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PLN

# Great Achievement of RBL-ADB for Electricity Grid Strengthening Sumatra Program

PT PLN (Persero)  
REGIONAL SUMATERA - INDONESIA

2019 Southeast Asia Regional  
Forum on Successful Project  
Design And Implementation

Phnom Penh, Cambodia  
30<sup>th</sup> July – 1<sup>st</sup> August 2019

Presented by: **M. Tagor E B Sidjabat**  
Previouslly Expert Business of PT PLN (Persero) Sumatra Region - INDONESIA

**Proper Emas 2018**  
**PLTU Paiton & PLTDG Pesanggaran**



PLTDG Pesanggaran

[www.pln.co.id](http://www.pln.co.id)



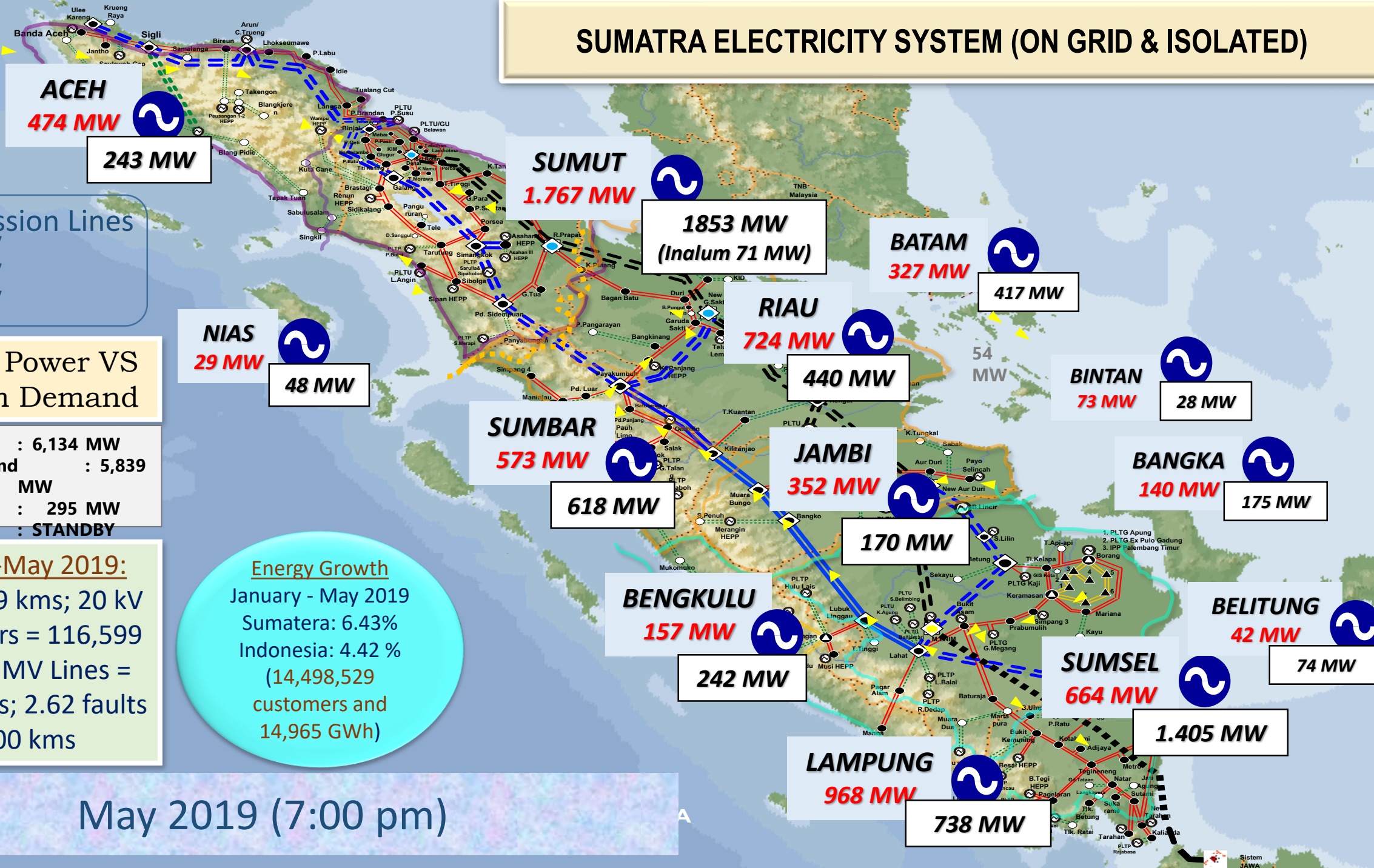
# Sumatra Region

## SUMATRA ELECTRICITY SYSTEM & PROJECT OVERVIEW

1

Electric Power Generation, Transmission Lines, Distribution Networks, Customer Services

# SUMATRA ELECTRICITY SYSTEM (ON GRID & ISOLATED)



**ACEH**  
474 MW  
243 MW

**SUMUT**  
1.767 MW  
1853 MW  
(Inalum 71 MW)

**BATAM**  
327 MW  
417 MW

**RIAU**  
724 MW  
440 MW

**BINTAN**  
73 MW  
28 MW

**NIAS**  
29 MW  
48 MW

**SUMBAR**  
573 MW  
618 MW

**JAMBI**  
352 MW  
170 MW

**BANGKA**  
140 MW  
175 MW

**BENGKULU**  
157 MW  
242 MW

**BELITUNG**  
42 MW  
74 MW

**SUMSEL**  
664 MW  
1.405 MW

**LAMPUNG**  
968 MW  
738 MW

**Transmission Lines**  
— 500 kV  
— 275 kV  
— 150 kV

**Available Power VS Maximum Demand**

Available Power : 6,134 MW  
Maximum Demand : 5,839 MW  
Reserve : 295 MW  
Status : **STANDBY**

**Energy Growth**  
January - May 2019  
Sumatera: 6.43%  
Indonesia: 4.42 %  
(14,498,529 customers and 14,965 GWh)

**Networks-May 2019:**  
T/L = 18,729 kms; 20 kV Transformers = 116,599 pcs; 2,462 MV Lines = 120,529 kms; 2.62 faults per 100 kms

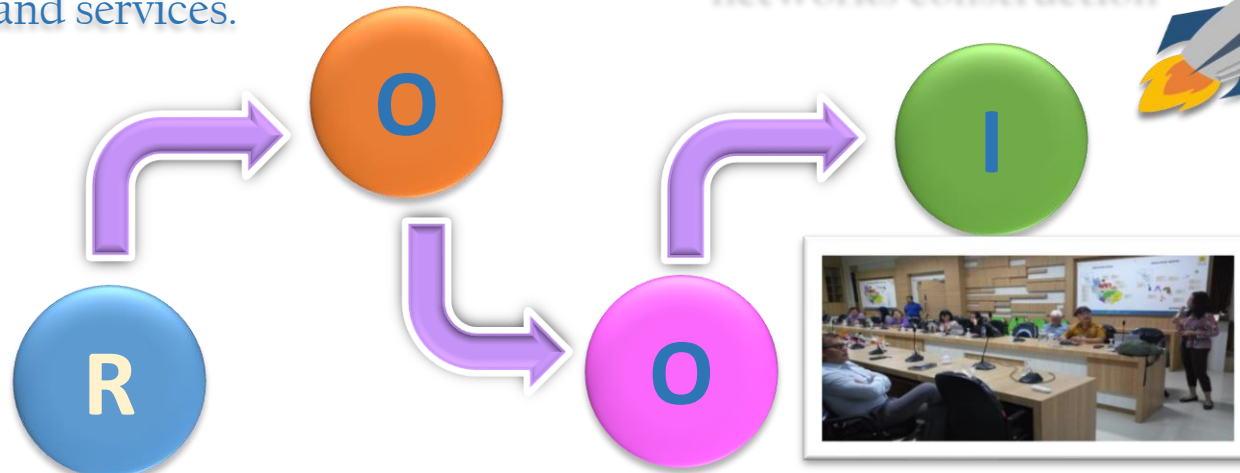
May 2019 (7:00 pm)

# Project Overview of RBL-ADB



**Output:** PLN able to build, strengthen and expand more transmission & distribution networks, for better reliability and services.

**Impact:** this investment fund will give big impact for implementing the distribution networks construction



**Relevance:** PLN need investment fund with low rate of interest, to enhance the distribution & transmission networks.

**Outcome:** the more reliability and qualified electricity networks, will give more growth of energy usage, become a lot of better profit for PLN.

**Guarantor:** Ministry Of Finance, Indonesia.

**Loan:** ADB's ordinary capital \$575,000,000 and ASEAN Infrastructure Fund \$25,000,000.

The program shall be completed by 31<sup>st</sup> December 2019, and Payment Due will be 15 years between 15<sup>th</sup> March 2021 and finish on 15<sup>th</sup> September 2035. This project attain its goals by quarterly serious supervision for DLI's and Program Action Plans.



## PROJECT IMPLEMENTATION

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Stakeholders, Ministerial involved,  
Challenges & Overcome, Organization.

# KEY STAKEHOLDERS AND OPTIMIZE SOLUTIONS



## Key Stakeholders:

PLN loyal customers and local government.



## Bidding Roles:

Open bidding, limited bidding, direct appointment, based on PLN procurement rules will give better implementing results.



## Result Based Lending ADB DLI's



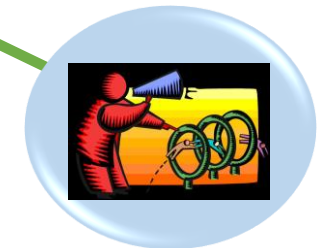
## Executing Agencies:

The more contractors join the bidding, more competitive and transparent.



## Challenges & Overcome:

Every challenges has a specific solution, involving the stakeholders, local government, also ministerial.



## Contracts Output:

Bidding contracts will be competitive and save cost, or refer to Head Office unit price with low cost.

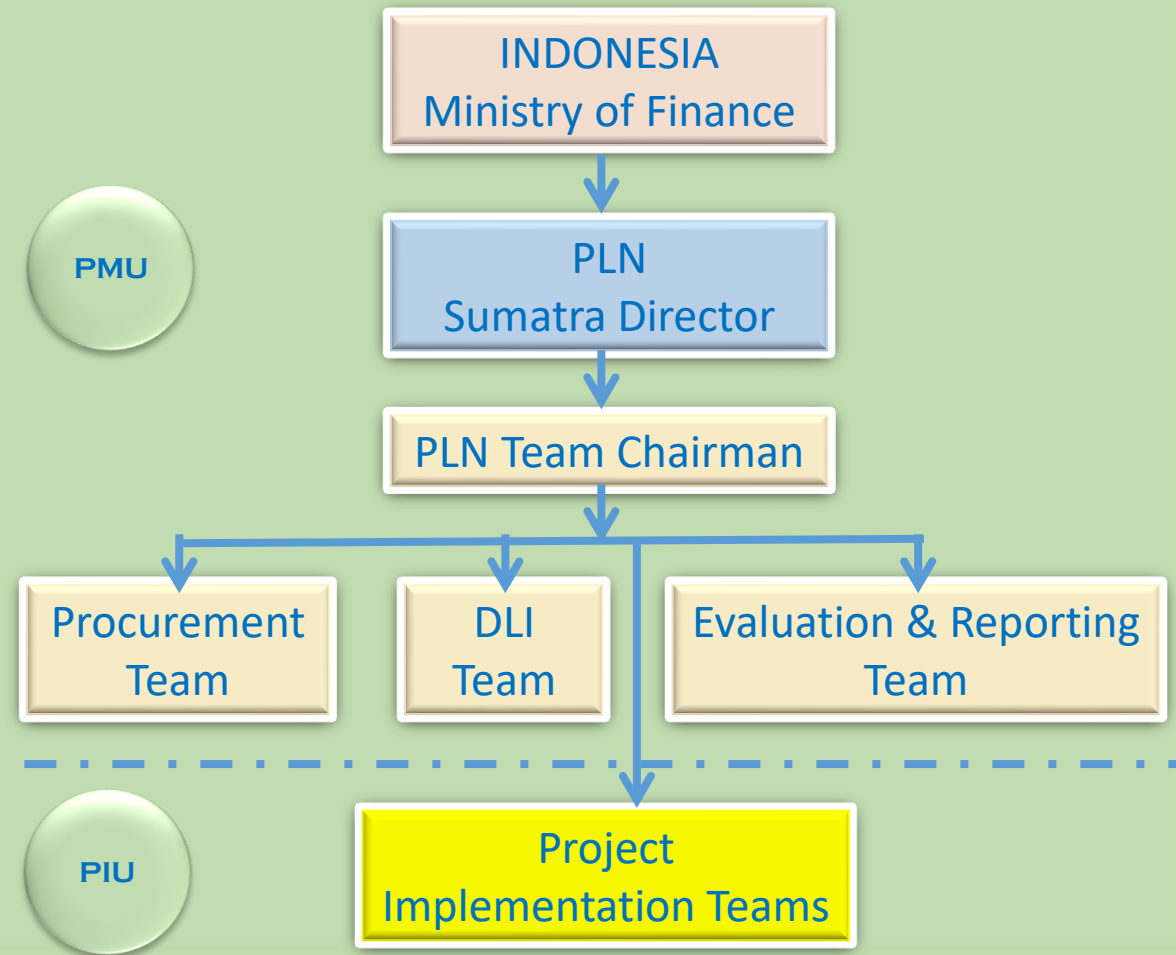
# COUNTERPART SUPPORT & GOOD ORGANIZATION

**7 PLN Units** (Aceh, North Sumatra, West Sumatra, Riau & Riau Islands, South Sumatra Jambi Bengkulu, Bangka Belitung, Lampung) and **1 PLN P3BS** (Load Dispatching Center) have to well prepare yearly investment budget with scheduled contracts, good performance with excellent output and outcome.

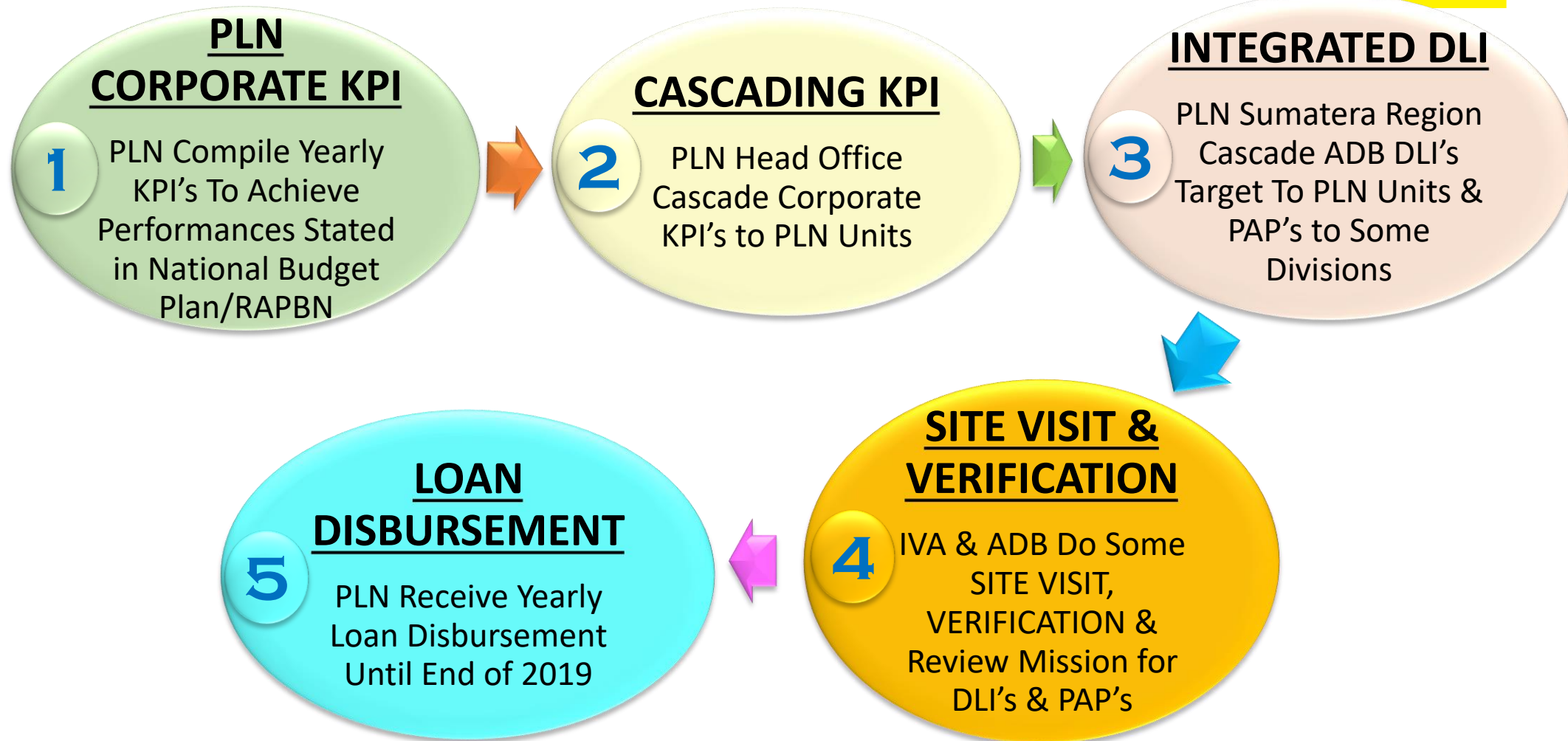
Easy to measure every achievement for **6 Disbursement Link Indicators (DLI) & 26 PAP's** with quarterly report evaluation, submitted by 7 PLN Distribution Units and 1 PLN P3BS.

Specific quarterly evaluation for distribution investment contracts using "**Contract Management Application**" (Aplikasi Manajemen Kontrak) with 8 PLN Units, is strictly to be done to get clear monitoring as requested by ADB.

Transparency for data collected and excellent coordination between horizontal and vertical level in PLN Head Office and/or PLN Units will result for clear information needed.

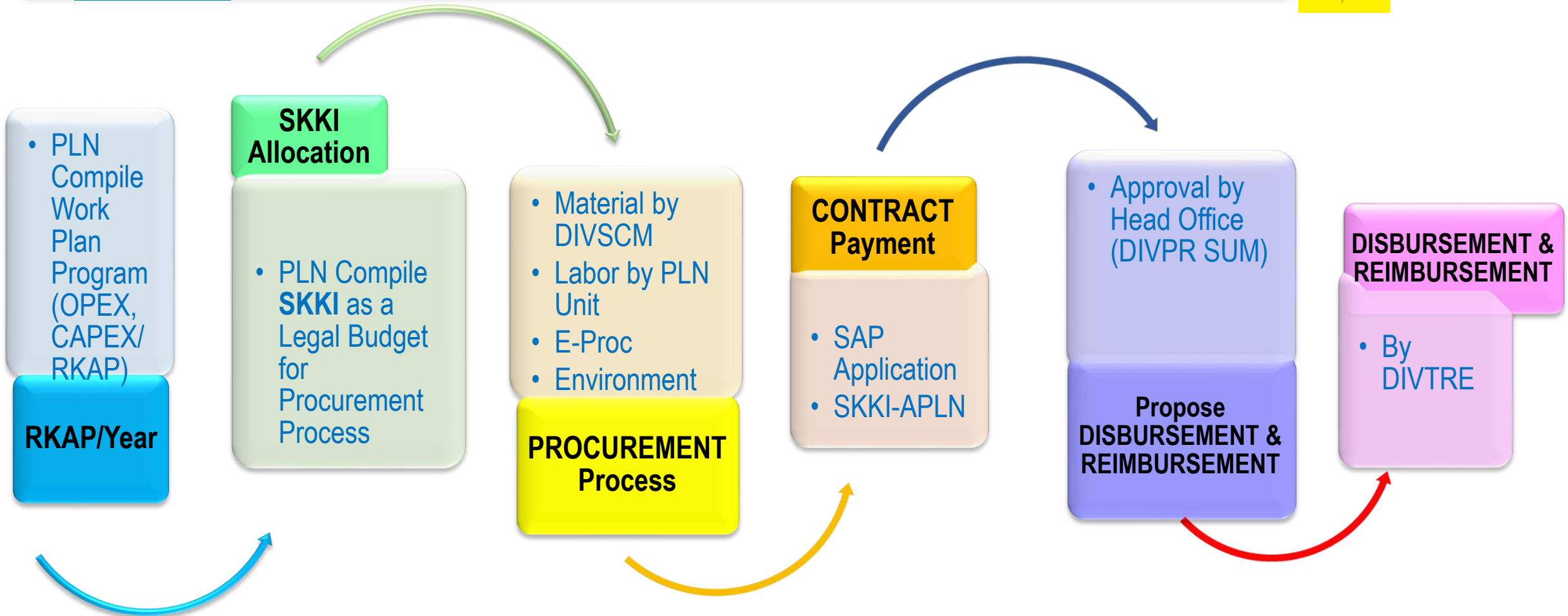


# DLI ACHIEVEMENT MANAGEMENT





# DISBURSEMENT & REIMBURSEMENT FLOW





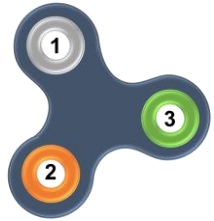
## CHALLENGES AND APPROACHES

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Facing The Challenges and Effort For Best Solutions.



# 6 DLI'S CHALLENGES & ACHIEVEMENT



DLI Number	Target	Actual	2018 Achievement	Remark
#1, Number of PLN Customer (Million)	13.41 M	14.18 M	106 %	Achieved.
#2, Residential Energy Sales (GWh)	20.49 GWh	18.92 GWh	92 %	PLN promote special price for new installation or free top up, promote electricity home appliances usage.
#3, Number of MV Permanent Feeders Interruptions per 100 km (times)	21.04 times	15.42 times	127 %	Achieved.
#4, Cumulative Length of 150 kV Transmission Line Reconductored (kmr)	2,275 kmr	2,337 kmr	103 %	Achieved
#5, Additional Number of Distribution Transformer Installed (pcs)	4,000 pcs	10,053 pcs	251 %	Achieved
#6, Length of MV Distribution Line Installed (kms)	3,755 kms	5,931 kms	158 %	Achieved

# Non-Disbursement Link Indicators

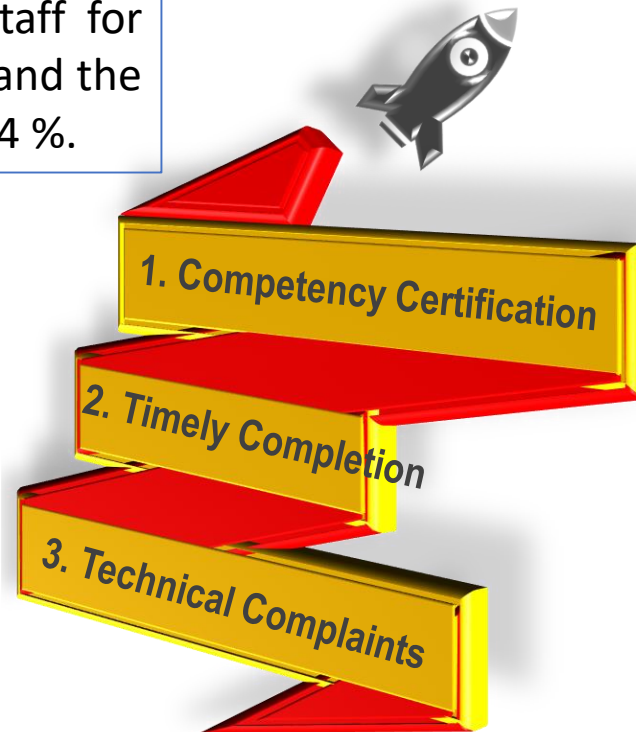


## 1. Competency Certification for PLN Staff

Certified PLN Sumatra Region Staff for the year 2018 was 2,410 people and the target was 2,789. The ratio is 86.4 %.

## 3. Technical Complaints from PLN Customers Per 1,000 Customers

The ADB year 2018 technical complaints target from PLN customers to the Sumatera call centre was < 5.36 complaints per 1,000 customers per month. Over the period January–Dec 2018, PLN received 7.33 complaints per 1,000 customers per month. Customer complaints mostly related to Low Voltage electricity cut off/fault (unplanned condition).



## 2. Timely Completion of Distribution System Contracts

The ADB RBL full year 2018 target for the percentage of contracts, that were completed within schedule is >75%. The 2018 achievement for timely completion of distribution contracts, both AMK and MDU contract, is 88% (12% continue to the next 2019).



# SITE VISIT AND VERIFICATION BY EXPERTS



Safeguards Site Visit to  
Kualanamo and Galang  
Sub Station-North Sumatra  
31<sup>st</sup> October 2018



Safeguards Site Visit to  
Binjai Warehouse-North Sumatra  
1<sup>st</sup> November 2018

## 2 Transformers, MV Lines DLI

DLI's for 150 TL reconductors, Distribution Transformers & MV Lines, should be well & perfect scheduled installed every year.

## 4 Contracts Quarterly Monitoring

Contracts monitoring has a strictly schedule:

1. Quarterly meeting, using "Contract Management Application" (AMK) with SCM Division & Sumatra Team.
2. This monitoring should be cross checked by IVA-ADB.



## 1 Safeguards and Social & Environment Monthly Monitoring

This is **the most important RBL** for preparing the PLN Units budget (warehouse, etc), conducted & checked by HSSE DIV and Sumatra Team.

## 3 Customer Care & Sales Energy DLI Monitoring

Growing customer is easy, growing energy is not easy, should be provide with electricity household usage promotion.

## 5 RBL-ADB Quartely Report

The most measurable & responsible is Quarterly Report, sent to Indonesia Ministry of Finance, ADB, and related Division (Talent, HSSE, IT System, SCM, RKO, TRE). No problem for some revision due to growing data evaluated by IVA and ADB.

# SITE VISIT & CHECK FOR ACTUAL INFORMATION



**UIW. ACEH**  
Warehouse at Banda Aceh, good condition, checked by IVA & ADB.

**UIW. SUMUT**  
Warehouse at Binjai-North Sumatra, good condition, checked by IVA & ADB.

**UIW. RIAU & KEPRI**  
Safeguards & Environmental visit at 150 kV Garuda Sakti Substation, Pekanbaru-Riau, checked by IVA & ADB.

**UIW. SUMBAR**  
Warehouse at Padang, good condition.

**UIW. S2JB**  
Warehouse at Jambi, need more efforts for better condition, checked by IVA & ADB.

**UIW. BABEL**  
Warehouse at Bangka, good condition.

**UID. LAMPUNG**  
Warehouse at Lampung, on going progress, checked by ADB.

Safeguards & Environmental visit at 150 kV Jakabaring Substation and Keramasan Warehouse, Palembang-South Sumatra, checked by ADB & Indonesia Ministry of Finance.

Warehouse at Bengkulu, on going progress.



## GREAT ACHIEVEMENT AND FUTURE PROSPECTIVE

4

Continuing Great Achievement With Better  
Future Prospective.



# Cumulative Disbursement & Withdrawal (2016-2019)



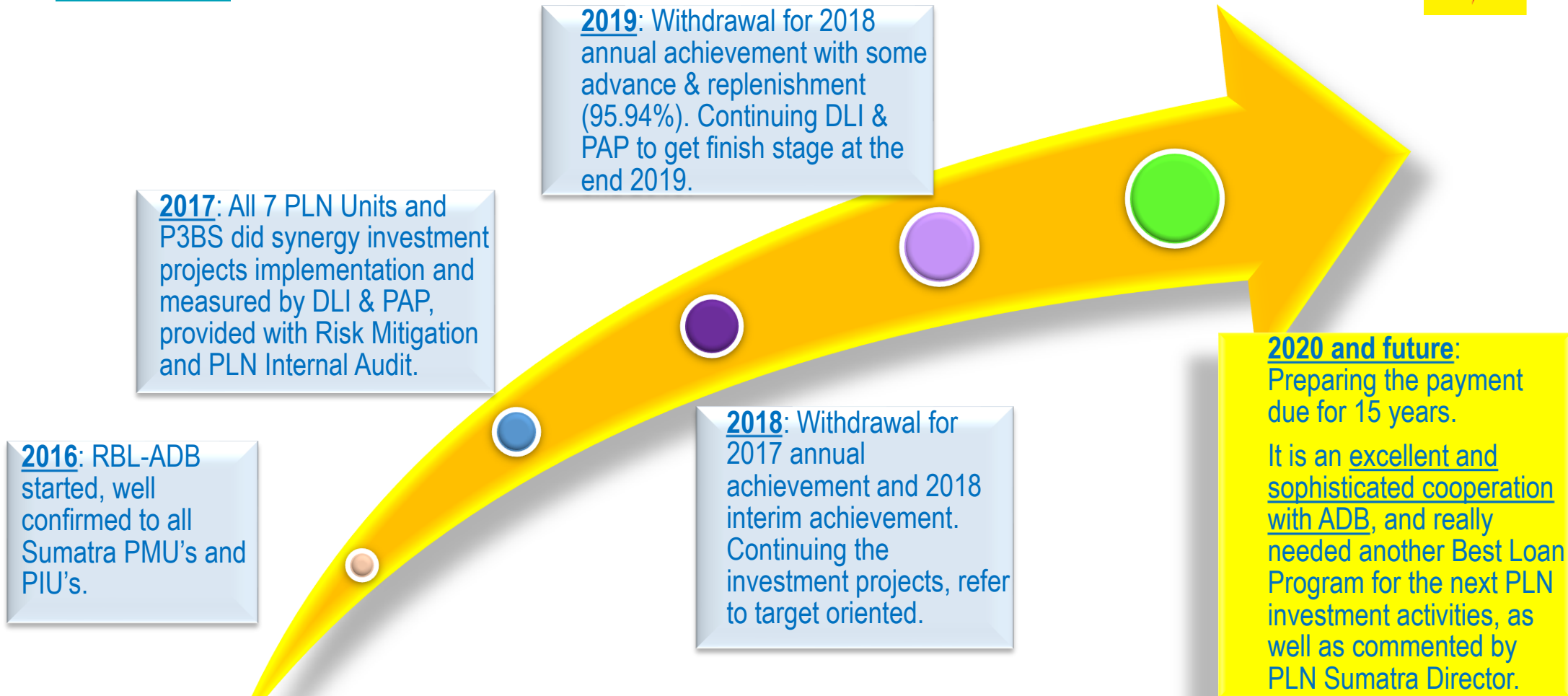
No.	LOAN	Initial (Million USD)	31 March 2019 (Million USD)	Q2-2019 Withdrawal (Million USD)	Total Cumulative Disbursement/ Initial (%)
1	RBL-ADB 3339-INO	575.00	463.859 (77.3%)	111.796 (45.00 advance & 45.00 replenishment)	575.655 (95.94%)
2	RBL-ADB 8297-INO	25.00			
3	TOTAL	600.00	463.859	111.796	575.655

## Remarks:

2019 Investment Cash Flow/AKI for 7 Sumatra PLN Units (Wilayah/Distribusi) is around IDR7,78 Trillion or **\$567.887 Million**.



# Road Map For Result Based Lending-ADB



There was no stumbling blocks and pitfalls, it was only challenges to win the situation, get the spirit.



Saum Arkoun, Arigato, Selamat,  
Vielen Dank, Merci, Gracias,  
Mahalo....



**PLN FOR BETTER  
INDONESIA SHINING**

Listrik untuk Kehidupan yang Lebih Baik