



# LRT MEBIDANG DEVELOPMENT PROJECT BY PPP SCHEME IN NORTH SUMATERA PROVINCE



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**TRANSPORTATION AGENCY - NORTH SUMATRA PROVINCE**  
**AUGUST - 2020**

# LRT MEBIDANG PROJECT

- **PRESIDENTIAL REGULATION NUMBER 61 OF 2011, ON SPATIAL PLANNING OF MEBIDANGRO STRATEGIC AREA**
- **PROVINCIAL REGULATION NUMBER 2 OF 2017 ON SPATIAL PLANNING OF NORTH SUMATERA PROVINCE**
- **MASTERPLAN OF NORTH SUMATERA RAILWAY DEVELOPMENT**
- **CONNECT TO SPORT CENTER AND MEBIDANG AREA**



# MEBIDANGRO ADMINISTRATIVE AREA

## Binjai City

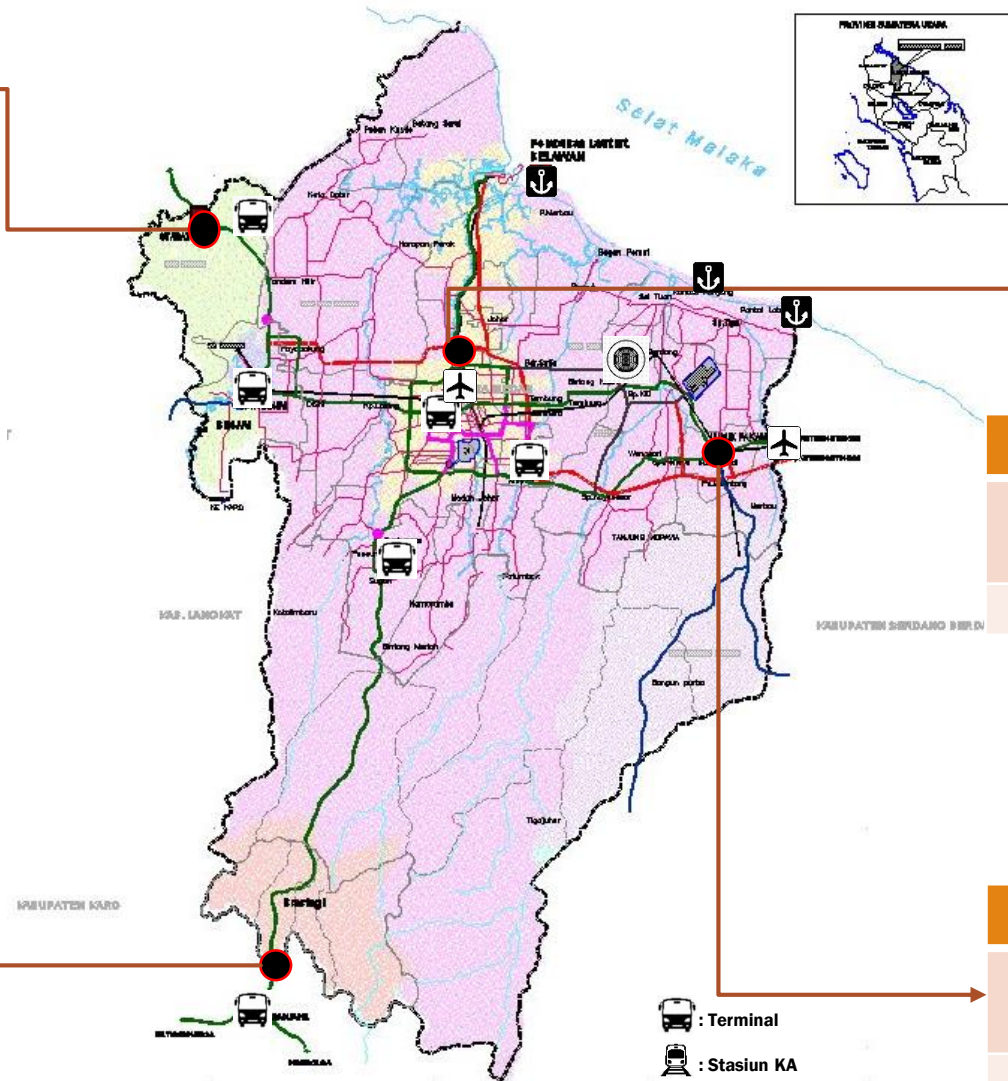
Population (lifes)	Total Area (Km2)	Population (lifes/Km2)	Road Length (Km)
273.892	59,19	4.627,34	369,63

## Karo Regency (Kec. Dolat Rakyat, Merdeka, Berastagi, Barusjahe)

Population (lifes)	Total Area (Km2)	Population (lifes/Km2)	Road Length (Km)
102.010	234,96	2.547,23	214,55

## Total Mebidangro Urban Area

Population (lifes)	Total Area (Km2)	Population (lifes/Km2)	Road Length (Km)
4.795.672	2.800,83	16.680,12	7.718,81



## Medan City

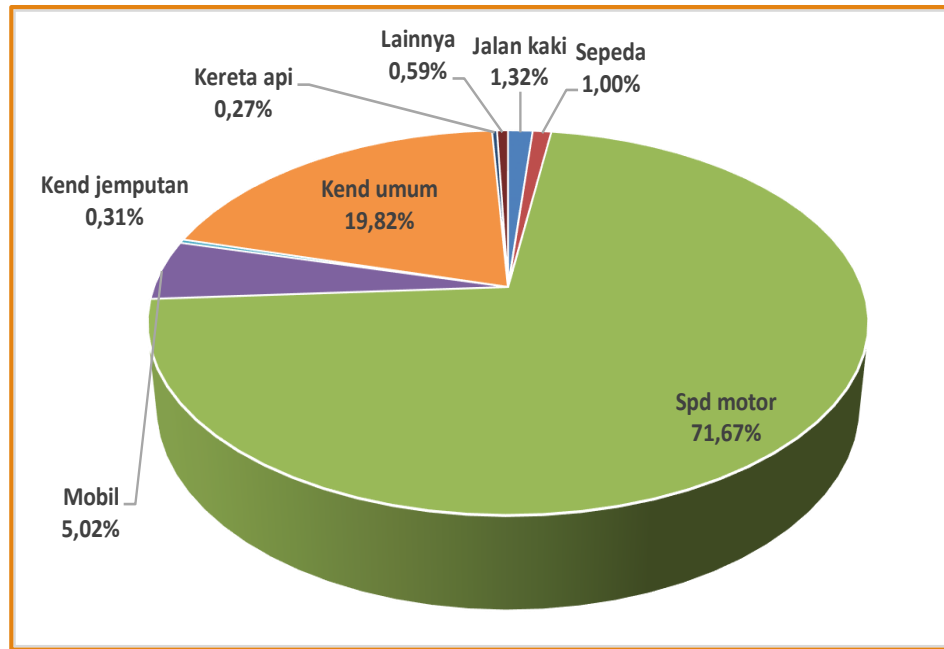
Population (lifes)	Total Area (Km2)	Population (lifes/Km2)	Road Length (Km)
2.264.145	265	8.543,94	3.317,05

## Deli Serdang Regency

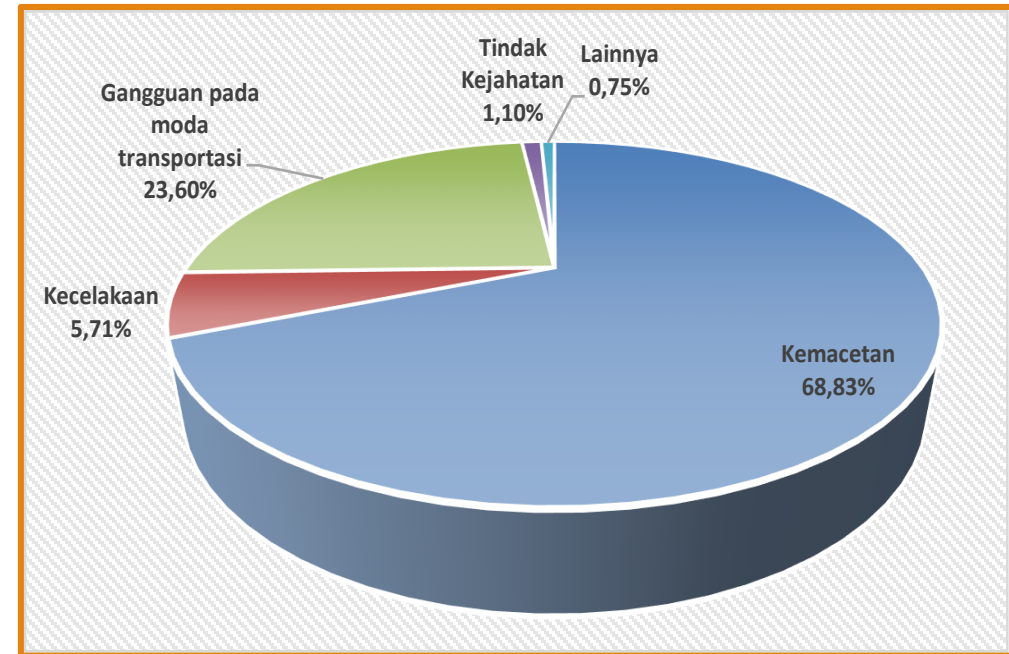
Population (lifes)	Total Area (Km2)	Population (lifes/Km2)	Road Length (Km)
2.155.625	2.241,68	961,61	3.817,58

- : Terminal
- : Stasiun KA
- : Pelabuhan
- : Bandara
- : Sport Center

# PASSENGER MOVEMENT CHARACTERISTIC (MEBIDANGRO AREA)



**SHARE MODE MODE**



**TRANSPORTATION PROBLEM**

- ❑ **SHARE MODE** → Motor Cycle (71,67%), Public Transport (19,82%) → **PUBLIC TRANSPORTATION IS NOT THE MAIN CHOICE FOR PEOPLE TO MOVE**
- ❑ **TRANSPORTATION PROBLEM** : Traffic Congestion 68,83% ; Transportation Distraction 23,60% ; Traffic Accident 5,71% → **POOR PEOPLE MOBILITY (SMALL CAR), UNCONVINIENT AND POOR QUALITY OF PUBLIC TRANSPORTATION**
- ❑ **TOTAL TRANSPORTATION ACCIDENT INVOLVED 7,094 million vehicles (Car 7,6% ; Bus 1,1% ; Freight 4,5% ; M.cycle 86,9%), average growth 2006-2019 = 10,35%/year.**
- ❑ **Commuter mobility tend to increase, total commuter in Mebidang area ± 800.000 People/Day**

# PROFILE PROJECT

## Medan – Binjai - Deli Serdang (Mebidang)

**Government Contracting Agency (GCA)**  
Governor of North Sumatera  
Province



**Track Distance**  
**41.3 Km**



**Est. Project Cost**

**LRT ~ IDR 20,300 Billion**



**Project Scheme**  
Public Private Partnership



**Contract Period**  
**20 years**



**Availability Payment**  
**IDR 5,755 Billion/Year**



**Location**

Medan - Deli Serdang,  
Indonesia



### Objective

- Reduce congestion in Medan and surrounding areas especially heading to Binjai city and Deli Serdang Municipality
- Increasing Economic Growth
- LRT to Transit Oriented Development (TOD)

### Target

- Development of integrated urban mass transportation in the Mebidang (Medan - Binjai - Deli Serdang)

### Scope of Project

- Purchase of Rolling Stock
- Infrastructure Construction, Maintenance and Operation **41.3 Km**

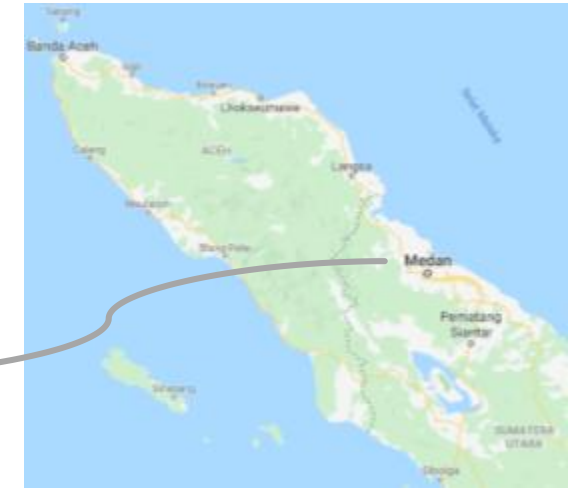
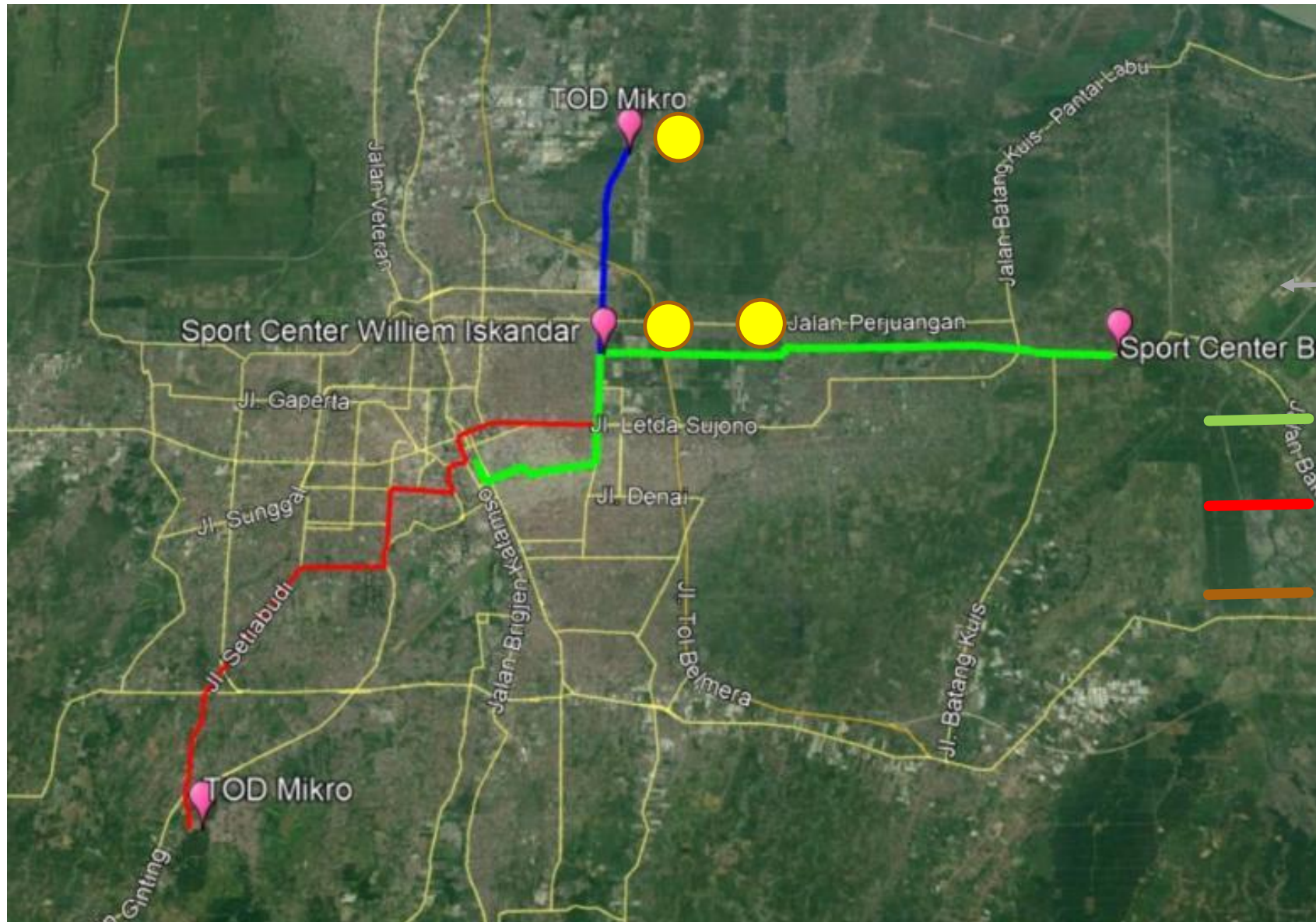
### Output

- Availability of passenger railway services on the Mebidang Light Rail Transit as urban mass transportation in Mebidang



# PROFILE PROJECT (SOLICITED)

## Medan – Binjai - Deli Serdang (Mebidang)



- Corridor 1: Stasiun Medan - Sport Centre Batang Kuis  
• Length: 20.072 km
- Corridor 2: Jl. Aksara - Pasar Lau Cih  
• Length: 17.211 km
- Corridor 3: Stasiun Pancing – Stasiun Cemara  
• Length: 3.37 km
- Total Length : 41.3 km



## FUNDING PLAN PROJECT – LRT MEBIDANG

LRT					
No	Description	Price	Unit		IDR Amount
1	Rolling Stock	IDR 24.400.800.000	20	unit	IDR 488.016.000.000
2	Track per km	IDR 400.000.000.000	41,3	km	IDR 16.520.000.000.000
3	Station	IDR 20.000.000.000	17	unit	IDR 340.000.000.000
4	Depot	IDR 66.831.925.670	1	unit	IDR 66.831.925.670
5	Operation Facilities	IDR 52.931.200.000	1	unit	IDR 52.931.200.000
<b>Total</b>					<b>IDR 17.467.779.125.670</b>

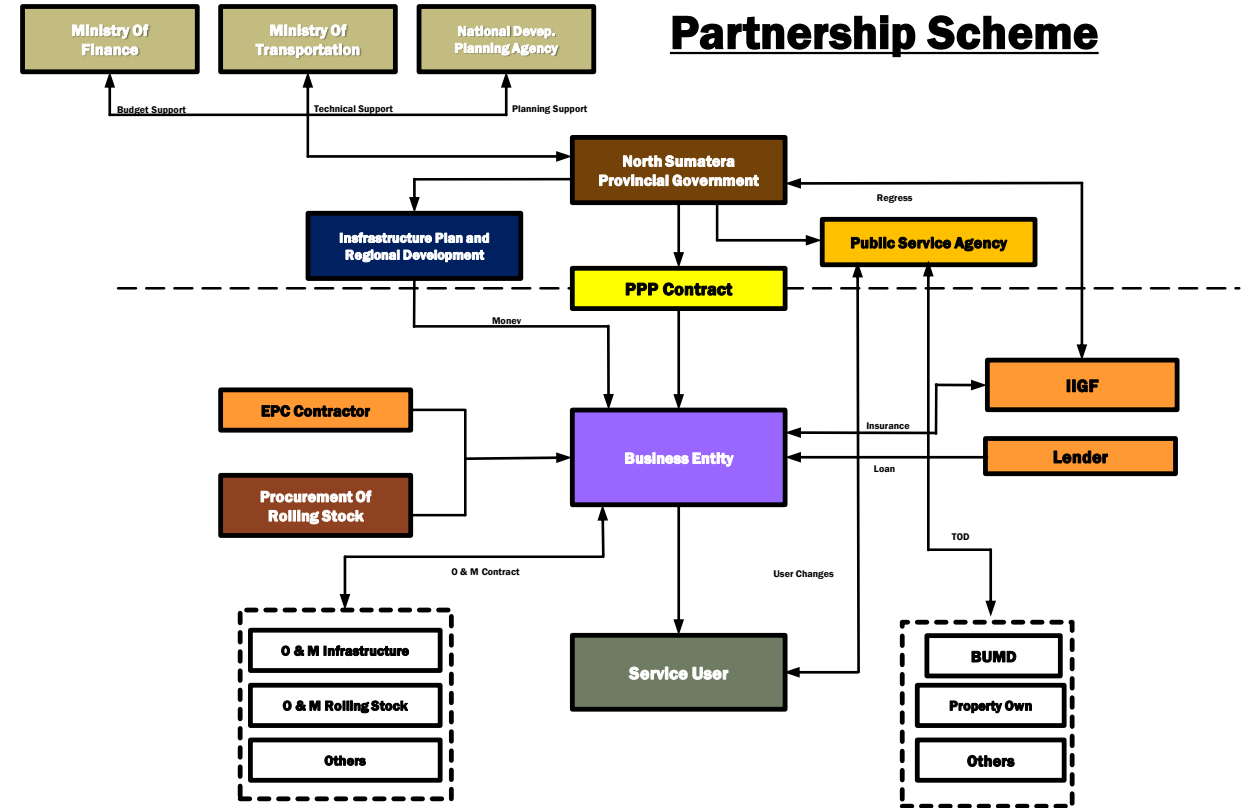
No	Aditonal Capital	Amount
1	Pre Operational Cost	IDR 210.635.769.000
2	Interest During Construction	IDR 55.607.843.000
3	Working Capital	IDR 2.569.756.388.000
<b>Total</b>		<b>IDR 2.836.000.000.000</b>

**Total Project Funding:  
IDR 20.303.779.124.670**

# FINANCING AND PARTNERSHIP SCHEME – LRT

Medan – Binjai - Deli Serdang (Mebidang)

Financial Profile	IDR	USD
<b>Ticket Price</b>	<b>IDR 12.000</b>	
<b>CAPEX</b>	<b>IDR 20.303.779 Million</b>	<b>\$ 1.440 Million</b>
<b>OPEX</b>	<b>IDR 306.951 Million/Annual</b>	<b>\$ 22 Million/Annual</b>
<b>DEBT : EQUITY</b>	<b>70 : 30</b>	
<b>EQUITY NPV</b>	<b>IDR. 1.496.884 Million</b>	<b>\$ 106 Million</b>
<b>PROJECT NPV</b>	<b>IDR . 487.872 Million</b>	<b>\$ 35 Million</b>
<b>EQUITY IRR</b>	<b>11,63 %</b>	
<b>PROJECT IRR</b>	<b>9,68 %</b>	
<b>AP VALUE ANNUAL</b>	<b>IDR 5.755.877 Million</b>	<b>\$ 408 Million</b>
<b>CONSESION PERIOD</b>	<b>20 Years</b>	
<b>Notes</b>	<b>1 USD = IDR.14.100</b>	



PPP Scheme of *Design - Build – Finance – Operate – Maintain - Transfer* (DBFOM-T)  
Mechanism of **Build Operate Transfer (BOT)**

## Timeline





*Thank  
you*

