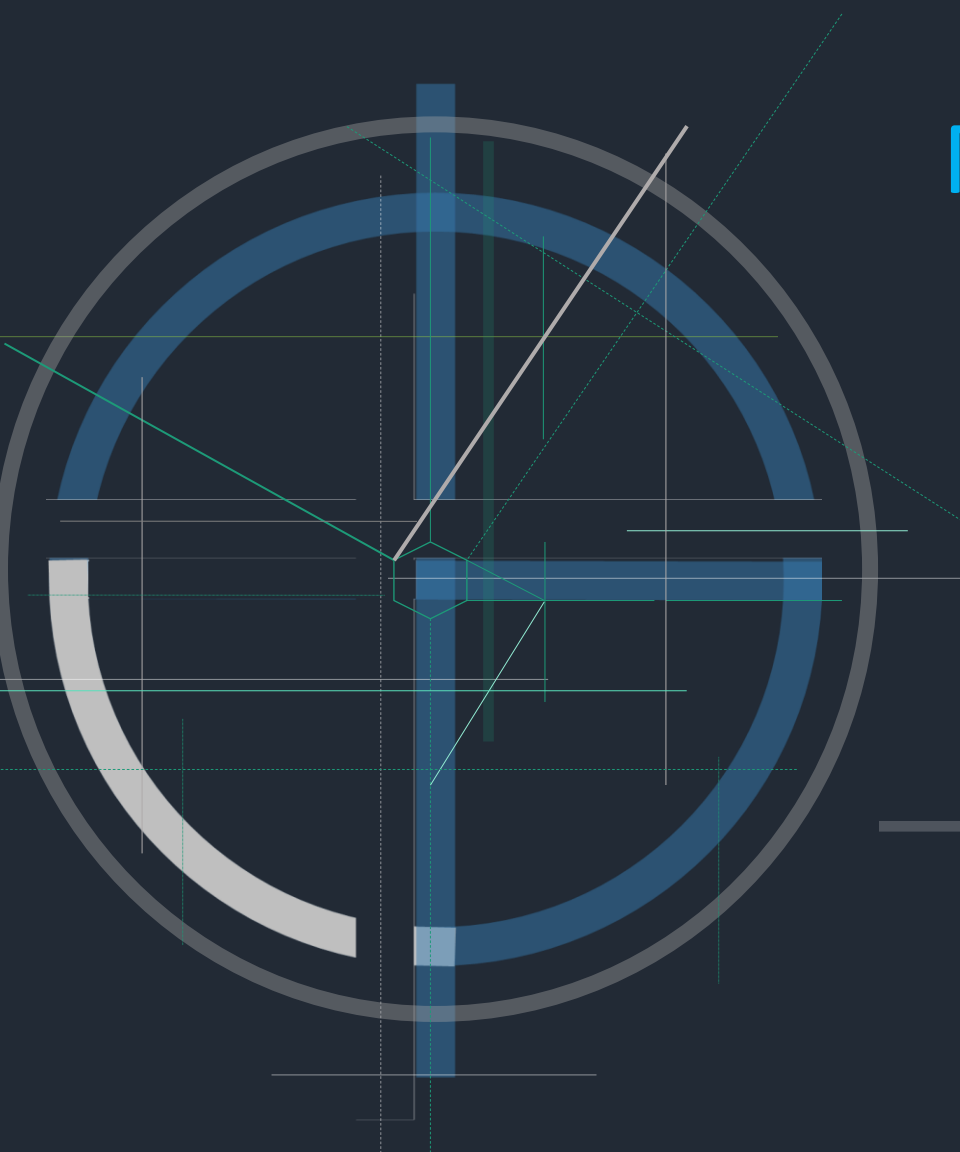




Management Review Reports

Assessment and Evaluation of
MP-Singapore Division's
Performance for the month of
January to December , 2019



Quality Commitment

Micro Precision is committed to meeting and exceeding customer expectations by providing complete, reliable, reproducible and accurate calibration and repair services in compliance with ISO/IEC 17025 and laboratory accreditation, and in accordance with stated methods and customer requirements. The quality and reliability of services offered by our company are maintained at levels meeting and exceeding the expectations of our customers and with contractual requirements. The quality management system is designed to achieve the Critical Success Factors.

Vision

To be a global leader in calibration services, test equipment solutions and engineering support services.

Mission

Our mission is to provide our customers with equipment management solutions; to create customer solutions through localized services on a global scale; and to promote growth opportunities and a rewarding work environment for our employees.

Overall Objective of the Review



- Assess and evaluate the previous Management Review Minutes for its effectiveness and task accomplishments of responsible individual designated to each specific area of responsibility.
- Evaluate division's operational procedures to ensure customer service guarantee.
- Evaluate division's performance thru goals accomplishment
- Formulate new strategies and goals to guide the company to achieve critical mission.



Review of Goals for 2020 (Quality Plan / KPI Targets)



ADEQUACY OF QUALITY SYSTEM

(Process Review for Suitability of Policies and Procedures)

Adequacy of Quality System



Admin Department

- (Policies / Procedure for review –title of Document or description of the process)
- Current implemented processes are still adequate to comply the Requirements and support the quality management system.



Technical Department

- (Policies / Procedure for review –title of Document or description of the process)
- Current implemented processes are still adequate to comply the Requirements and support the quality management system.



Quality Department

- (Policies / Procedure for review –title of Document or description of the process)
- Current implemented processes are still adequate to comply the Requirements and support the quality management system.

Adequacy of Quality System



Sales Department

- (Policies / Procedure for review –title of Document or description of the process)
- Current implemented processes are still adequate to comply the Requirements and support the quality management system.



PERSONNEL REVIEW

**(Personnel Movement, Training, Task
Assignment, and Other concerns)**

Personnel Review



Admin Department

➤ Department Manpower

Months	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Newly Hired	0	0	0	0	0	0	0	0	0	0	0	0
Transferred /Resignation	0	0	0	0	0	0	0	0	0	0	0	0
Current Department Headcount	1	1	1	1	1	1	1	1	1	1	1	1

➤ Department Trainings

- *Nothing to Report*

➤ Personnel Concerns / Personnel Requests

- *Nothing to Report*

Personnel Review



Technical Department

➤ Department Manpower

Months	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Newly Hired	0	0	0	0	0	0	0	1	0	0	0	0
Transferred /Resignation	0	0	0	0	0	0	0	0	0	0	0	0
Current Department Headcount	6	6	6	6	6	6	6	7	7	7	7	7

➤ Department Trainings

- *Nothing to Report*

➤ Personnel Concerns / Personnel Requests

- *Nothing to Report*

Personnel Review



Quality Department

➤ Department Manpower

Months	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Newly Hired	0	0	0	0	0	0	0	0	0	0	0	0
Transferred /Resignation	0	0	0	0	0	0	0	0	0	0	0	0
Current Department Headcount	1	1	1	1	1	1	1	1	1	1	1	1

➤ Department Trainings

- *Nothing to Report*

➤ Personnel Concerns / Personnel Requests

- *Nothing to Report*

Personnel Review



Sales Department

➤ Department Manpower

Months	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Newly Hired	0	0	0	0	0	0	0	0	0	0	0	0
Transferred /Resignation	0	0	0	0	0	0	0	0	0	0	0	0
Current Department Headcount	4	4	4	4	4	4	4	4	4	4	4	4

➤ Department Trainings

- *Nothing to Report*

➤ Personnel Concerns / Personnel Requests

- *Nothing to Report*



EQUIPMENT & FACILITIES REVIEW

**(Laboratory Projects, Equipment Acquisition,
Laboratory Physical Improvements)**



Admin Department

- Adequacy of Equipment and Facility Resources
 - *Equipment and current facility are adequate to support the current process*
- Current Projects
 - *Nothing to report*
- Future Plans and Projects
 - *Nothing to report*

EQUIPMENT and FACILITIES REVIEW



Technical Department

➤ Adequacy of Equipment and Facility Resources A. New Standard

CALIBRATION ID.	SERIAL NUMBER	DESCRIPTION	MANUFACTURER	MODEL	DATE RECEIVED
DB9116	1640J00201	DUT BOX	HEWLETT PACKARD	16361A	5-Apr.19
DR2957	3148J01436	HIGH RESISTANCE METER	HEWLETT PACKARD	4339A	14-May-19
DR7821	AF5555031	AC MEASUREMENT STANDARD	FLUKE	5790A	17-Jun-19
DR5501	337	PRECISION PHASE METER	KROHN-HITE	6620-2	19-Jun-19
DS3105	None	CURRENT SHUNT A40 14 PC SET	FLUKE	A40 20A	6-Aug-19
CA8286	32613	PRESSURE BALANCE	LR-CAL	LDW-HK	21-Aug-19
DS6599	TA900514/841201	LOAD CELL W/ READOUT	ZEMIC	BM14A-N10-100K-15YB-D08/SC2000	11-Sept-19
CA8311	190277	CONDUCTIVITY STANDARD SOLUTION 84US/CM @ 25	VWR	84.3 US/CM @ 25	4-Oct-19
CA8294	US39441011	OPTICAL ELECTRICAL MODULE	AGILENT	86105A	21-Nov-19
CA3814	19J114105	BUFFER SOLUTION PH 10.00	VWR	None	27-Nov-2019

EQUIPMENT and FACILITIES REVIEW



Technical Department

- Adequacy of Equipment and Facility Resources
- A. New Standard (*continuation...*)

CALIBRATION ID.	SERIAL NUMBER	DESCRIPTION	MANUFACTURER	MODEL	DATE RECEIVED
CA8293	3514A15473	AUDIO ANALYZER	HEWLETT PACKARD	8903B	8-Nov-19
DT4403	5745001	CALBRATOR CURRENT AMPLIFIER	FLUKE	5725A	3-Dec-19

B. Standard for External Calibration

CAL CONTROL	SERIAL NUMBER	DESCRIPTION	MANUFACTURER	MODEL	TYPE OF CALIBRATION	ACCREDITED CALIBRATION LABORATORY
CA8029	96346	TORQUE SCREWDRIVER TESTER	NORBAR	43212	EXTERNAL	NORBAR
CA8153	230302081004	HUMIDITY / TEMPERATURE TRANSMITTER	EYC-TECH CO.,LTD.	THS306-T181H001-XMS2	EXTERNAL	ISOLAB
CA8155	2823A17314	MULTIMETER	HEWLETT PACKARD	3458A	EXTERNAL	KEYSIGHT TECHNOLOGIES

EQUIPMENT and FACILITIES REVIEW



Technical Department

- Adequacy of Equipment and Facility Resources
 - B. Standard for External Calibration (*continuation...*)

CAL CONTROL	SERIAL NUMBER	DESCRIPTION	MANUFACTURER	MODEL	TYPE OF CALIBRATION	ACCREDITED CALIBRATION LABORATORY
CA8189	150600546	MULTI-FIELD EMF METER	TENMARS	TM-190	EXTERNAL	TENMARS
CA8242	AFL429756-209	THERMO-HYGRO GRAPH	ISUZU	TH-27R	EXTERNAL	ISOLAB
CA8243	AFL429756-210	THERMO-HYGRO GRAPH	ISUZU	TH-27R	EXTERNAL	ISOLAB
CA8275	22954-1812-15	CALIBRATION SCALE	KEYENCE	OP-87657	EXTERNAL	KEYENCE
CA8286	32613	PRESSURE BALANCE	LR-CAL	LDW-HK	EXTERNAL	MPC-GV
CA8287	2585	RESISTOR STANDARD	CAEAAHO B CCCP	P3030	EXTERNAL	CAEAAHO B CCCP
CA8288	CA8288	RESISTOR STANDARD	CAEAAHO B CCCP	P3030	EXTERNAL	CAEAAHO B CCCP
CA8295	CA8295	PIN GAUGE	YORKSHIRE PRECISION GAUGES	5.900 MM	EXTERNAL	Yorkshire Precision Gauges Laboratory
CA8296	CA8296	PIN GAUGE	YORKSHIRE PRECISION GAUGES	1.000 MM	EXTERNAL	Yorkshire Precision Gauges Laboratory
CA8297	CA8297	PIN GAUGE	YORKSHIRE PRECISION GAUGES	3.000 MM	EXTERNAL	Yorkshire Precision Gauges Laboratory

EQUIPMENT and FACILITIES REVIEW



Technical Department

- Adequacy of Equipment and Facility Resources
 - B. Standard for External Calibration (*continuation...*)

CAL CONTROL	SERIAL NUMBER	DESCRIPTION	MANUFACTURER	MODEL	TYPE OF CALIBRATION	ACCREDITED CALIBRATION LABORATORY
CA8300	01024 / 2182	LEVELMETER W/SENSOR	WYLER	A40	EXTERNAL	MPC-THAI BOI NEW
CA8311	190277	CONDUCTIVITY STANDARD SOLUTION	VWR	84.3 US/CM @ 25	EXTERNAL	VWR
CA8312	190234	CONDUCTIVITY STANDARD SOLUTION	VWR	12956US/CM @25'C	EXTERNAL	VWR
CA8313	19J144112	BUFFER SOLUTION (PHOSPHATE BUFFER)	VWR	PH 7.00	EXTERNAL	VWR
CA8314	19J114105	BUFFER SOLUTION PH 10.00	VWR	NA	EXTERNAL	VWR
CA8317	142875	PIN GAUGE	YORKSHIRE PRECISION GAUGES	1.270 MM	EXTERNAL	Yorkshire Precision Gauges Laboratory
CA8318	142876	PIN GAUGE	YORKSHIRE PRECISION GAUGES	1.778 MM	EXTERNAL	Yorkshire Precision Gauges Laboratory
CR6030	DE38200372	OPTICAL HEAD	AGILENT	81625A	EXTERNAL	Kesight Technologies Japan K.K Service Center

EQUIPMENT and FACILITIES REVIEW



Technical Department

- Adequacy of Equipment and Facility Resources
B. Standard for External Calibration (*continuation...*)

CAL CONTROL	SERIAL NUMBER	DESCRIPTION	MANUFACTURER	MODEL	TYPE OF CALIBRATION	ACCREDITED CALIBRATION LABORATORY
DB9116	1640J00201	DUT BOX	HEWLETT PACKARD	16361A	EXTERNAL	MPC-THAI BOI NEW
DH1020	MY52310009	AVERAGE POWER SENSOR	AGILENT	E9304A	EXTERNAL	Keysight Technologies Japan
AX9413	S9-20186	DIGITAL PRESSURE INDICATOR	HEISE	901 B	EXTERNAL	MPC-THAI BOI NEW
DC0354	3125A06380	NETWORK ANALYZER	HEWLETT PACKARD	8510C	EXTERNAL	MPC-GV
DB6128	200094	FREQUENCY SPECTRUM ANALYZER	ROHDE & SCHWARZ	FSU26	EXTERNAL	MPC-THAI BOI NEW
CH2775	2847A09652	SYNTHESIZED FUNCTION GENERATOR	HEWLETT PACKARD	3325B	EXTERNAL	Keysight Tehnologies Japan
AX8605	88213	SURFACE PLATE	WILBANKS INTNL	CERA-CHECK	EXTERNAL	MPC-THAI BOI NEW
AX8823	3318A19664	POWER SENSOR	HEWLETT PACKARD	8485A	EXTERNAL	Keysight Technologies Singapore (Sales)

EQUIPMENT and FACILITIES REVIEW



Technical Department

- Adequacy of Equipment and Facility Resources
B. Standard for External Calibration (*continuation...*)

CAL CONTROL	SERIAL NUMBER	DESCRIPTION	MANUFACTURER	MODEL	TYPE OF CALIBRATION	ACCREDITED CALIBRATION LABORATORY
CC8451	V0330143 / V0920024	HUMIDITY/TEMPERATURE INDICATOR & PROBE	VAISALA	HMI41 / HMP46	EXTERNAL	Unique Calibration Solution (UNICAL)
CE4257	43335	TORQUE TESTER	NORBAR	43189	EXTERNAL	Norbar Torque Tools
CE4535	43207	BLACK BODY CALIBRATION SOURCE	MIKRON INSTRUMENTS	M310	EXTERNAL	MPC-THAI BOI NEW



Technical Department

C. Standard with Incident Reports

- *Nothing to report*

D. Standards for Repair / Replacement

- *Nothing to report*



Technical Department

- Current Projects
 - *Nothing to report*

- Future Plans and Projects
 - *Nothing to report*



Quality Department

- Adequacy of Equipment and Facility Resources
 - *Equipment and current facility are adequate to support the current process.*

- Current Projects
 - *Nothing to report*

- Future Plans and Projects
 - *Nothing to report*



Sales Department

- Adequacy of Equipment and Facility Resources
 - *Equipment and current facility are adequate to support the current process*

- Current Projects
 - *Nothing to report*

- Future Plans and Projects
 - *Nothing to report*



MEASUREMENT, ANALYSIS & IMPROVEMENTS

MEASUREMENT, ANALYSIS & IMPROVEMENTS



Quality Department

➤ Corrective Action Reports

CUSTOMER CODE	CAR No.	Description of Non-Conformity	Root Cause of Nonconformity	Corrective Action Taken	Status
ANAB EMAIL	CAR No. 032219-SG44	ANAB received complaint from MPC Singapore's customer in January 2019, and in the complaint, it was mentioned that they had asked MPC Singapore to amend the attached certificate to indicate those measurements which were not listed on the MPC Singapore laboratory scope. ANAB have verified that MPC Singapore laboratory issued a certificate which reported both accredited and non-accredited data without the annotations identifying the non-accredited data and They are requesting the laboratory to investigate how or why this may have occurred. The review of the certificate also discovered there were uncertainties reported that were numerically lower than those listed on the Singapore laboratory's scope of accreditation.	The technician inadvertently used a wrong datasheet, which he gathered from the old files of other technician. The said datasheet was unverified and neither downloaded from MP Database system. He did not made any communication to the TQDG team to verify if the datasheet he use is updated, validated and correct. The technician also failed to identify parameters that is within the scope of accreditation and which are not covered by the scope, although the lab is capable to do all the ranges, but various test are not in their scope of accreditation	TQDG is cleaning up the MP Database system and tasked to upload verified datasheet (updated and corrected). The system have tagging system to ensure that only verified datasheet will be available to technicians upon searching and downloading from the system. Should the needed datasheet was not available, ticket request must made to create new datasheet by TQDG. The technician requested a new datasheet for BK PRECISION- LCR METER and revised the calibration report. All parameters and test points that are covered and not covered by MP SG scope of accreditation were duly identified. Uncertainty reported were revised as well with consideration to their current scope of accreditation. Re-issuance of Calibration Report No. 551220083044339 to Customer last May 31 2019 has been made. Attached is the copy of the corrected report.	Corrected Action Report has been acknowledged by ANAB last June 4, 2019

MEASUREMENT, ANALYSIS & IMPROVEMENTS



Quality Department

➤ RISK ASSESSMENT & ACTION IMPLEMENTATION

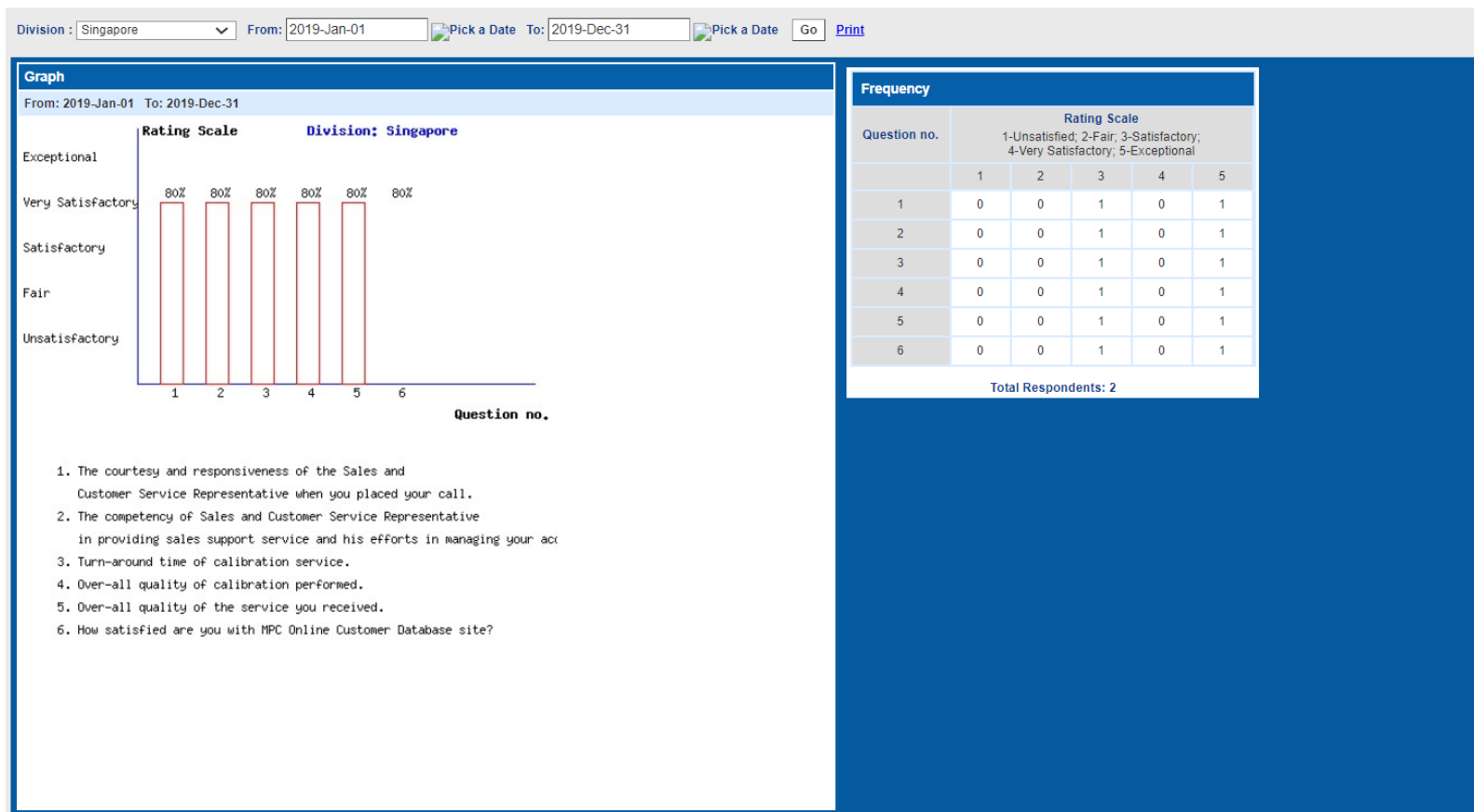
MP Process	Calibration Process	Analysis Created by:	Joel De Vera	Likelihood 3 6 9 2 4 6 1 2 3 Low Medium High Severity						
Risk Type	Operational		Last Updated Date:		1-Dec-19					
MP Area	Technical									
Risk Analysis					Risk Mitigation Plan					
Potential Risk	Root Cause of Risk	SEV Rating	Likelihood Rating	R.P.N.	Risk Mitigation Actions	Responsible	SEV Rating	Likelihood Rating	Improved R.P.N.	Result
Incorrect reporting of laboratory environment condition due to misreading.	Poor illumination and insufficient lightning inside the laboratory.	1	1	1	Monitoring only. No mitigation required.				0	
Misplaced parts/accessories.	Accessories used in the calibration of the main equipment were not returned to its box/case and not endorsed to QC Area together with the main equipment.	1	1	1	Monitoring only. No mitigation required.				0	
Delay of calibration of customer equipment in the lab.	Delay performance of the calibration technician that will calibrate the unit due to onsite schedule.	2	1	2	Monitoring only. No mitigation required.					
	(Add New Identified Risk per process as identified by the process owner or the organization).			0					0	

MEASUREMENT, ANALYSIS & IMPROVEMENTS



Quality Department

➤ Customer Satisfaction Survey



MEASUREMENT, ANALYSIS & IMPROVEMENTS



Quality Department

➤ Customer Satisfaction Feedbacks

- *Nothing to Report*

MEASUREMENT, ANALYSIS & IMPROVEMENTS



Quality Department

➤ Customer Complaint Review

MEASUREMENT, ANALYSIS & IMPROVEMENTS



Quality Department

- **Customer Audits and Visits for the Month**
 - *Nothing to report*

- **Customer Audits and Visits Summary**
 - *Nothing to report*

MEASUREMENT, ANALYSIS & IMPROVEMENTS



Quality Department

➤ Internal Audit

- *Internal Audit 2019*

Audit Report No. : IAR-SG-09062019-Internal Audit Report September 2019-MP Singapore

Release Date: September 6, 2019

➤ External Audits (Accreditation or Certification Audit)

- *Nothing to report*

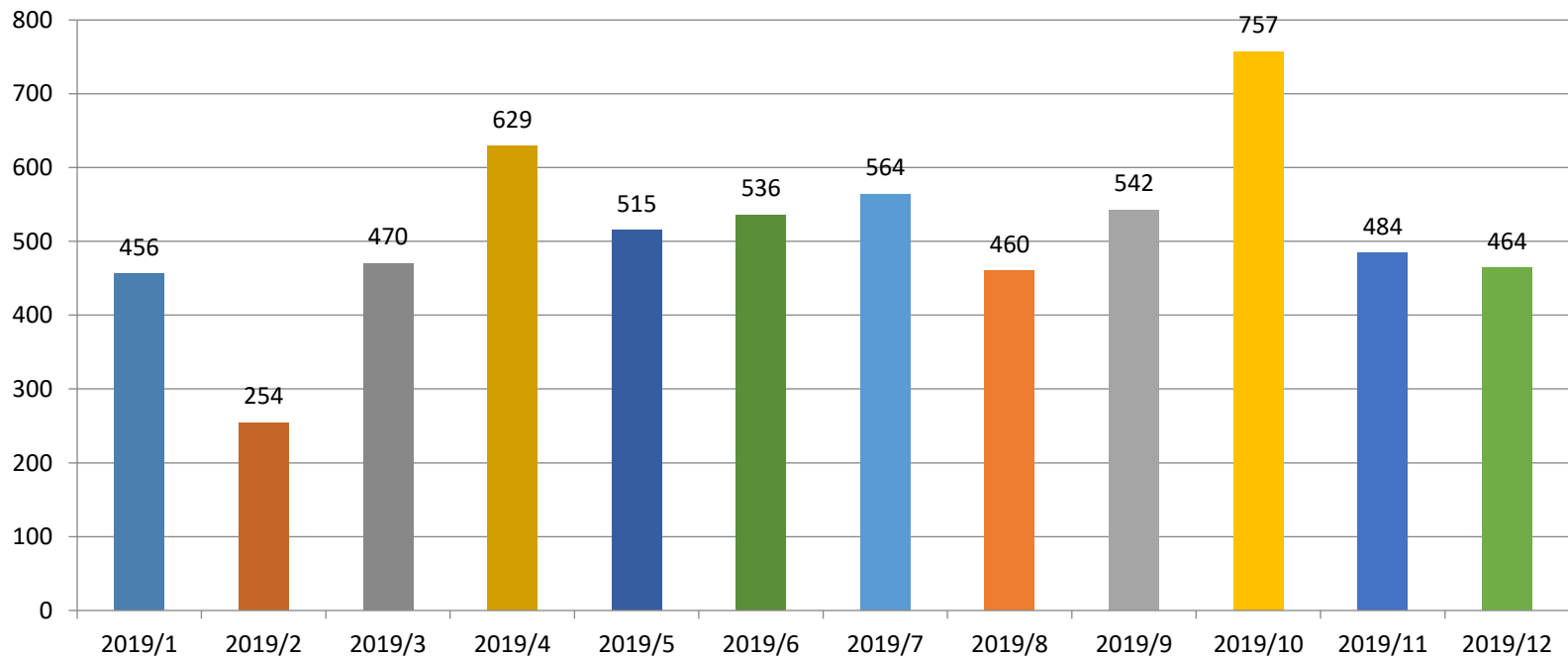
MEASUREMENT, ANALAYSIS & IMPROVEMENTS



Technical Department

➤ Monthly Calibration Performance

Monthly cal. number in 2019



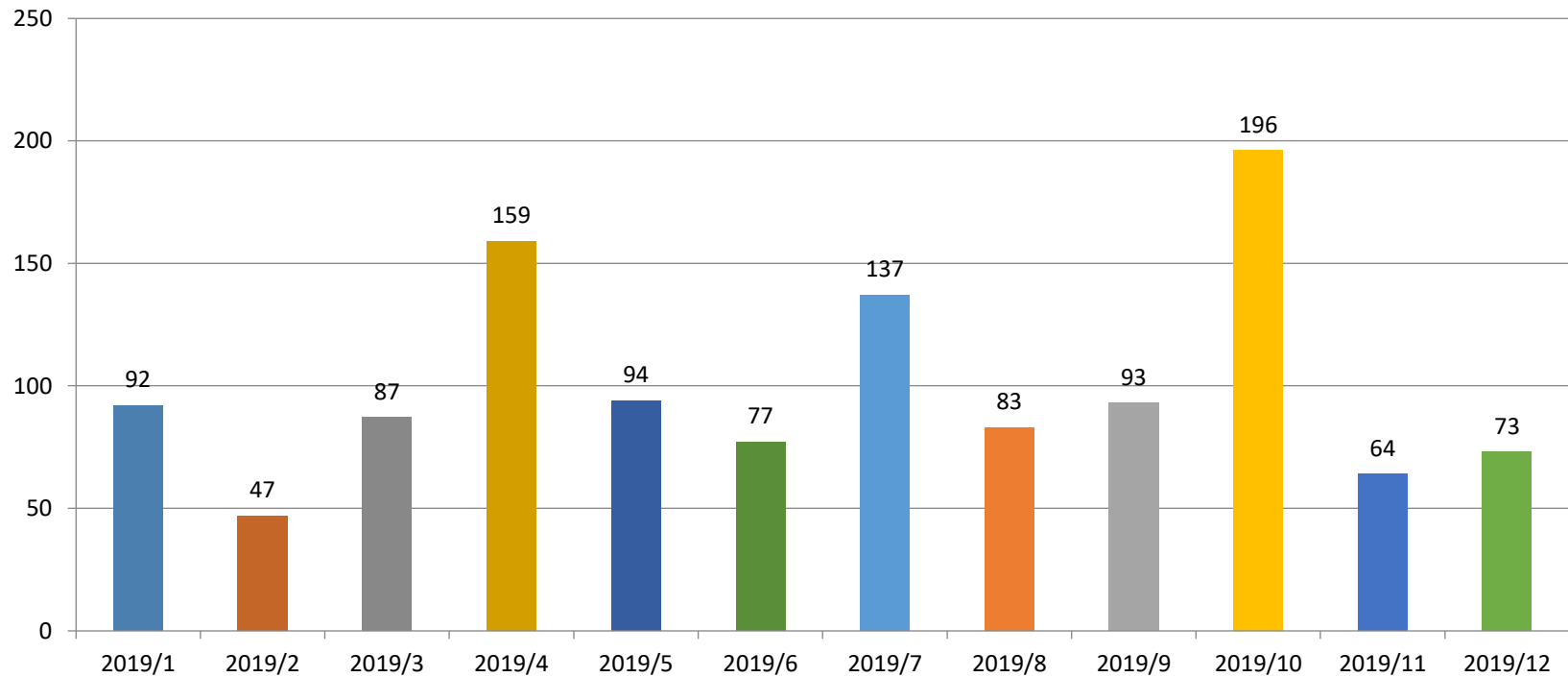
MEASUREMENT, ANALAYSIS & IMPROVEMENTS



Technical Department

➤ Technician Calibration Performance

RICHARD TAY



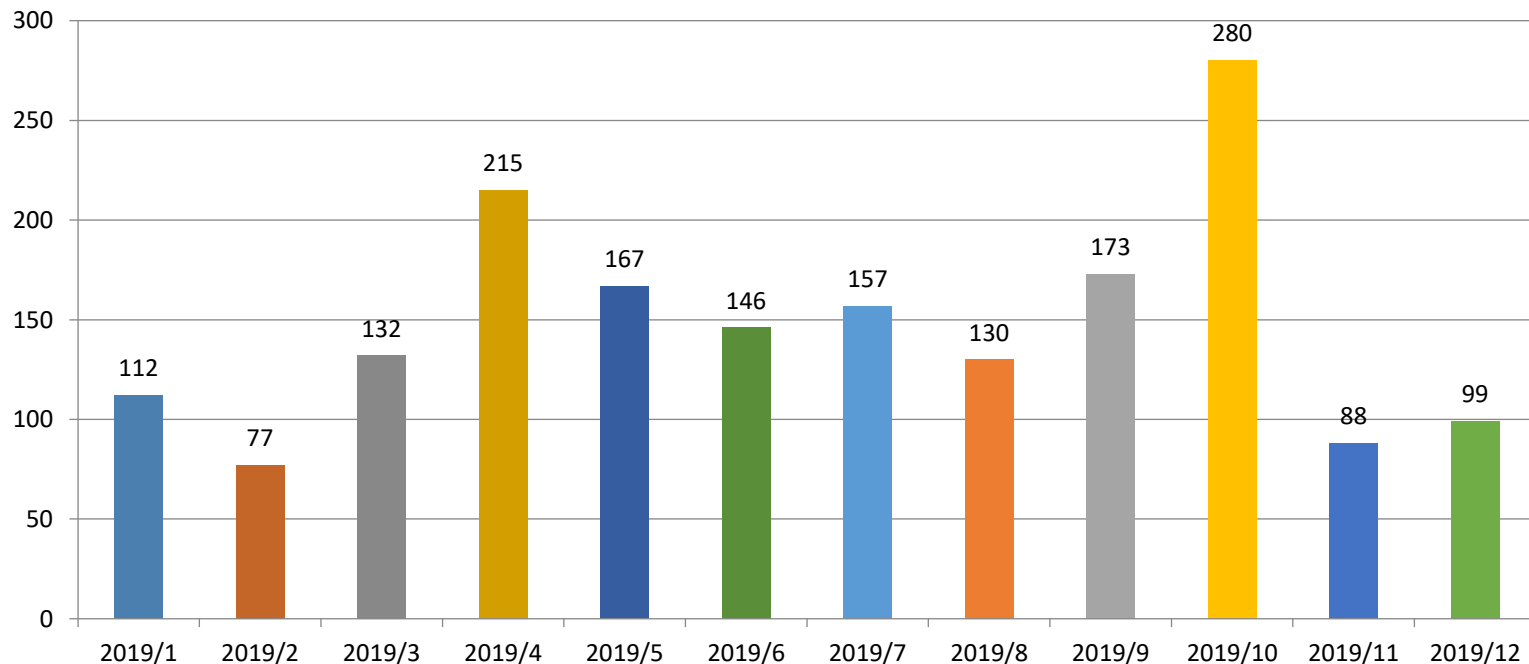
MEASUREMENT, ANALYSIS & IMPROVEMENTS



Technical Department

➤ Technician Calibration Performance

ZHIYUAN LIM



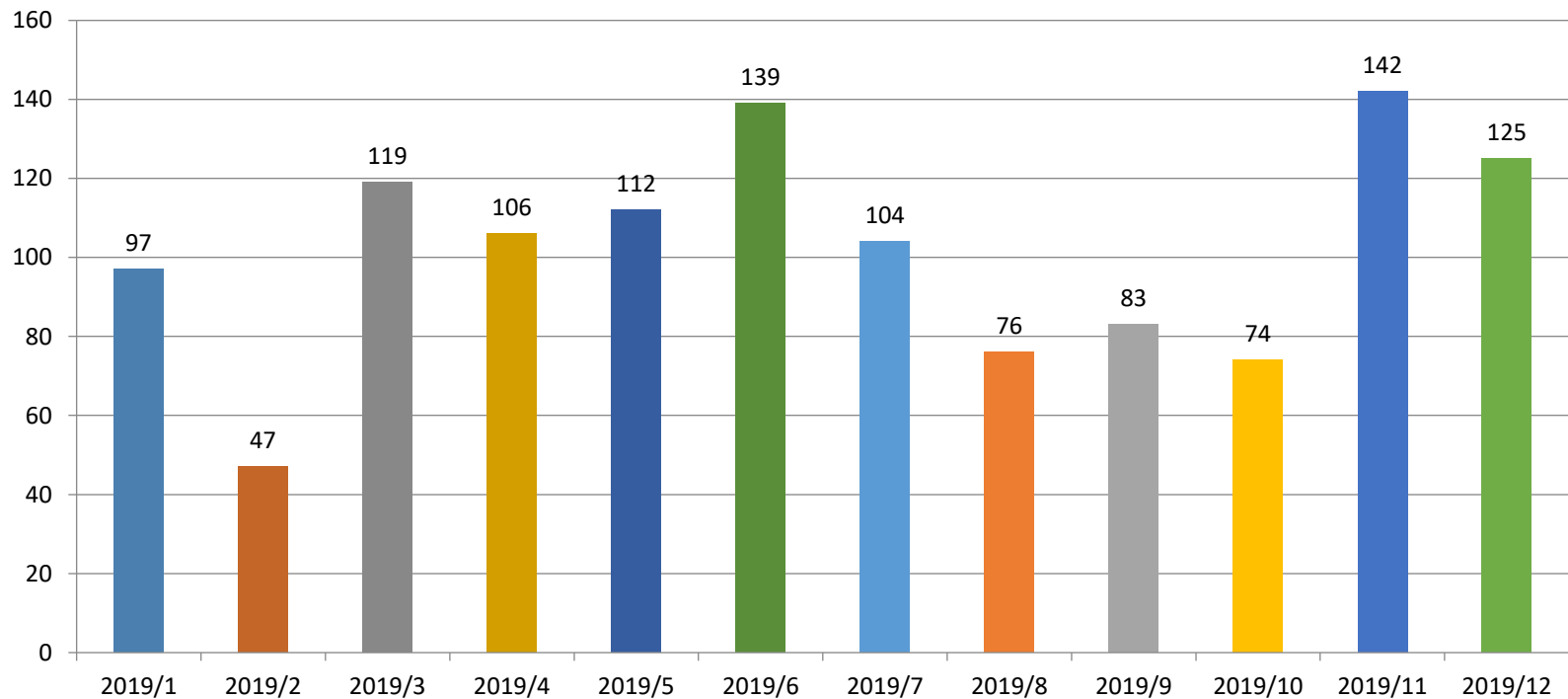
MEASUREMENT, ANALAYSIS & IMPROVEMENTS



Technical Department

➤ Technician Calibration Performance

DIVIEERNRAJ CHANDRAN



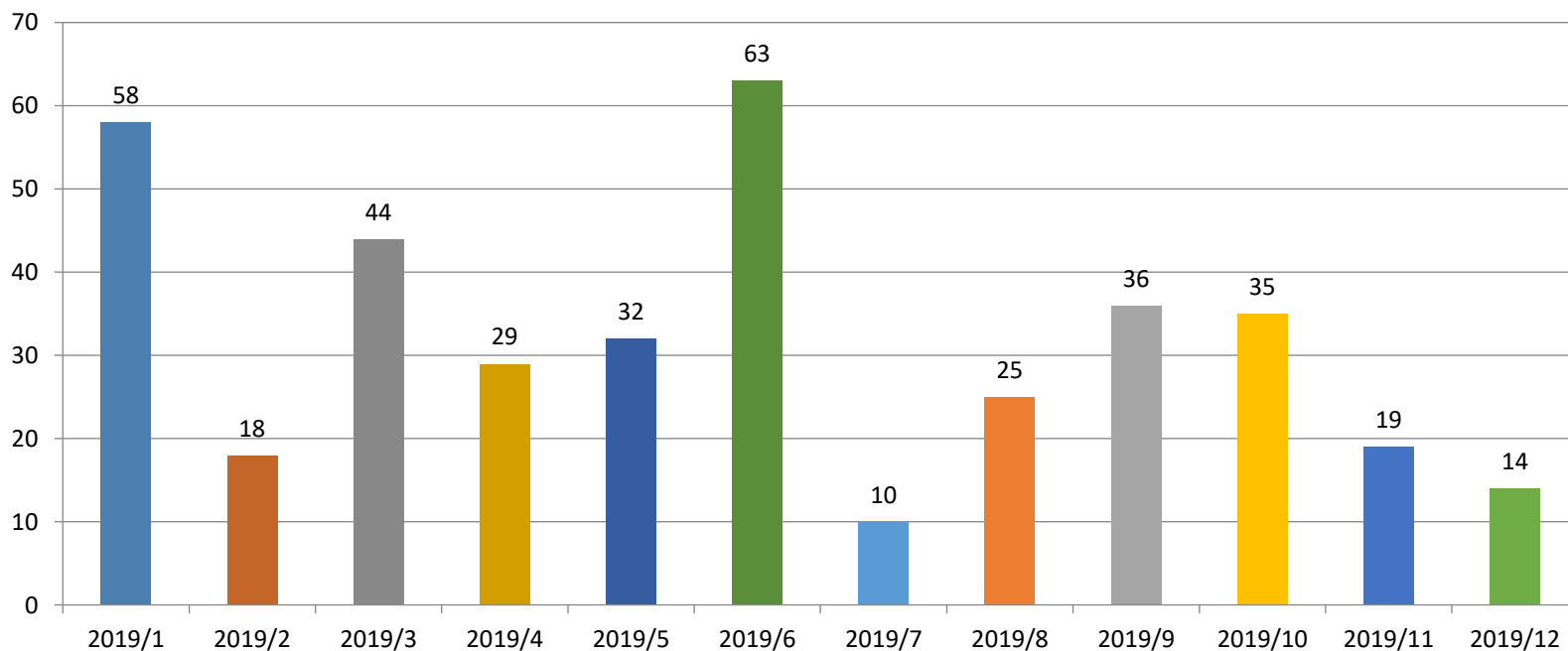
MEASUREMENT, ANALAYSIS & IMPROVEMENTS



Technical Department

➤ Technician Calibration Performance

JOEL DE VERA



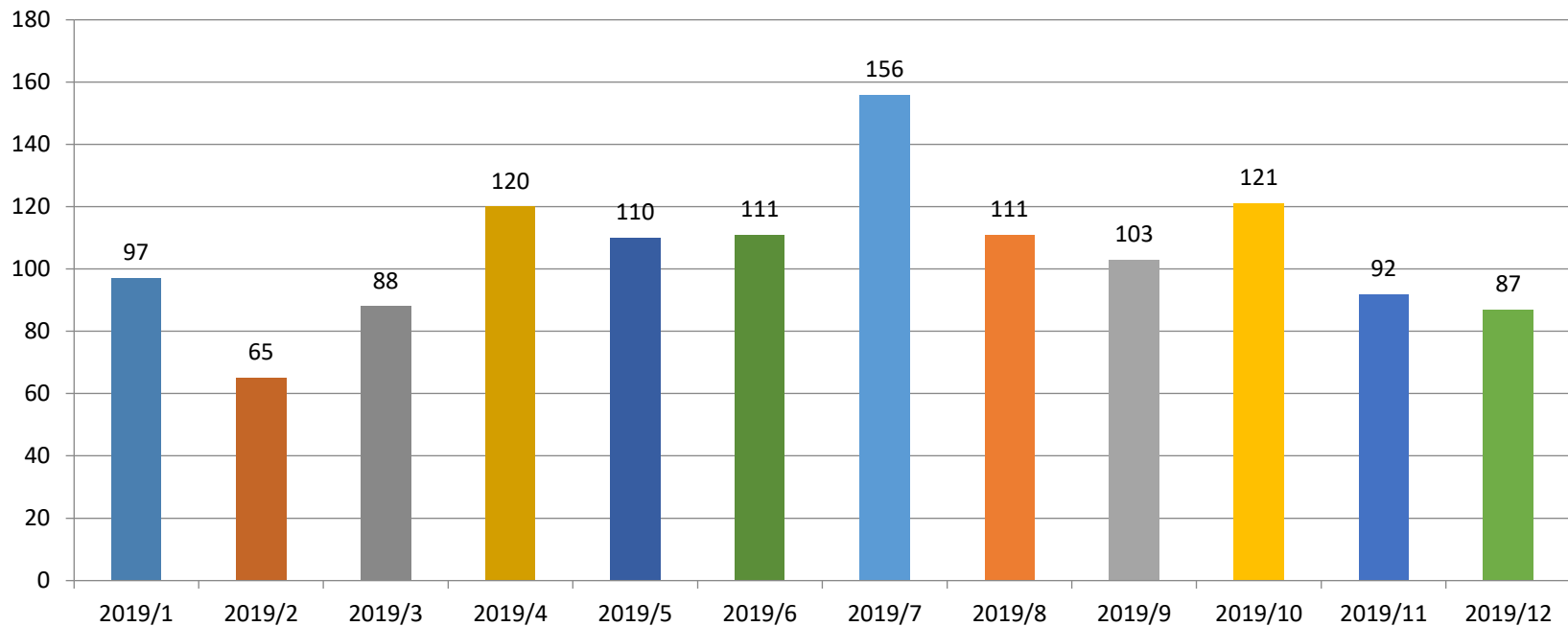
MEASUREMENT, ANALAYSIS & IMPROVEMENTS



Technical Department

➤ Technician Calibration Performance

SENGTHYE CHEW



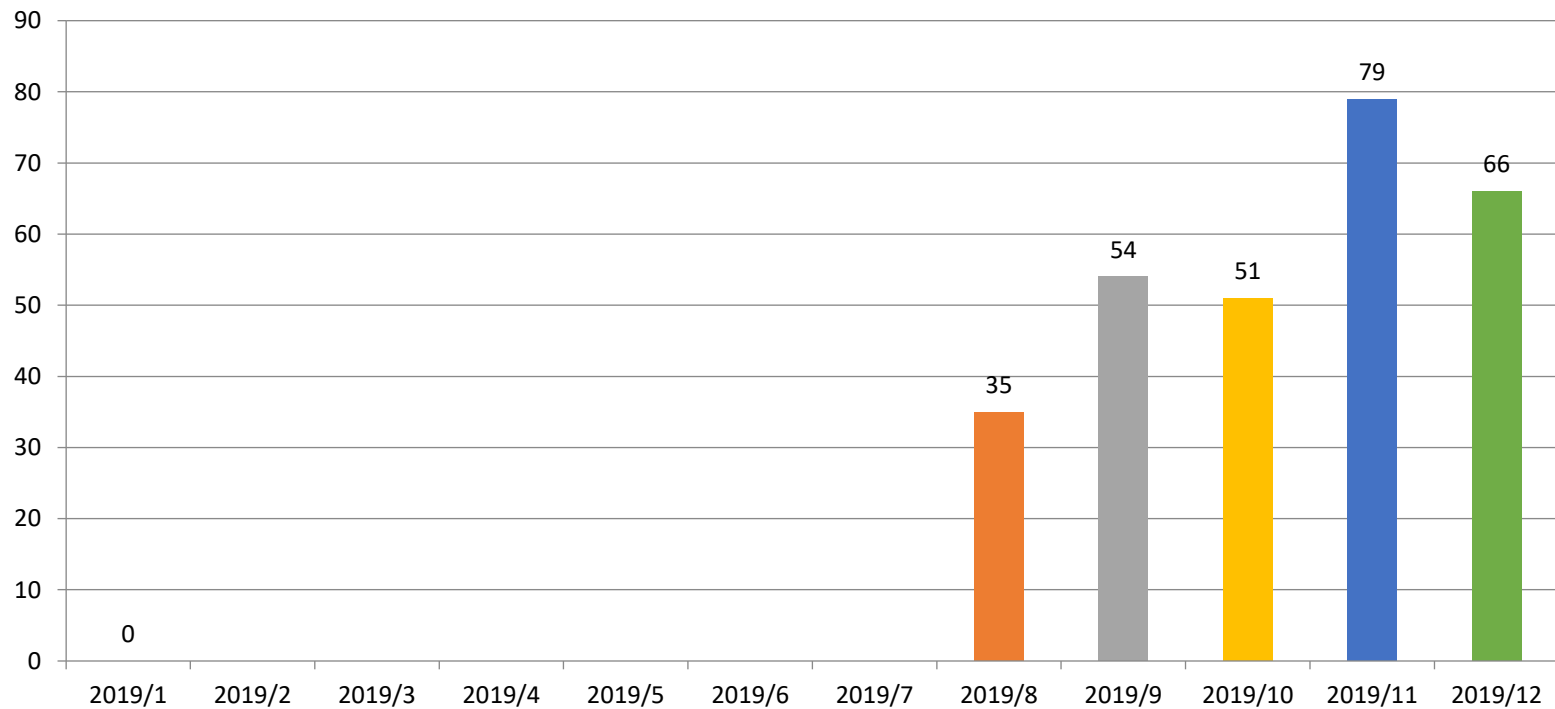
MEASUREMENT, ANALAYSIS & IMPROVEMENTS



Technical Department

➤ Technician Calibration Performance

YIOK TEE CHUA



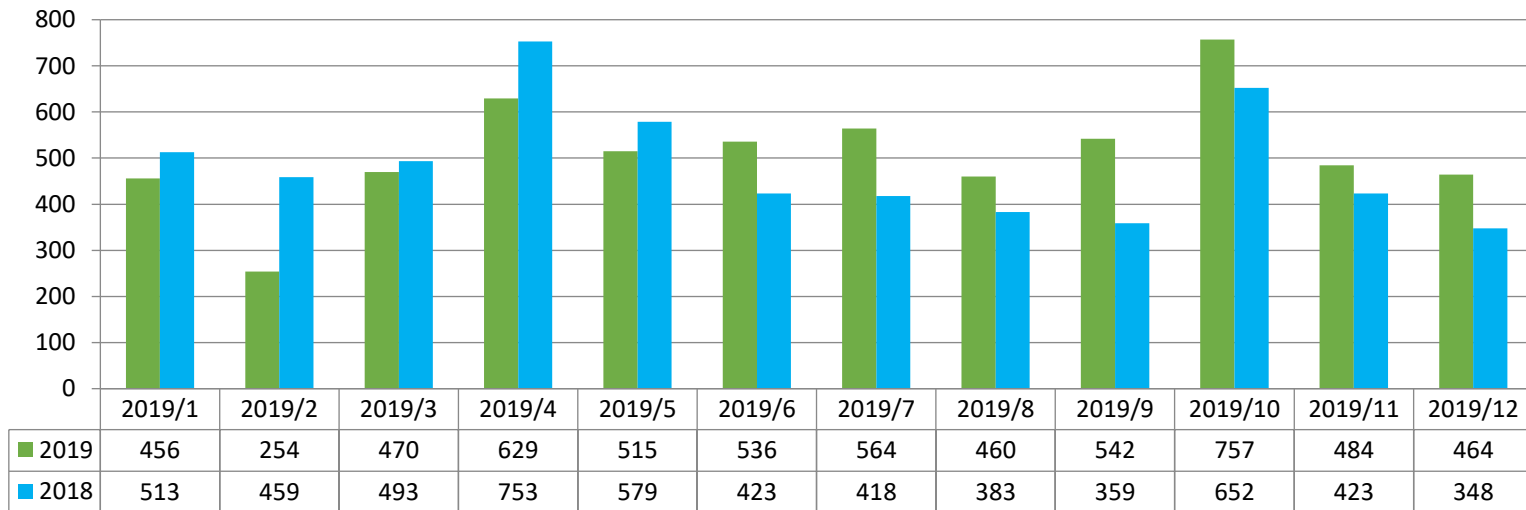
MEASUREMENT, ANALAYSIS & IMPROVEMENTS



Technical Department

➤ Calibration Performance Comparison –2018 vs. 2019

Comparison of monthly cal. number between 2019 and 2018



Interpretation:

- There are **6,131** units with **+3.28% percentage ratio increased** in calibration Jobs for the Year **2019** compare to Last year 2018 result.

MEASUREMENT, ANALYSIS & IMPROVEMENTS



Technical Department

➤ Proficiency Testing 2020

Year	Scope Discipline	Target Testing Date	Provider	Status
2019	Inductance	November 2019	MP Interlab	On-going
	Vibration	November 2019	MP Interlab	On-going
	Torque	November 2019	MP Interlab	On-going
2020	Viscosity Meter	June 2020	MP Interlab	Planned
	Gage Block	June 2020	MP Interlab	Planned
	Pressure	June 2020	MP Interlab	Planned
	IR Thermometer	June 2020	MP Interlab	Planned

MEASUREMENT, ANALAYSIS & IMPROVEMENTS



Sales Department

- **Summary of Equipment Quoted as Not Capable**
 - *Nothing to Report*

- **Scope expansion opportunities**
(from Items quoted as not capable)
 - *Nothing to Report*

MEASUREMENT, ANALYSIS & IMPROVEMENTS



Admin Department

- **Summary of Back Job Calibration**
 - *Nothing to Report*

- **Summary of Returned Equipment Due to No Standards**
 - *Nothing to Report*

MEASUREMENT, ANALYSIS & IMPROVEMENTS



Admin Department

- **Summary of Returned Equipment Due to Not Capable**
 - *Nothing to Report*

- **Summary of Returned Equipment Recommended for Onsite**
 - *Nothing to Report*



DEPARTMENTAL ACTION ITEMS

ACTION ITEMS



Admin Department

- **New Action Items:**
 - *Nothing to Report*

- **Open Action Items from Previous Months**
 - *Nothing to Report*

ACTION ITEMS



Sales Department

- **New Action Items:**
 - *Nothing to Report*

- **Open Action Items from Previous Months**
 - *Nothing to Report*

ACTION ITEMS



Quality Department

- **New Action Items:**
 - *Nothing to Report*

- **Open Action Items from Previous Months**
 - *Nothing to Report*

ACTION ITEMS



Technical Department

- **New Action Items:**
 - *Nothing to Report*

- **Open Action Items from Previous Months**
 - *Nothing to Report*



Management Review Meeting Schedules

MRM Attendance



JANUARY 2020

Name	Position
Zheng Jian Juan	Division Manager
Joel De Vera	Laboratory Manager
Li Yan Yan	Sales Engineer
Wang Jian Ying	Senior Account Admin

Management Meeting Schedule



ANNUALLY

➤ **Frequency of Meeting:**

- *Planned date of MR meeting are concluded below, however subject to changes depending on the workloads and/or availability of the management personnel.*
- *Changes will be communicated to the management team via email, skype or during the meeting itself.*

➤ **Schedule and Completion Date**

January 2021

Thank You!



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