

The Division of Mechanical and Electrical

MUDA AGRICULTURE DEVELOPMENT AUTHORITY (MADA)



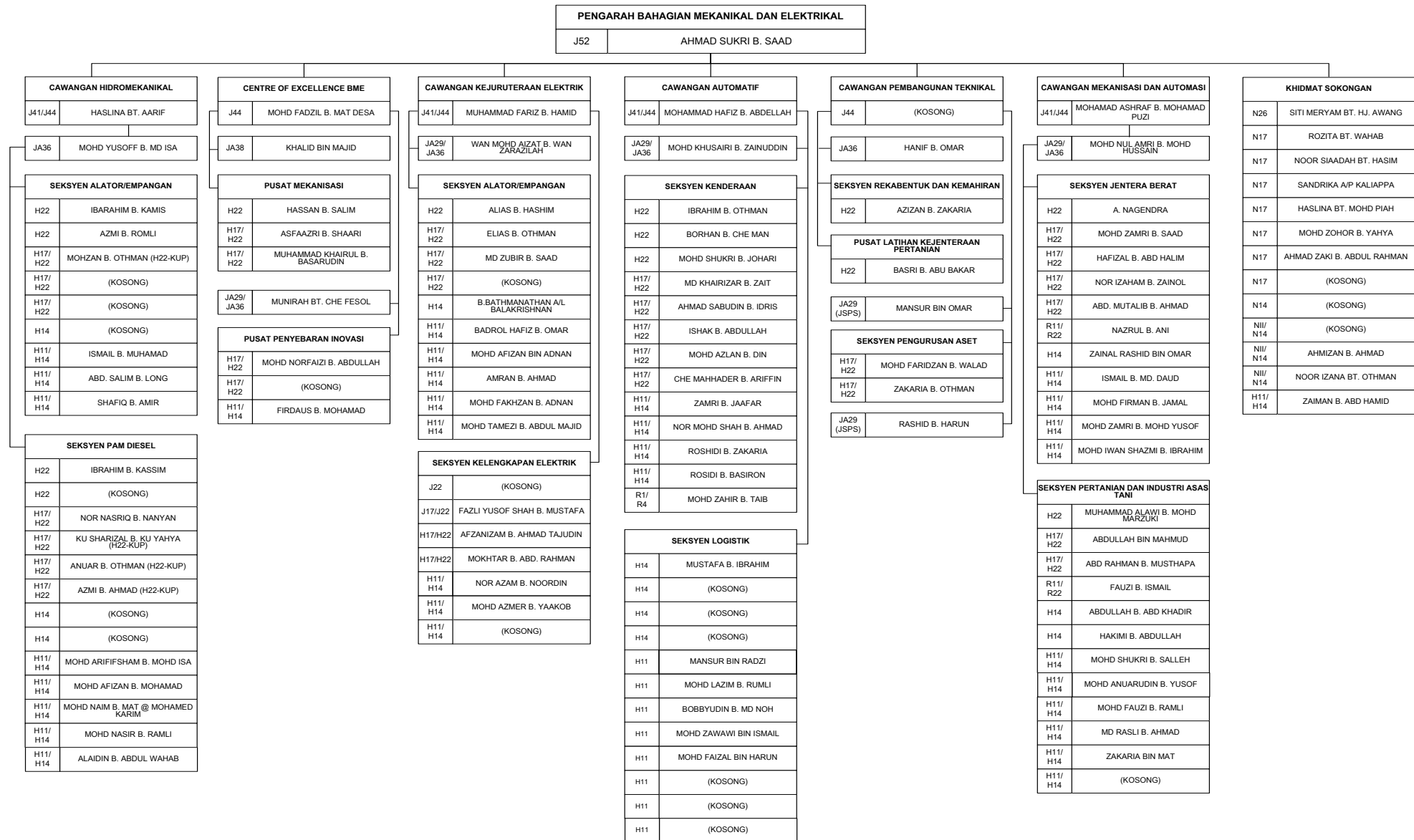
THE INTRODUCTION

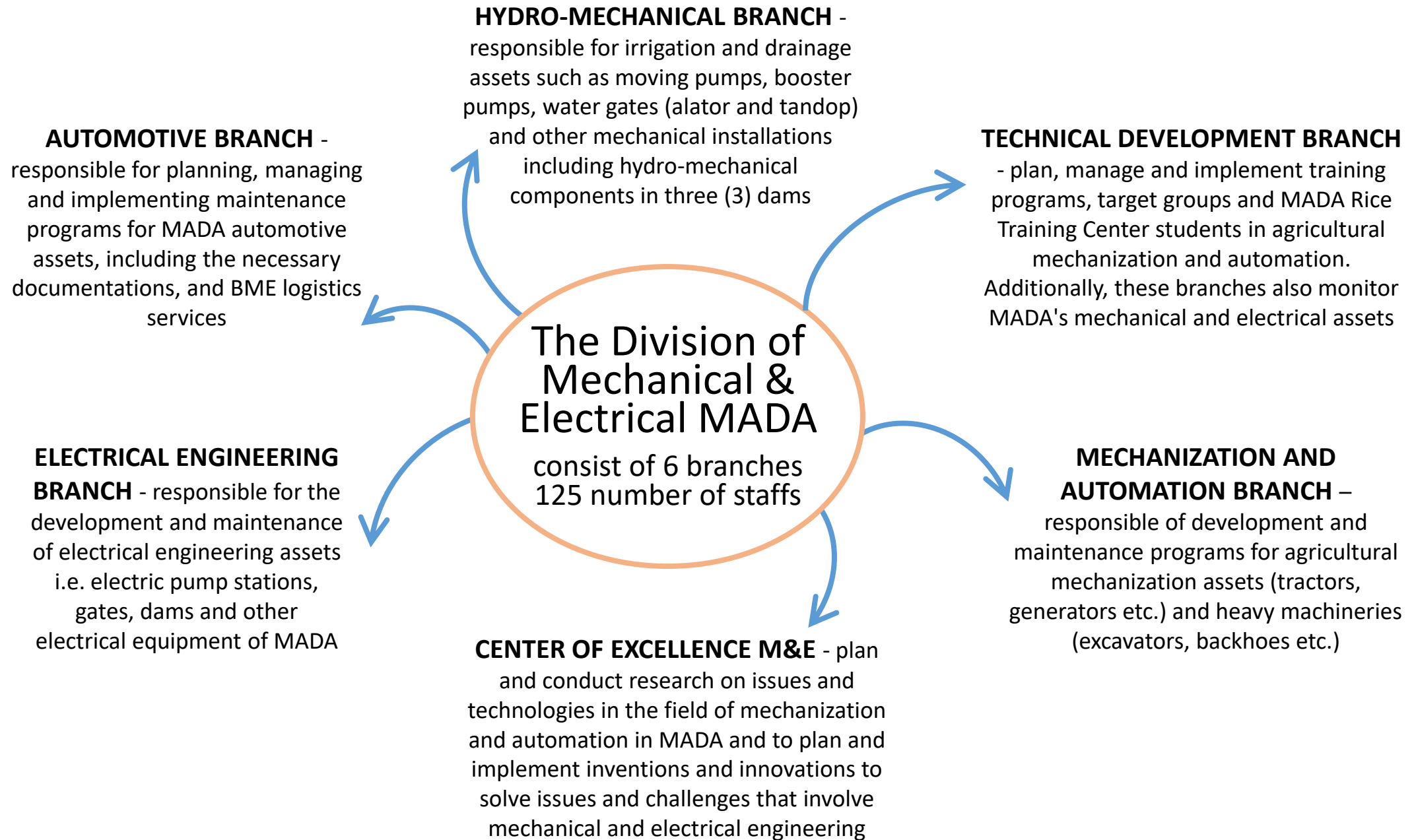
division of mechanical and electrical

- Previously we are known as Branch of Mechanical Service, a small branch in MADA
- Later in 16th November 2015, we are being recognized by the management and upgraded to become Division of Mechanical and Elektrikal (BME)
- Located in Jitra, Kedah, BME is 1 of the 10 division in MADA
- Our functions are to plan, manage and execute M&E engineering programs and projects for MADA
- Supporting all 9 division for M&E engineering related matter
- Yearly operational expenditure is estimated at USD680k and capital expenditure is USD790k, total is **USD1.47m yearly**

ORGANIZATION CHART

division of mechanical and electrical





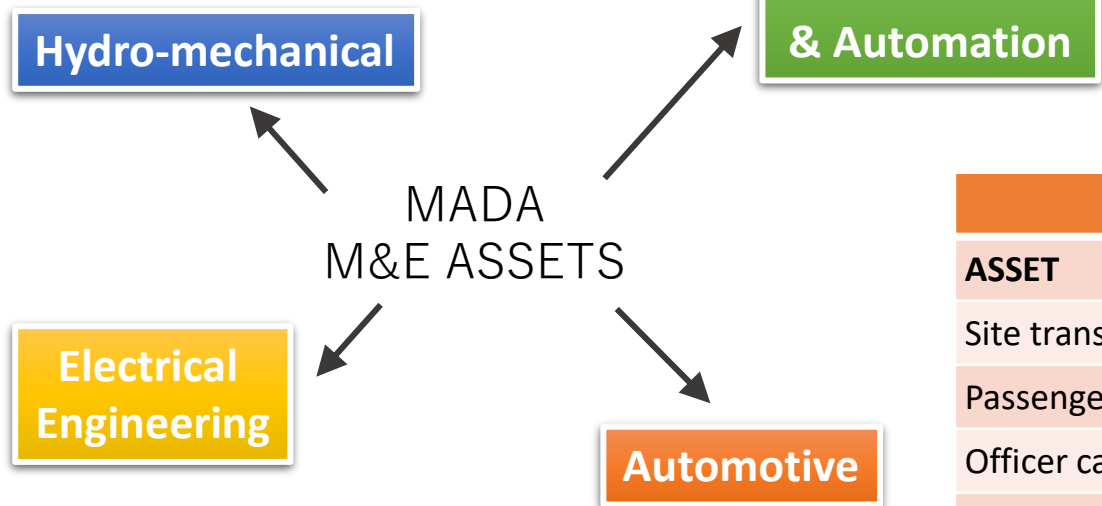
SLUICE GATE	
STRUCTURE/ASSET	QTY
Offtake	5
Regulator	33
Tidal Gate	26
Barrage	3
Syphon	3
Dam	3
TOTAL STRUCTURE	73
TOTAL GATE	173

DIESEL PUMP	
STRUCTURE/ASSET	QTY
Diesel Pump House	23
Electric Pump House	36
TOTAL STRUCTURE	59
Mobile Pump 4"	599
Mobile Pump 6"	222
Diesel Screw Pump	24
Electric Screw Pump	57
TOTAL PUMP	902

HEAVY MACHINERIES	
ASSET	QTY
Excavator	14
Backhoe	11
Boat	21
Forklift	21
Generator	12
Other	9
TOTAL	88

AGRICULTURE	
ASSET	QTY
Harvester	10
Tractor	118
Transplanter	13
Power Tiller	15
Grass Cutter	214
Round Baler	15
Other	348
TOTAL	733

ELECTRIC PUMP	
STRUCTURE/ASSET	QTY
ESP Station	121
Electric Pump Station	35
ESP Station (new MADA)	13
TOTAL STRUCTURE	169
ESP	237
Electric Pump	57
ESP (MADA Baru)	66
TOTAL PUMP	360



TRANSPORTATION	
ASSET	QTY
Site transport	53
Passenger carrier	50
Officer carrier	12
Truck	28
Motorbike	9
TOTAL	152






MAINTENANCE

mechanical and electrical assets

- Maintenance covers scheduled and unscheduled maintenance (repair)
- Every year, all branches will produce a schedule for the maintenance of each particular asset which is under their supervision
- The scheduled maintenances are usually done at site and most of the unscheduled maintenances are brought back to BME
- In general, the scope of works are inclusive of but not limited to;
 - a) Interview
 - b) Visual inspection
 - c) Repair
 - d) Servicing of engine
 - e) Servicing of hydraulic system
 - f) Greasing
 - g) Cleaning
 - h) Functionality test

MAINTENANCE

mechanical and electrical assets

Asset			
	ENGINE PUMP SET	SLUICE GATE	HEAVY MACHINERY
Scheduled	<ol style="list-style-type: none"> 1. Interview the operator 2. Visual inspection <ul style="list-style-type: none"> • Pump body • Piping 3. Engine servicing 4. Greasing (if applicable) 5. Functionality test 	<ol style="list-style-type: none"> 1. Interview the operator 2. Visual inspection <ul style="list-style-type: none"> • Parts (wire rope, rod, shaft) • Hydraulic (pump, pipe, leaking) • Electrical (abnormalities) 3. Hydraulic system servicing 4. Greasing 5. Functionality test 	<ol style="list-style-type: none"> 1. Interview the operator 2. Visual inspection <ul style="list-style-type: none"> • Parts (under carriage, boom) • Hydraulic (pump, pipe, leaking) 3. Engine servicing 4. Hydraulic system servicing 5. Functionality test
	Unscheduled	<ol style="list-style-type: none"> 1. Bring back to BME 2. Troubleshooting 3. Repair/replace parts 4. Functionality test 5. Send back to site 	<ol style="list-style-type: none"> 1. Repair/order parts 2. Back to site for installation 3. Functionality test

PEOPLE@WORK

mechanical and electrical engineering



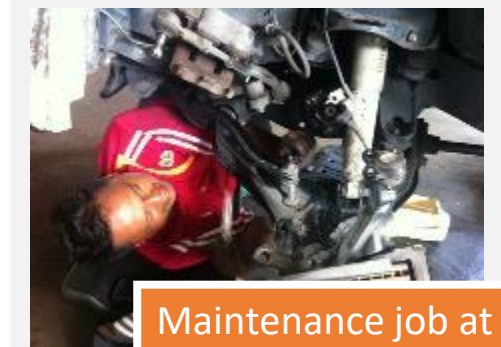
Excavator shoes repairing work at site



Instalation of 10" pump with engine at site



Refurbishment of old water gate at site

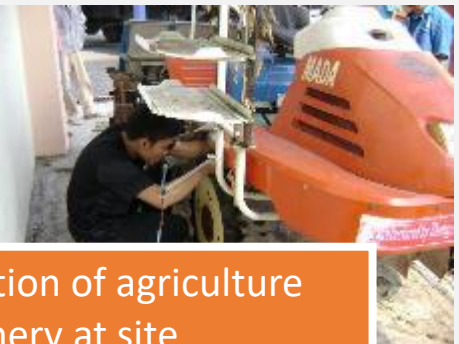


Maintenance job at the branch workshop



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mechanical and electrical engineering



Inspection of agriculture machinery at site



Installation work of ESP at site



Theory and hands-on training in the classroom & workshop



Data collection job for research and technology adaptation test



THE WAY FORWARD

division of mechanical and electrical

- During the early days of MADA, the private sector was not well established yet, thus MADA was enabled to do everything by itself
- MADA has all the resources, from machineries, operators and mechanics
- As Malaysia grows, the businesses bloom and now we can find all kind of products and services that are provided by the private sector
- Therefore, more of our works are being outsourced now, and we are more focusing on repair work, fault finding and troubleshooting instead of schedule maintenance
- Some of the machineries were already disposed such as motor grader, mobile crane etc
- More and more farmers are buying their own machineries now and BME will focus more on training as to empower the farmers, reduce their operation cost, better the operation and increase their yield and income

THANK YOU

