

# ROUTING & SCHEDULING ISSUES

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1



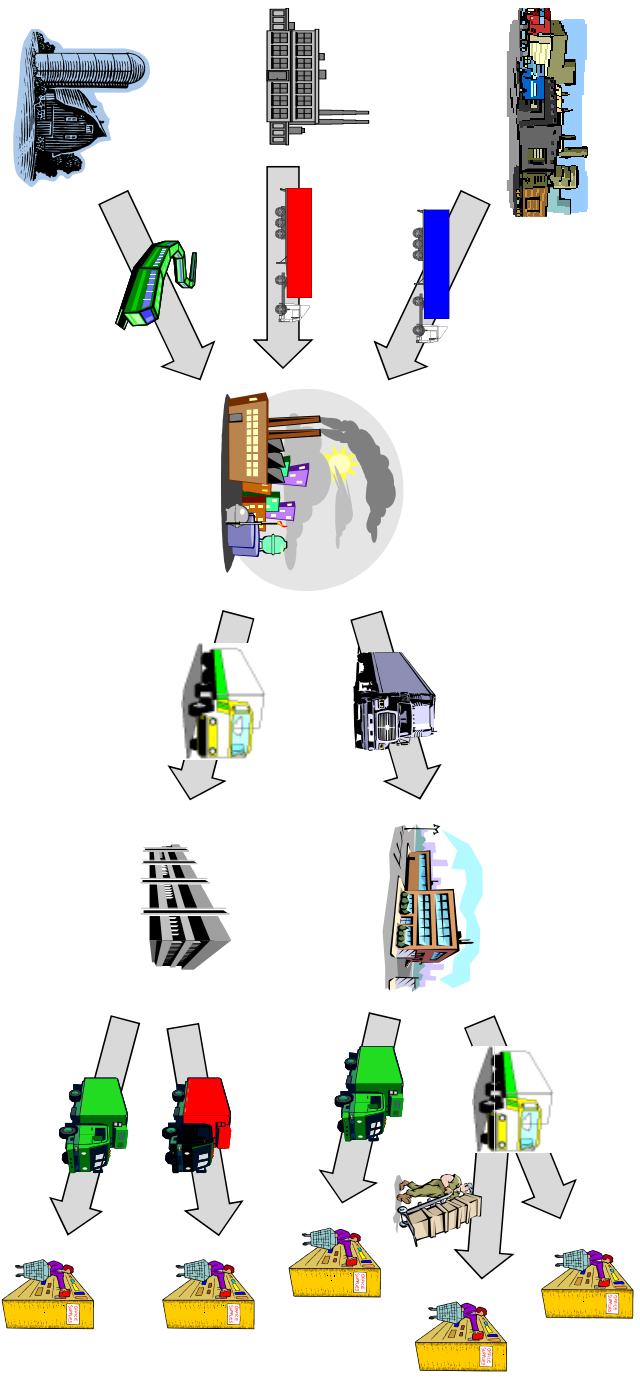
# BACKGROUND



2



# Flow of Logistics



SUPPLIER

CARRIER

MANUFACTURER

CARRIER

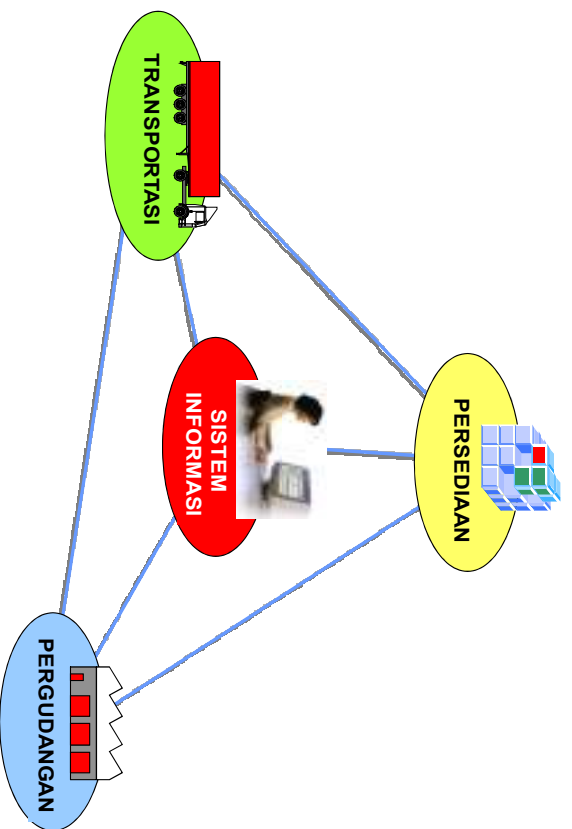
DISTRIBUTOR

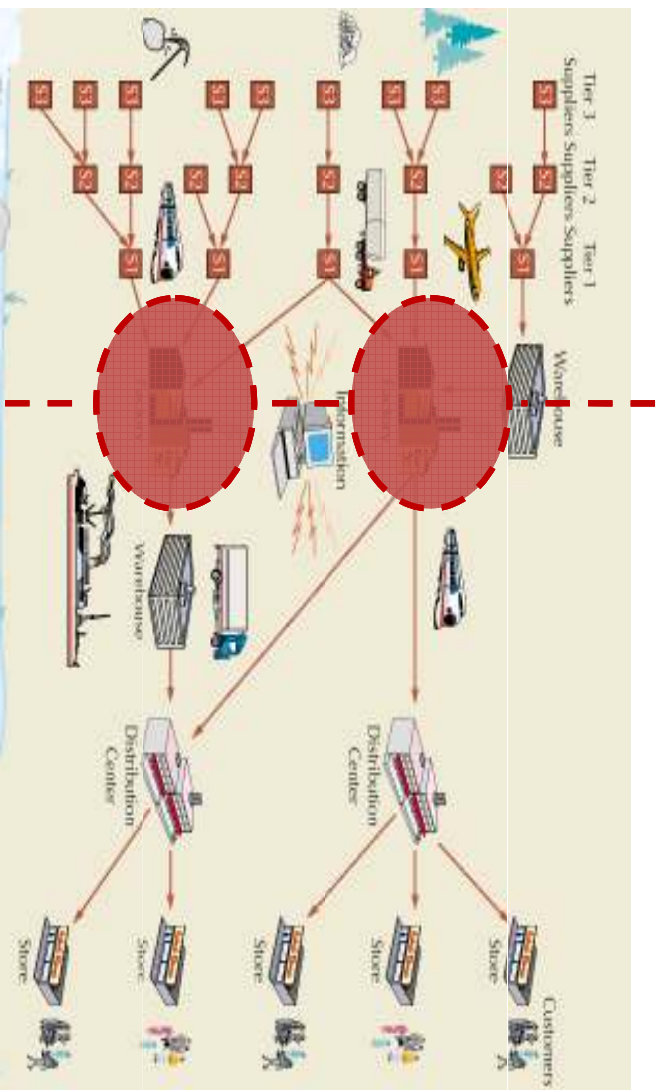
CARRIER

CUSTOMER



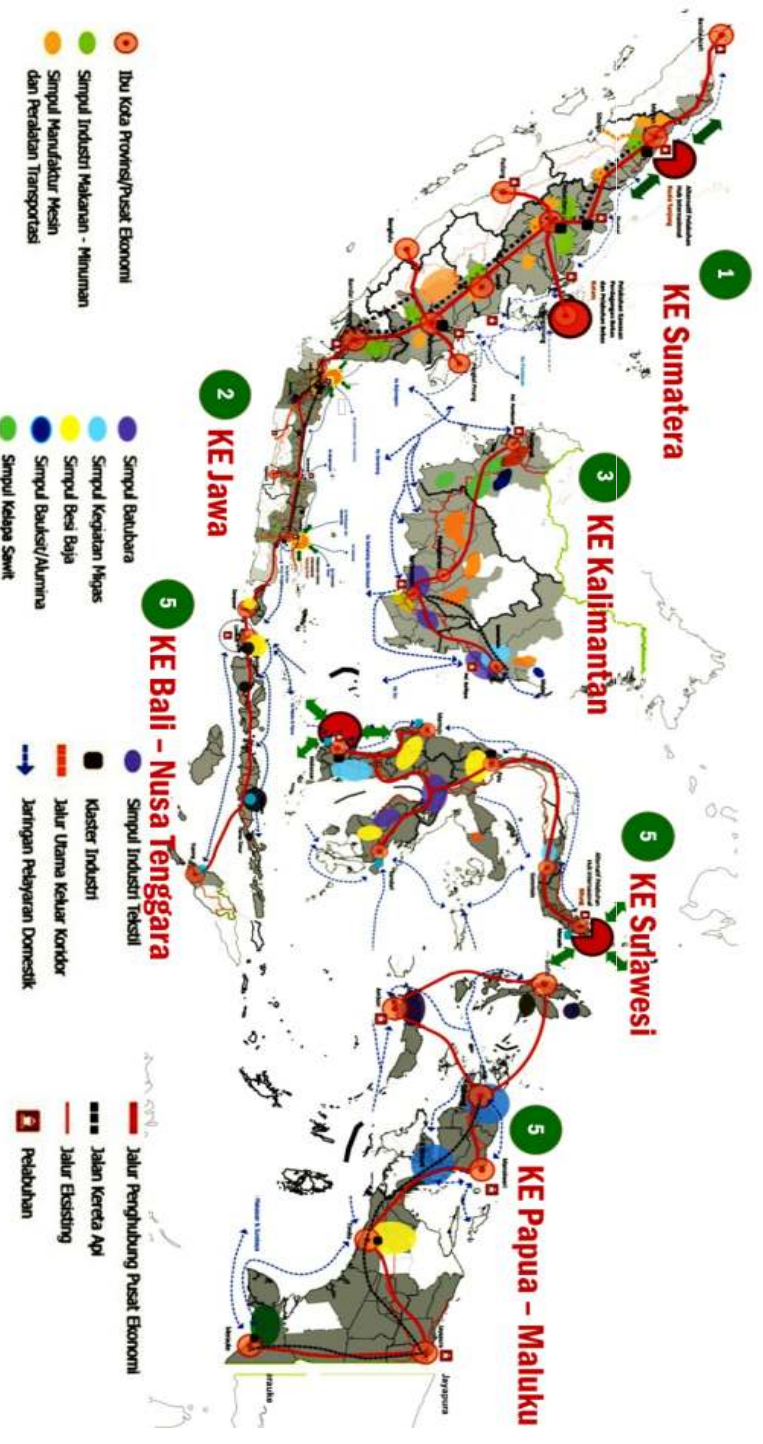
# Fungsi-fungsi Utama Sistem Logistik





Modified from Russell & Taylor (2006)

## Six Economic Development Corridors as the Backbone of MP3EI



# ROUTING



7

## What's Factors Affect Routing & Scheduling Processes

- Distance
- Lead times
- Materials/goods
  - Types (expired dates, DG/non-DG, perishable/non-perishable, etc.)
  - Volume
  - Value
- Infrastructures
- Traffic jam
- Safety
- Vehicle:
  - Types
  - Capacity
  - Number
- Destination
  - Number of destination
  - Accessibility
  - Variation of goods ordered
  - Volume of order
  - Inventory stock (capacity)
- Urgency
- Regulation
- Receiving time
- 

8

# Problems and Solution in Routing & Scheduling Processes

No.	Problems	Solutions
1	Poor infrastructure	Change routes Change types of mode/vehicle Use multimode transportation
2	Traffic jam	Shipping time Change of routes Change of types of mode/vehicle Change receiving time (overnight shipping)
3	Regulation - Limitation of weight	- New design of vehicle - Change routes - Change types of mode/vehicle - Use multimode transportation
4	“Pungli”	Law enforcement Use “safety” mode of transportation
5	High transportation costs (high frequency, low capacity of vehicle)	Use more capacity of vehicle Build/use more DC (number, capacity)
6	Traffic jam, complicated order, etc.	Use IT for: scheduling, routing, and consolidation

# Problems and Solution in Routing & Scheduling Processes

No.	Problems	Solutions

# Criteria for Successful Routing & Scheduling

- General criteria:
  - Right time, right goods, right place, right condition, right cost
- Specific KPI:
  - On-time delivery
  - Order fulfillment
  - Low cost (efficiency)



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