

Mark-ups and market segmentation in the Italian Track Access Charging system

Francesca Ciuffini

RFI – Commercial Department

Head of Marketing and Integrated Services Development

Amsterdam, 4-5 April 2018

Charging levels

What the NATIONAL average unit charging levels depend on?

SPECIFIC COST
of
infrastructure
management

COST

km of network

$\frac{\text{€}}{\text{km}}$

TRAFFIC
DENSITY
on the network
(average load)

TRAFFIC

km of network

$\frac{\text{train} \cdot \text{km}}{\text{km}}$

SPECIFIC
STATE
FUNDING
of
infrastructure
management

SUBSIDIES

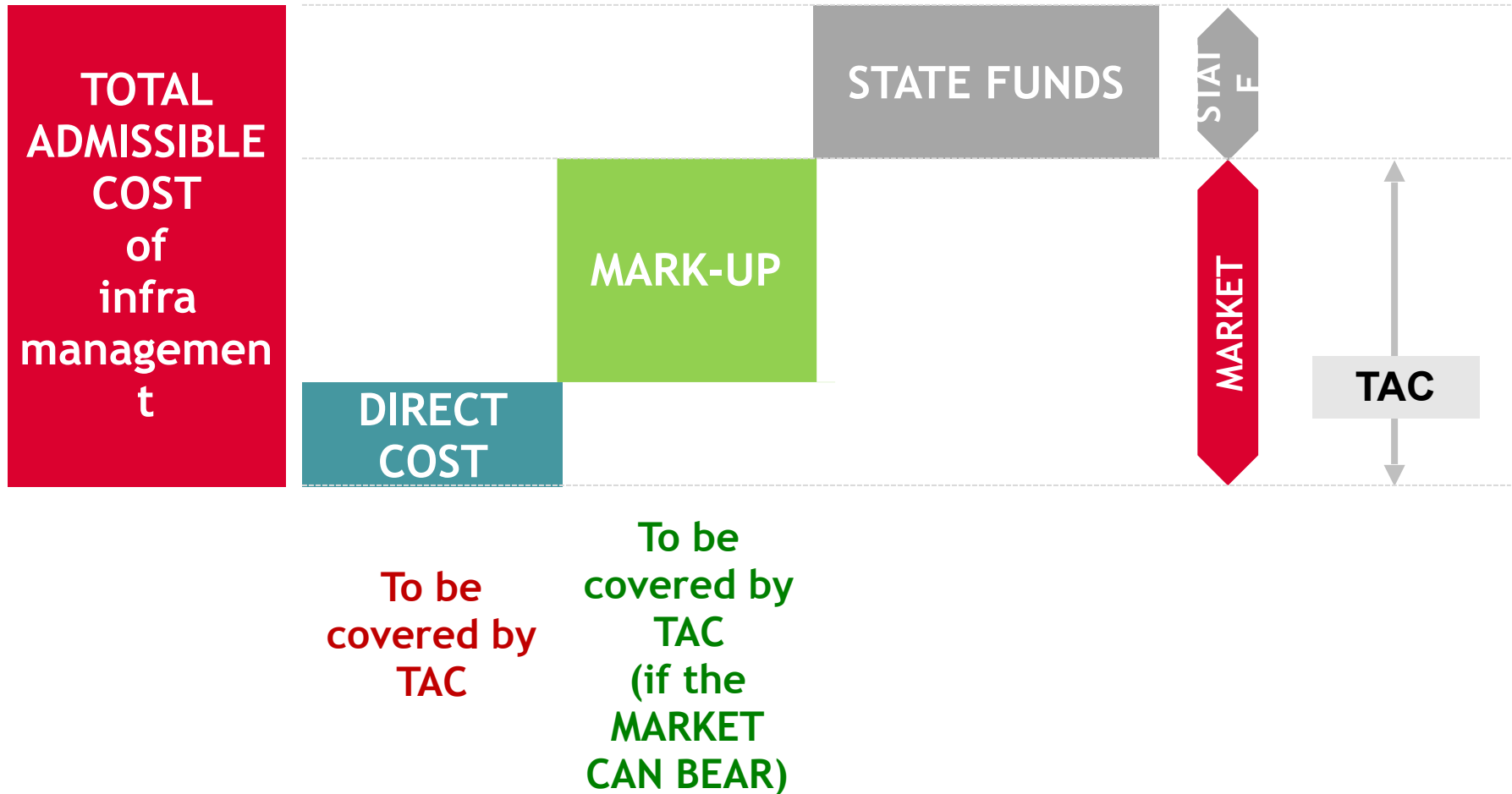
km of network

$\frac{\text{€}}{\text{km}}$

Unit Charge
€/km

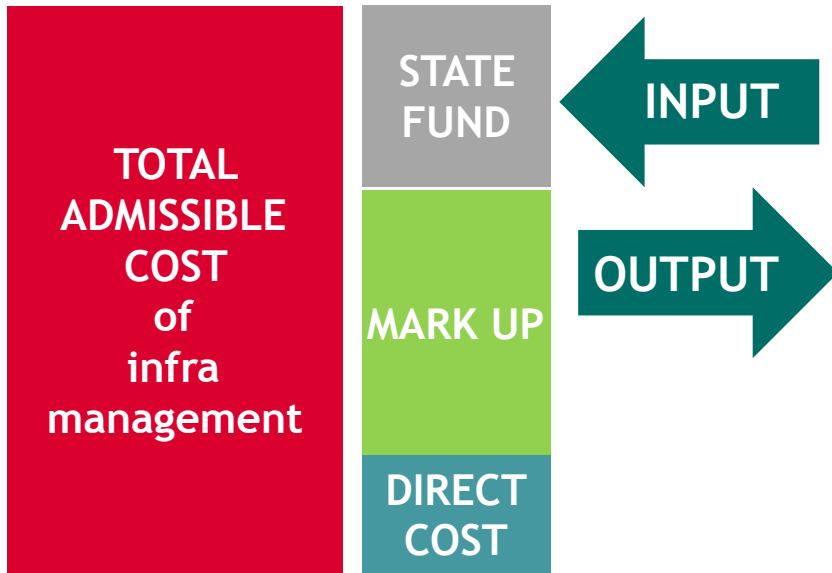
Regulatory frame

Direct costs, mark-up and financial equilibrium of the IM



Possible approaches in the regulation

APPROACH 1

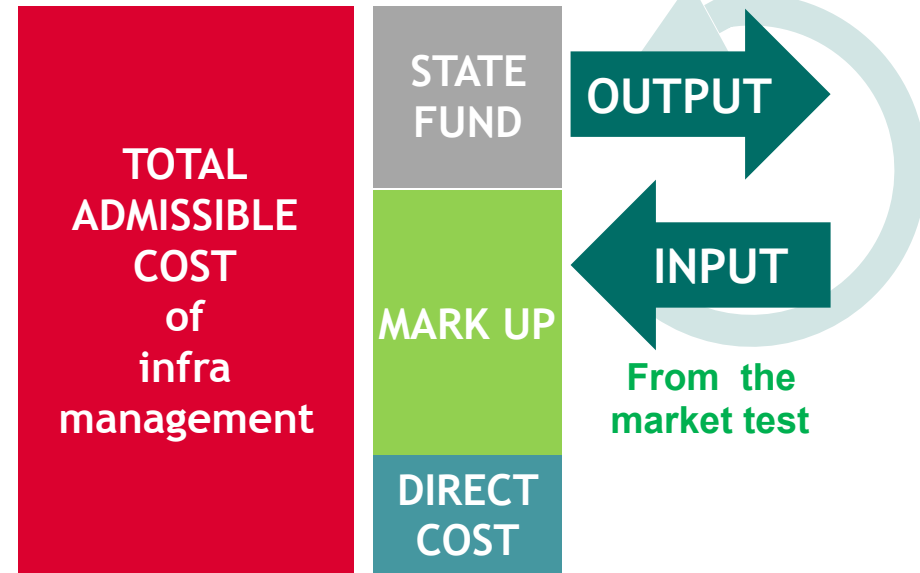


Target of the sustainability analysis

- Determine the **OPTIMAL MIX OF TARIFFS** such as to minimize the modal shift towards the road
- ... given the **TOTAL AMOUNT** of cost **TO BE COVERED BY BY TAC** and direct costs

EVALUATION OF RELATIVE ABILITY TO

APPROACH 2

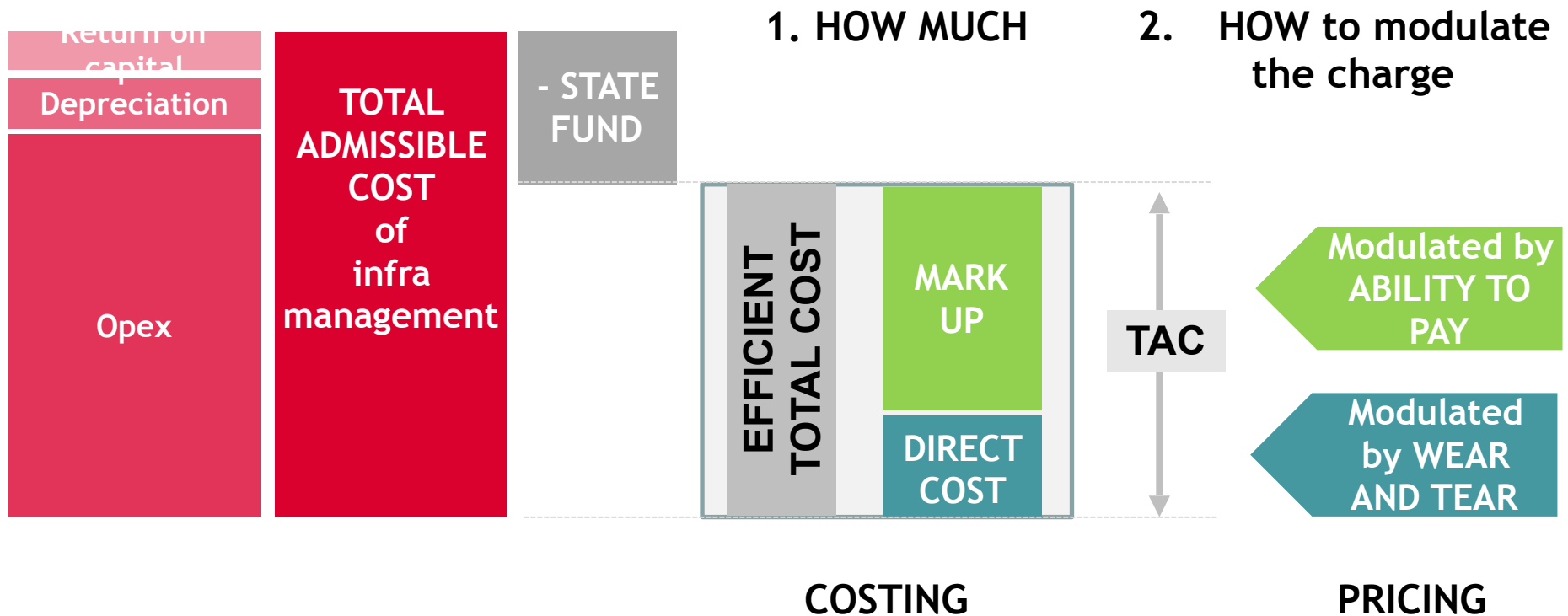


Target of the sustainability analysis

- Determine the **GLOBAL AMOUNT OF MARK-UPS** and **OPTIMAL MIX OF TARIFFS** to allow a target modal shift
- ... given the **DIRECT COST**

EVALUATION OF ABSOLUTE ABILITY TO PAY

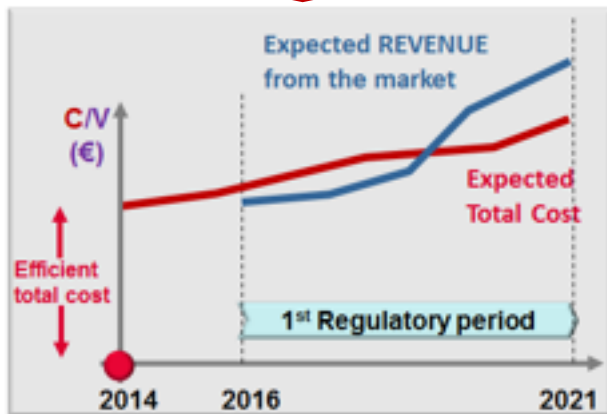
Costing and pricing in Italian Regulation



Charging system design

HOW MUCH (Costing e Volumes)

TOTAL ADMISSIBLE COST
Opex (+)
Depreciation(+)
Return on capital (+)
State funding (-)



VOLUMES
 Estimation of future volumes

UNIT average
 CHARGE
 €/train·km
 Cost/volumes

HOW to modulate (Pricing)

**A COMPONENT
(DIRECT COST)**

- Weight classes
- Speed classes
- Catenary usage

Modulation on the basis of
 TRACK'S WEAR AND TEAR

ALGORITHM

TARIFFS

**B COMPONENT
(MARK UPS)**

- Market segmentation

Modulation on the basis of
 ABILITY TO PAY

Track Access Charge Algorithm

GIVEN BY RB

A

A1 (WEIGHT) + A2 (SPEED) + A3 (EL.)

Wear & Tear

50 %

46 %

4 %

16%

WEIGHT
0 - 500 t
500 - 1000 t
1000 - 1500 t
>1500 t

SPEED
0 - 100 km/h
100 - 150 km/h
≥ 150 km/h

TRACTION
Diesel Traction
Electric Traction

Classes and threshold values

$(T_{A1} + T_{A2} + T_{A3}) * km$

CHOSEN BY IM

B

B1 (MARKET SEGM.) + B2 (LINE) + B3

Ability to pay

100 %

84%

MARKET SEGMENTS
Premium
International pass.
Basic
PSO - Long haul
PSO - Regio
Freight
Technical

NO LINE

NO TIME WINDOWS

CHOSEN BY IM

Ability to pay differentiated on the basis of further pairs added by IM

IM

GIVEN BY RB

IM

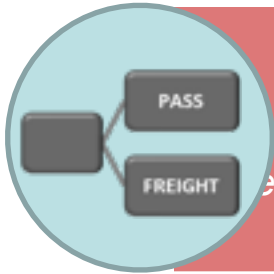
$(T_{B1}) * km$

Market Segmentation and ability to pay

REGULATORY BODY

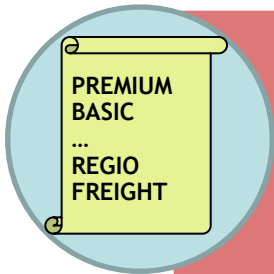
INFRASTRUCTURE MANAGER

MARKET SEGMENTATION



PAIRS
to be considered by IM
*e.g. Passenger/Freight, Technical/
commercial...*

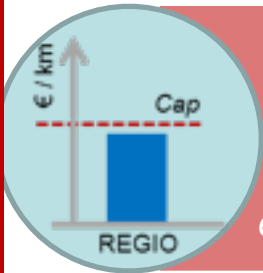
FURTHER PAIRS
added by IM



Minimum list
of **MARKET SEGMENT**
8 Market segment

Complete list
of **MARKET SEGMENT**
19 Market segment

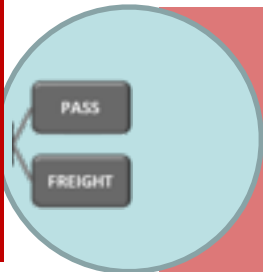
ABILITY TO PAY EVALUATION



CAPS to the average
Unit charge (€/km) for
some market segment

e.g. Average Unit charge for regio

CALIBRATION of coefficient set in
order to respect caps and constraints
fixed by RB

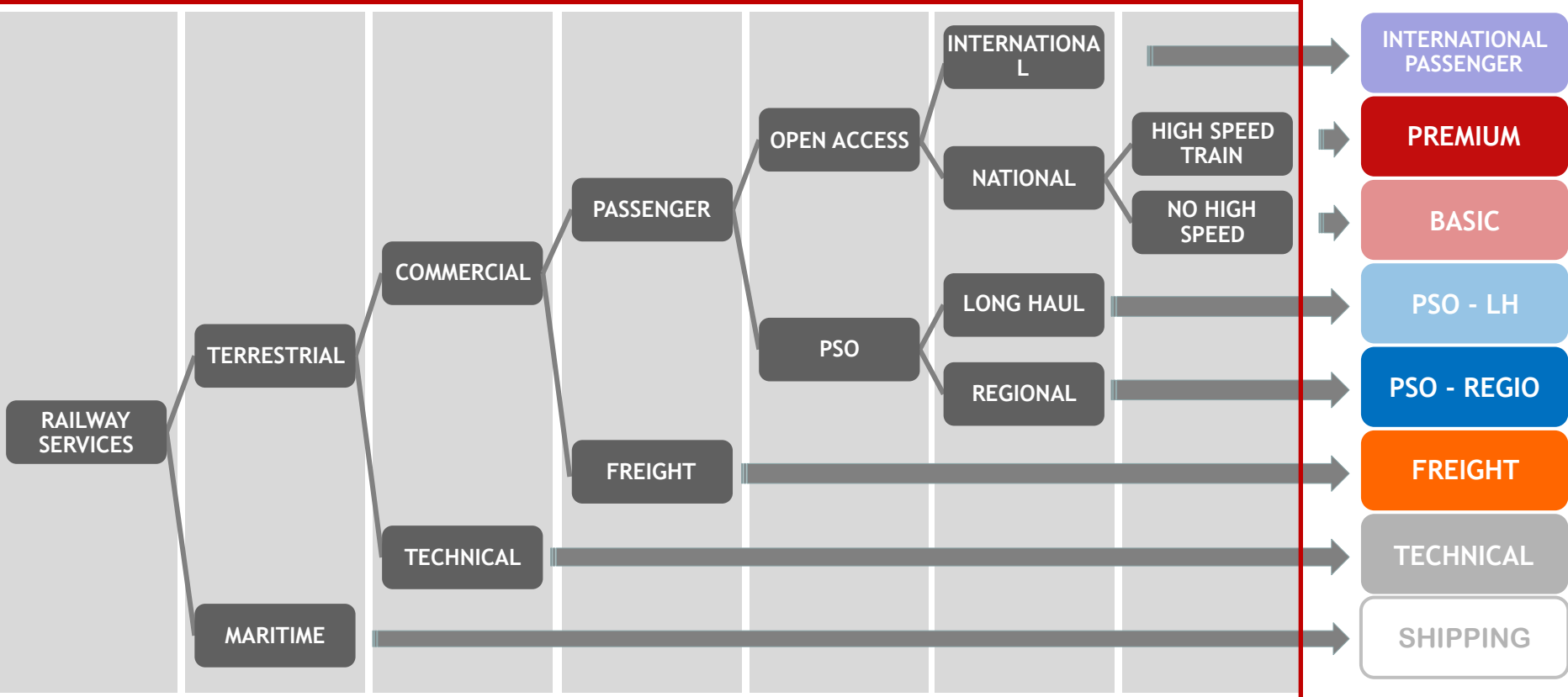


CONSTRAINTS in the calibration
of coefficient in the Algorithm

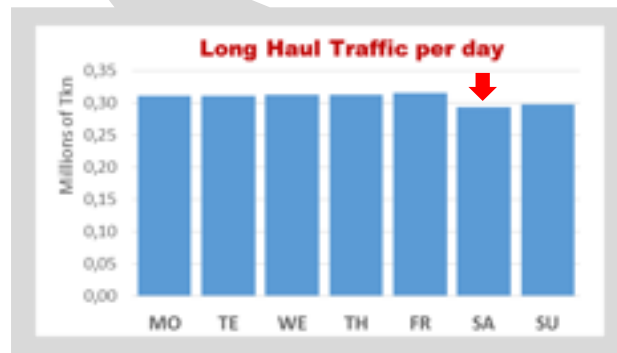
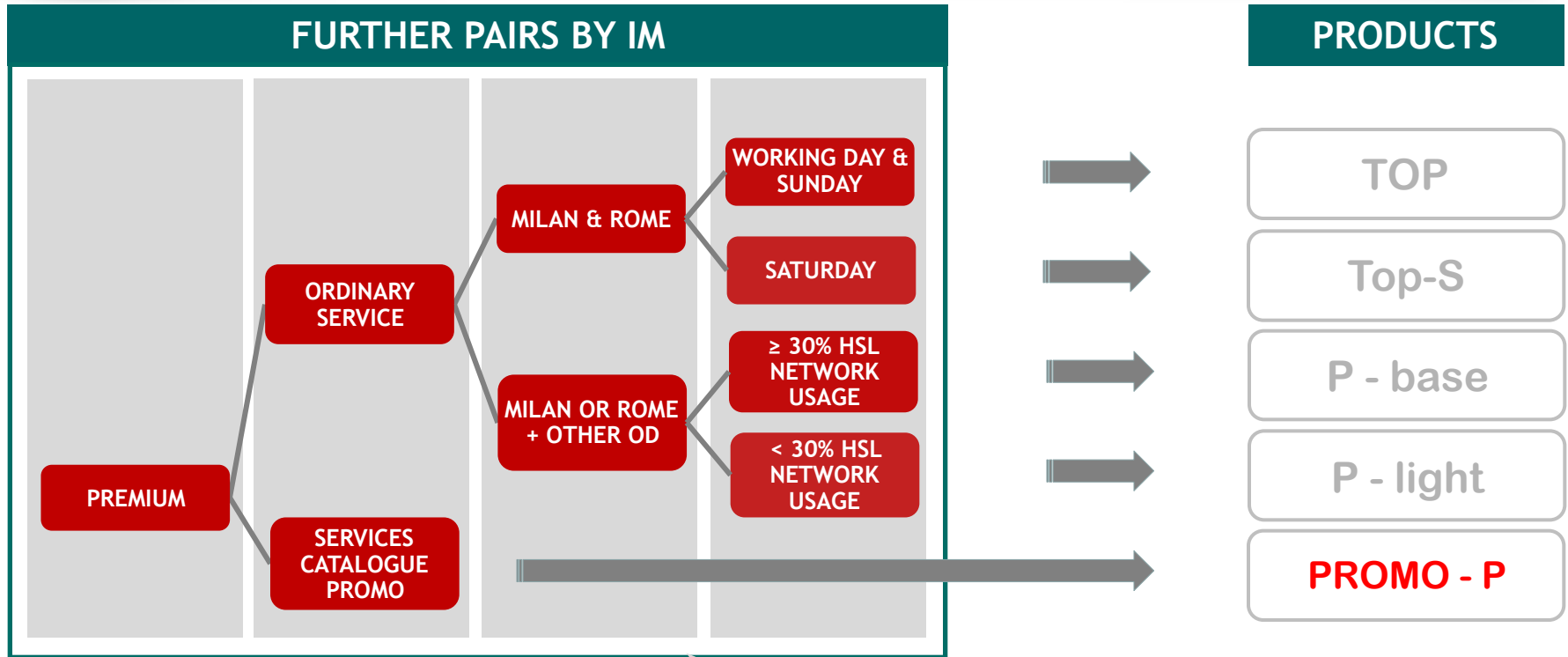
Qualitative **PAIRWISE COMPARISON**
of market pair (lack of data about
elasticity)

Basic pairs to be considered by IM to define a list of market segments (Art. 32.1 Recast)

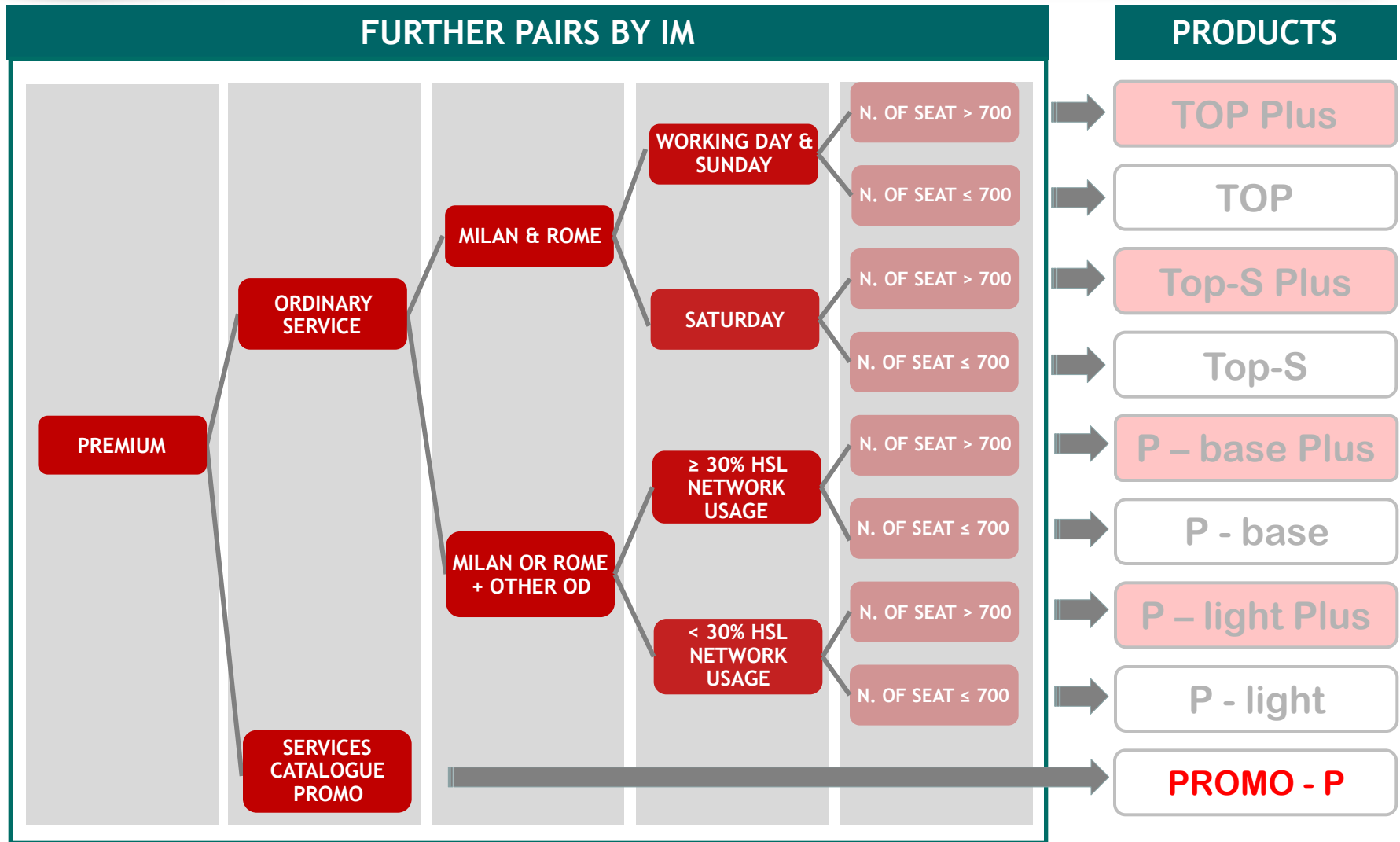
PAIRS GIVEN BY RB



PREMIUM - Pairs chosen by IM to define a list of market segments



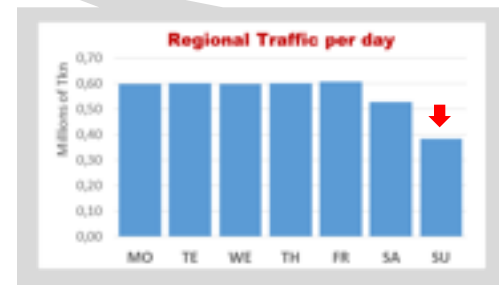
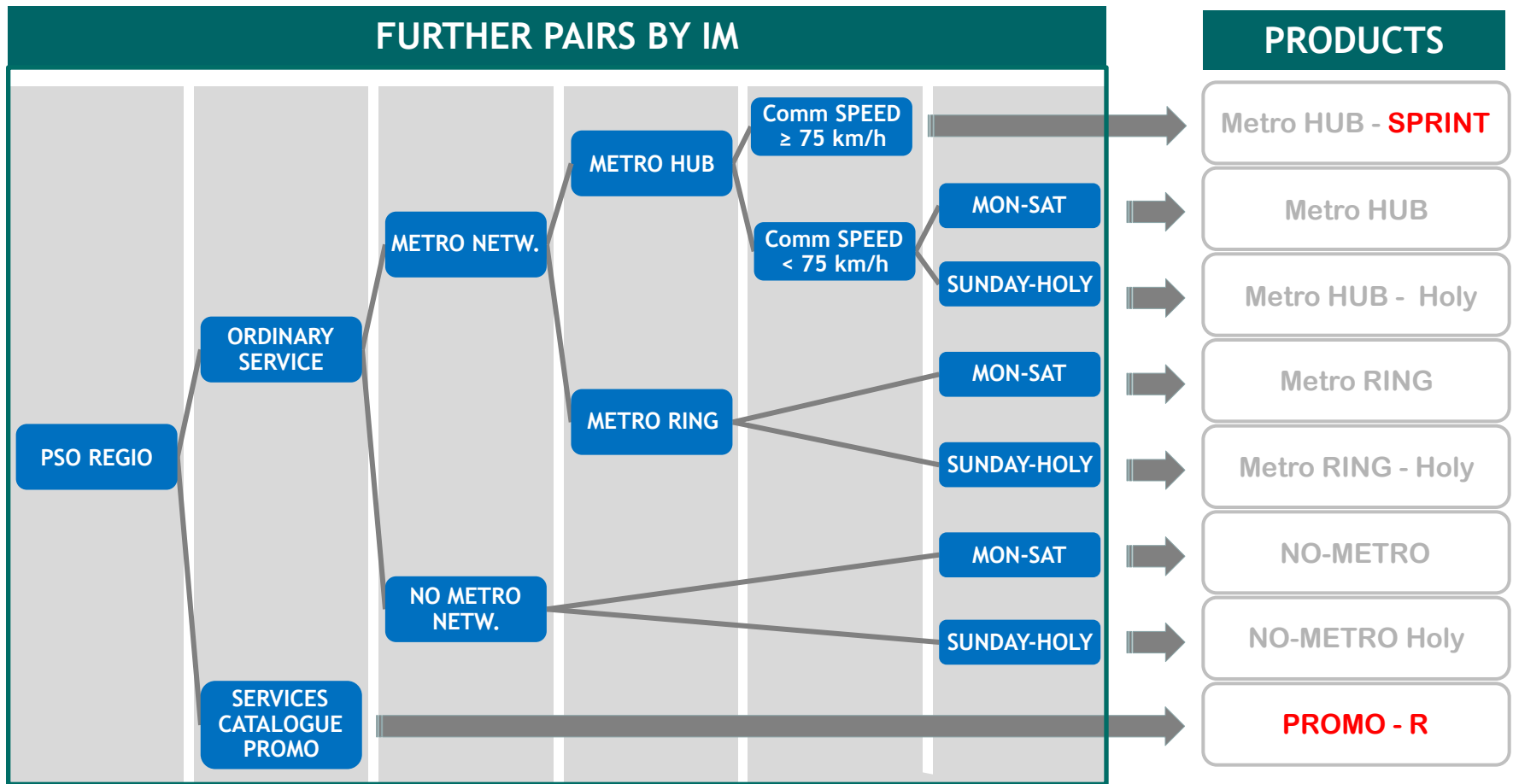
PREMIUM - Pairs chosen by IM to define a list of market segments



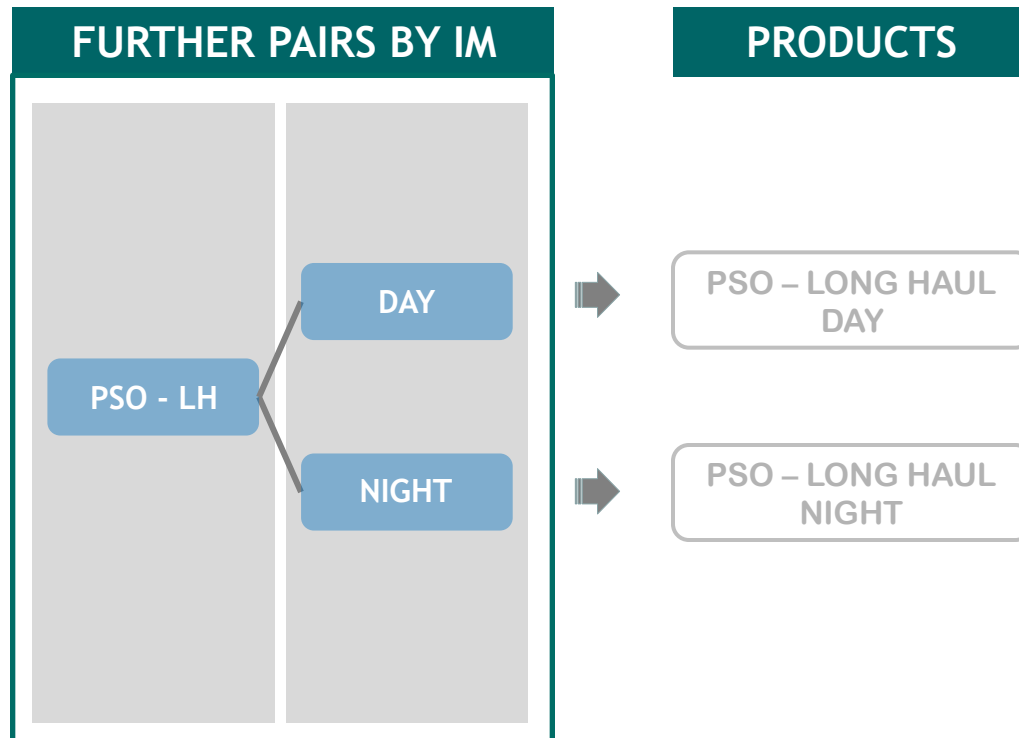
New **pairs** due to last prescription of RB (2018) regarding offered seats

Increasing of **market segments** due to RB's prescription

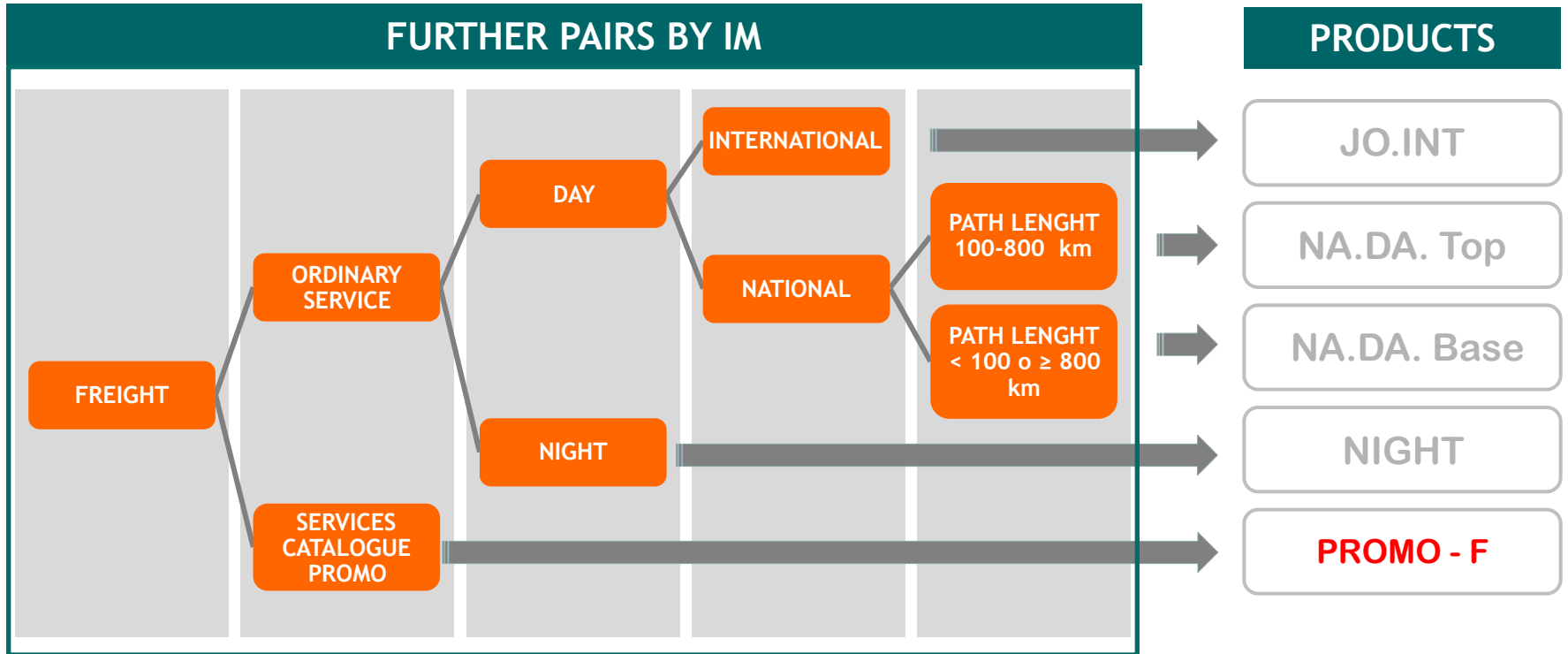
PSO – REGIO - Pairs chosen by IM to define a list of market segments



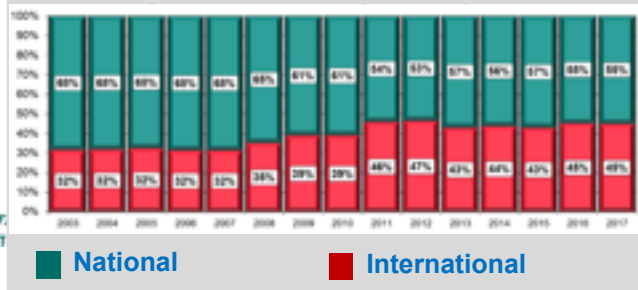
PSO - LONG HAUL - Pairs chosen by IM to define a list of market segments



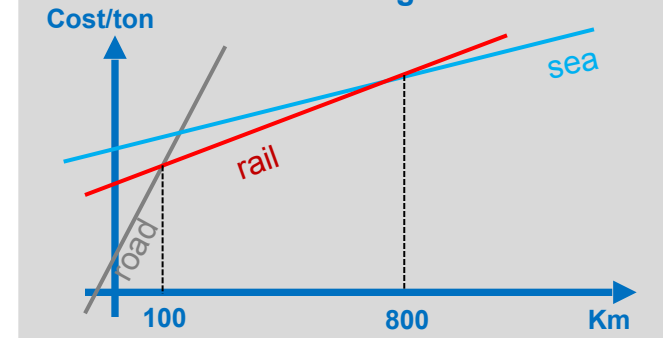
FREIGHT - Pairs chosen by IM to define a list of market segments



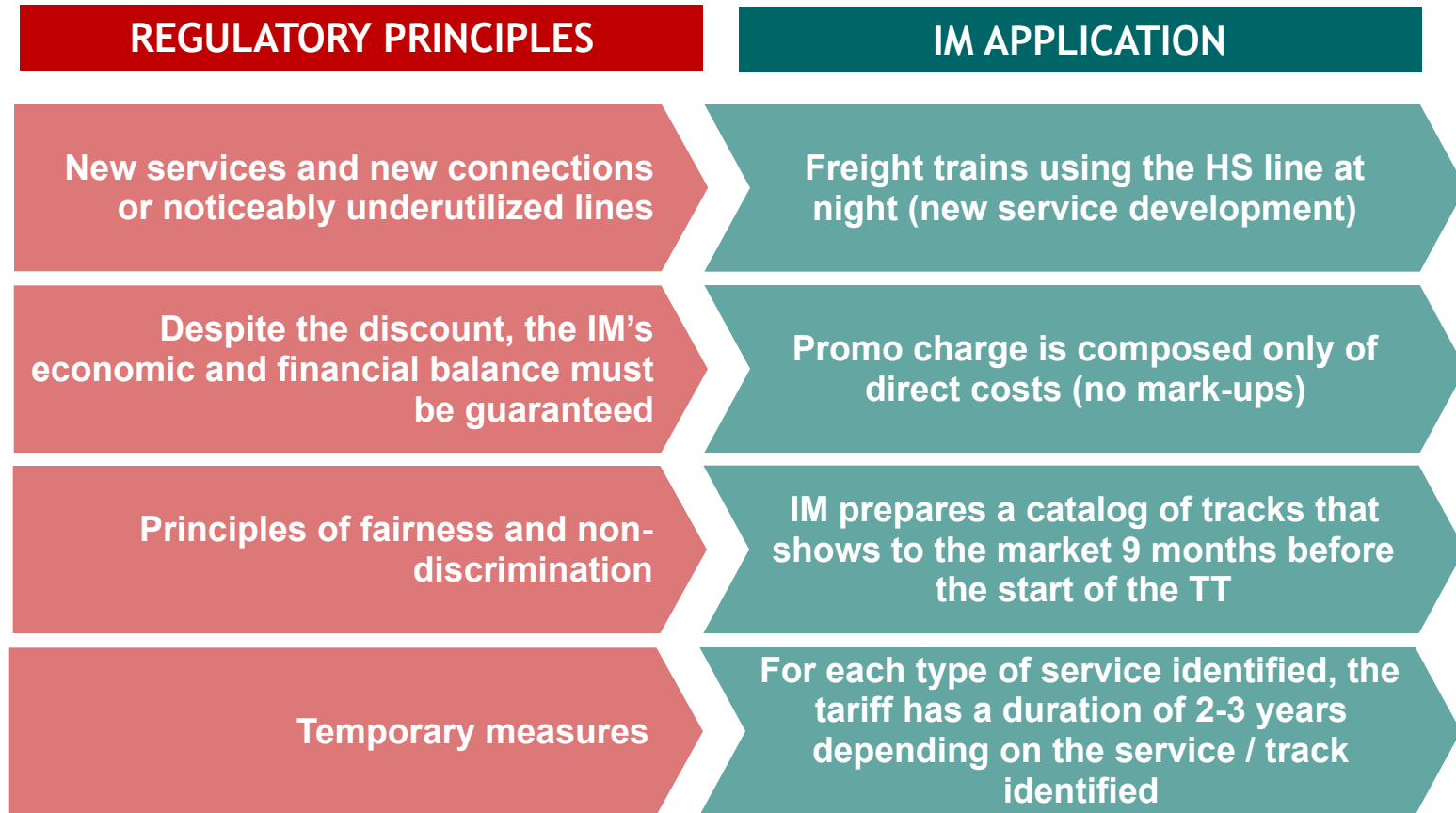
Trend of share National/International freight traffic



Hoover diagram

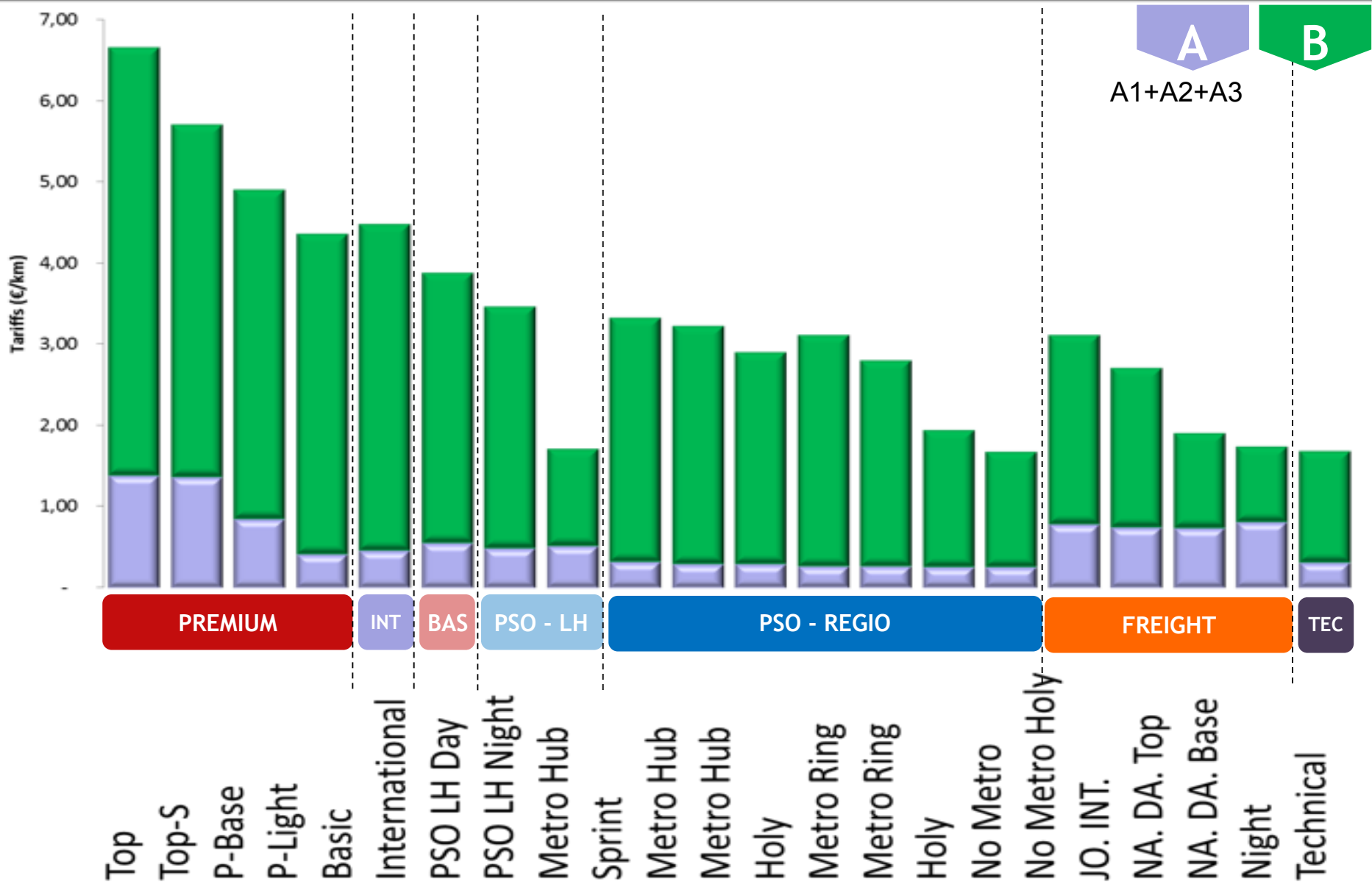


Promo charge



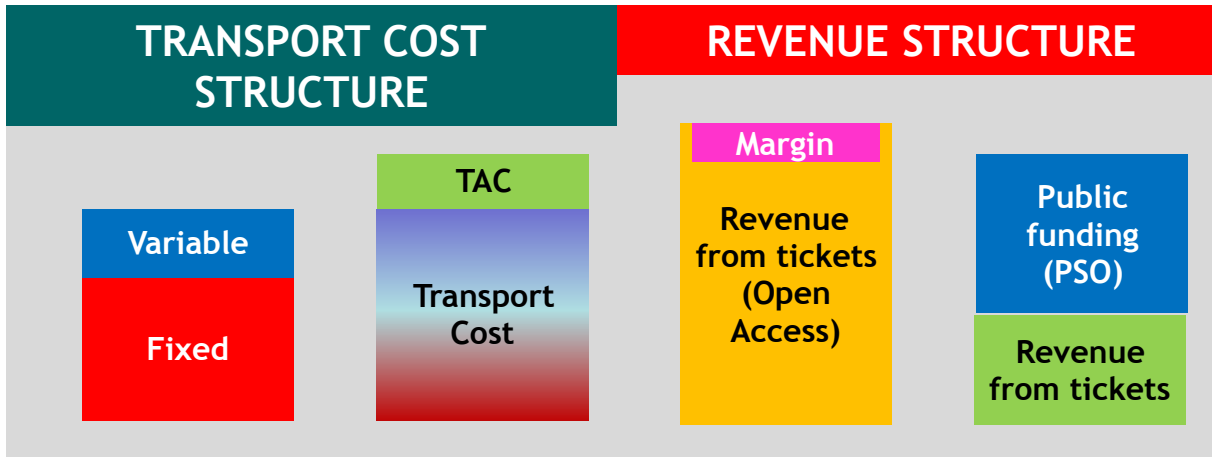
Tariffs 2018

TARIFFS



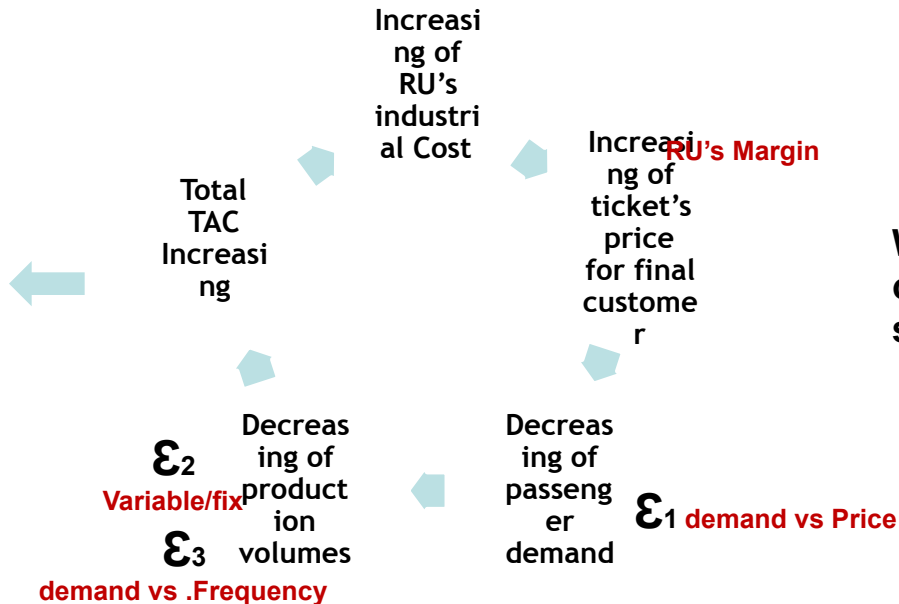
Sustainability analysis: approaches

Input data to be known



TAC/total cost

€ Train volumes vs. mark-up



Within which thresholds of mark-up does the system converge?

Thank you for your attention!

f.ciuffini@rfi.it