Freight Operations & Operating Indices

Sachin Sharma Kamlesh Gosai

Sr. Professor (Mgt) Professor (IT)

Scheme of Presentation

- Freight Loading
- Future Plans
- Primary Units, Fundamental Units, Derived Units
- Categories – Traffic, Power , and Rolling Stock
- Indices
- Summing Up

Freight Loading – 2015-16

Commodity	Loading (Million Tonne)
Coal	551.67
Raw Material for Steel Plants	20.30
Pig Iron and Finished Steel	42.47
Iron Ore for Exports	2.13
Iron Ore for Steel Plants	78.78
Iron Ore for Other Users	36.47
Cement	106.07
Food Grains	45.84
Fertilisers	52.25
POL	43.96
Container Services	46.18
Other Goods	78.05
Total	1104.17

Procedure for booking of goods

- Registration of a wagon demand by customer
- Allotment of wagons by Operations department
- Execution of forwarding note for goods by customer
- Examination of goods and their packing by Commercial staff
- Marking of packages

Procedure for booking of goods

- Loading of consignments in the wagons by customer
- Labeling, sealing and riveting of loaded wagons
- Weighment of wagons
- Calculation of freight and issue of R.R.

Preferential Traffic Schedule

(GO No. 81 -as per powers conferred by section 71 of The Railways Act, 1989)

Priority	Traffic/Commodity
A	Military Traffic
B	Goods for Emergency relief work Food grains and levy sugar for P.D.S. or other welfare schemes
C	Coal, Edible salt, Raw Material to Steel Plants, Fertilizer, POL
D	All traffic not included in priority 'A' to 'C'

Unit of Loading

- **Smalls traffic – Not allowed now**
- **Wagon Load - Option Available but not encouraged**
- **Train Load – Mostly followed**
- **Unit of movement - Train**

Unit of loading

Wagon Load– Less than full rake – wagon load rate charged

Train Load – one full rake – Train load rate charged

Two-point rake – loaded full rake but for Two different Destination – train load rate charged

Mini-Rake- Half rake is loaded – train load rate – limited distance

Calculation of freight

Freight charges depend on

- Weight of consignment
- Distance between two stations(Distance for charge)
- Classification of the commodity(Rate applicable-Rs/tonne)
- Mode of payment (Paid / To-pay)
- Risk rate chosen by party - Owners' Risk rate (ORR) or Railway Risk rate (RRR)

Other charges

- **Busy season surcharge (Dynamic pricing)**
- **Terminal charge**
- **Congestion surcharge**
- **Supplementary charge**
- **Miscellaneous charges**

Preparation of Invoice / issue of Railway Receipt

Railway Receipt

Foreign R.R.

(Destination on Other zones/Other countries)

- **Paid** (Payment at origin)
- **To-Pay** (Payment at Destination)
- **Paid-ToPay** (To Pakistan & Bangladesh) IR Paid, Rest To-Pay

Local R.R

(Destination within the zone)

- **Paid** (Payment at Origin)
- **To-Pay** (Payment at Destination)

RAILWAY RECIEPT (Manual)

Electronic RR

Railway Receipt / रेलवे रसीद

RR No. / आर आर सं. 262009799 PAID FOREIGN

Form / फार्म COM.G. 25

R. R. No. / आर आर सं. 262009799

FNR : 13062103114

Com.G.25

1 RR Date	2 Invoice No. / Date	3 R. Note No. / Date	4 TRFC TYPE	5 No. of Wagons	6 Risk Rate	7 Zone Code	8 Gauge Code	9 CHRG Dist.	10 Handled by	11 Rate Type	12 Class	13 Total Chargeable Weight	14 Weight Unit	15 Rate Rs. P.
21/06/13	34 / 21/06/13	822 / 20/06/13	GG	12	RR	1	1	341	P	C	150	762	T	440.3

Punitive Charge For Overloading: 16 Class | 17 Rate | 18 Class | 19 Rate

20 From Station/Siding / स्टेशन/साइडिंग: BINANI CEMENT SIDING, KESHAV GANJ — Code: BGKG 11108138

21 To Station/Siding / स्टेशन/साइडिंग: VADODARA MARSHALLING YARD — Code: BRCY 08224223

Charged Via / प्रभारित मार्ग: KVJ-BNS-PNU-MSH-KHDB-SBT-ADI-ND-KBRV-ANND-VDA-BJW

Train/Wagon Load: T — Inv. At — Weight at — Delivery Book/Folio No. — For RMC

22 Sender's Name & Address: M/S BINANI CEMENT, BGKG — BCKM

23 Consignee's Name & Address: BINANI CEMENT LTD. VADODARA MARSHLING YARD. Code: PUB

24 Commodity Code	25 No. of Articles	26	27 Pvt. Mark	28 Sender's Weight	29 Actual Weight	30 Chargeable weight at Nor. Rate	31 Over Wt. Chargeable at Pun. Rate	32 Freight
2891122	15216	2	BCEM	761.9	0	762	0	335508.6

SERVICE TAX PARTICULARS: 61

REGN. NO. OF STAX PROVIDER: FA&CAO/NW - APPLIED FOR

SERVICE TAX = 14839 + EC = 297 + HEC = 148

TYPE : TRANSPORTATION OF GOODS BY RAIL CODE : ZZZP

EXEMPTION NOTIFICATION NO: 1 OF 2006 ST DT: 01-03-2006

Other Charges 33 Code	34 Amount	Rebate 35 Code	36 Amount	Paid on Charge 37 Code	38 Amount	Total Freight 39 Amount	Under Charge 40 Code	41 Amount	Over Charge 42 Code	43 Amount
DPO	40264.00					427466				
TPRC	16779.24									
DS	19629.12									
*STAX	15284									

Allocation and other details: 44 Acct's head — 45 Dept. to be Debited — 46 A. Officer

47 S. No.	48 Own RLY.	49 Type	50 Wagon No.	51 CC Tonnes	52 Tare	53 No. of Articles	54 Commodity Code	55 Gross Weight	56 D.Me.Ain	57 Weight	58 Actual Weight	59 Perm CC Tonnes	60 Total	61 Norm. Rate	62 Pun. Rate	63 Chargeable Weight
1	NF	BCNA	71276	56.2	24.5	1279	2891122	88.59		0	63.99	64	0	0	0	64
2	SE	BCN	107374	56.7	27.2	1218	2891122	88.19		0	60.99	61	0	0	0	61
3	SE	BCNA	180451	56.7	24.8	1279	2891122	88.59		0	63.99	64	0	0	0	64
4	NF	BCNA	71199	57.28	24.8	1279	2891122	88.59		0	63.99	64	0	0	0	64
5	CR	BCNA	1063736	56.8	24.6	1279	2891122	88.59		0	63.99	64	0	0	0	64
6	CR	BCN	153982A	57.1	27.2	1218	2891122	88.19		0	60.98	61	0	0	0	61
						Total										

64 S. No.	65 Own RLY.	66 Type	67 Wagon No.	68 CC Tonnes	69 Tare	70 No. of Articles	71 Commodity Code	72 Gross Weight	73 D.Me.Ain	74 Weight	75 Actual Weight	76 Perm CC Tonnes	77 Total	78 Norm. Rate	79 Pun. Rate	80 Chargeable Weight
7	NC	BCNAHS	11810	56.7	24.6	1279	2891122	88.59		0	63.99	64	0	0	0	64
8	SC	BCNA	37719	56.7	24.6	1279	2891122	88.59		0	63.99	64	0	0	0	64
9	SR	BCNA	47833A	57.2	24.6	1279	2891122	88.59		0	63.99	64	0	0	0	64
10	SC	BCNA	39698	58.34	24.6	1278	2891122	88.59		0	63.99	64	0	0	0	64
11	WR	BCNA	953441	56.7	24.6	1279	2891122	88.59		0	63.99	64	0	0	0	64
12	CR	BCNA	973588	56.7	24.6	1278	2891122	88.59		0	63.99	64	0	0	0	64
						15216	Total	1062.29		0	761.89	762	0	0	0	762

F 5/36
700 ..29
22/06/13

Commodity Description / सामान का विवरण: CEMENT (RAKE DEMAND)

Remarks / टिप्पणी: ... COMMODITY AS DESCRIBED BY THE SENDER IN THE F/NOTE.#WAGON JOINTLY EXAMINED, FOUND FIT & WATERTIGHT.#WAGON SELECTED BY SENDER.#TRAIN LOAD CONDITIONS COMPLIED WITH.#UNDER CHARGES, IF ANY TO BE ADVISED TO FA&CAO/NWT FOR REALISATION.#LOADING DONE IN SIDING, NOT SUPERVISED BY RAILWAY STAFF.#SENDER'S WEIGHT ACCEPTED #SAID TO CONTAIN## PACKAGING CONDITION OUTER NOT COMPLIANT: P/1## CLUBBED WITH INVOICE NUMBERS 34 TO 37 FOR BRCY AND 67 TO 70 FOR ST AND BENEFIT OF TRAIN LOAD RATE GRANTED. #. DESTINATION TO ENSURE COLLECTION OF UNDER CHARGES # DUE ON ACCOUNT OF NON LOADING OF OTHER DEMANDS / FNOTES. #TLOAD CONDITION FULFILLED.DEFAULT# FOR TRAINLOAD CLASS RATE, ENSURE COMPLIANCE OF DESTINATION STATIONS BEING WITHIN 200 KMS.## SALES TAX/TIN NO.:08763301287 #

Payment Mode / भुगतान पद्धति: Credited to FA & CAO/T/NW under Bank trxdt :5630 on : 21-06-2013 10:05; Prty.- BCEM; LC A/C.- 00618,C005910, LC valid from- 01-10-2012, LC valid to- 30-09-2013 PUNJAB NATIONAL BANK ... 4002100018503,PUNJAB NATIONAL BANK,406-400.

स्टेशनरी क्र. सं. A 2462073

2073

Station Stamp / स्टेशन की मुहर — बिनानी सीमेंट साईडिंग, केशवगंज

Sig. Station Master / स्टेशन मास्टर के हस्ताक्षर


155061

Ordering of trains

Concept of ordering – ordering a train means deciding tentative time for departure of that train

- **Ordering Depends on Availability Of:**
  - **Load**
  - **Power**
  - **Path**
  - **Crew & Guard**

Ordering of trains

Three units play major role

- **Goods-shed/siding/yard- Making the load available.**
  - Train is generated here after loading/ unloading.
  - Train is also formed in a yard
  - Efficiency of these units help early formation of trains

Ordering of trains

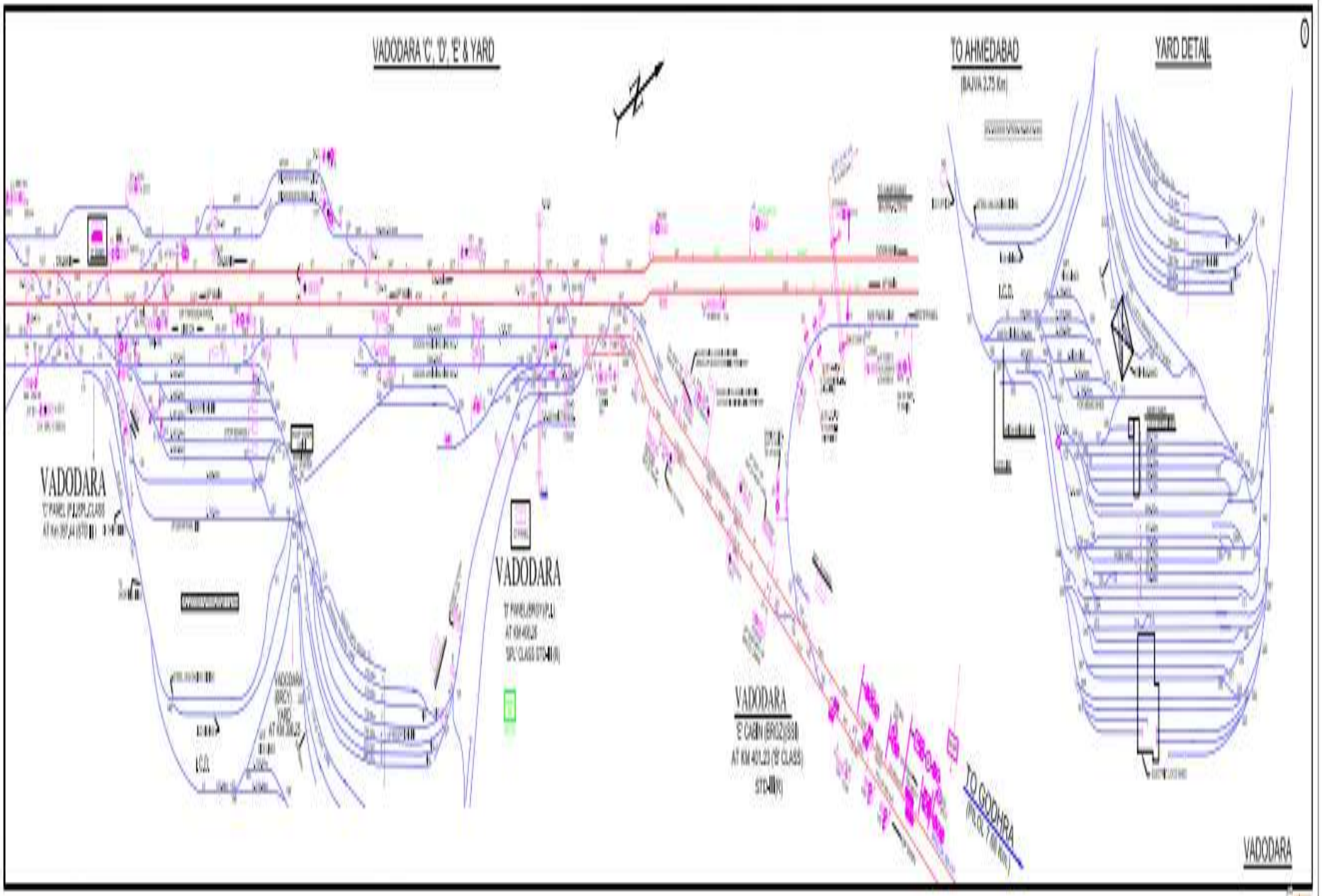
Loco shed- Making loco available

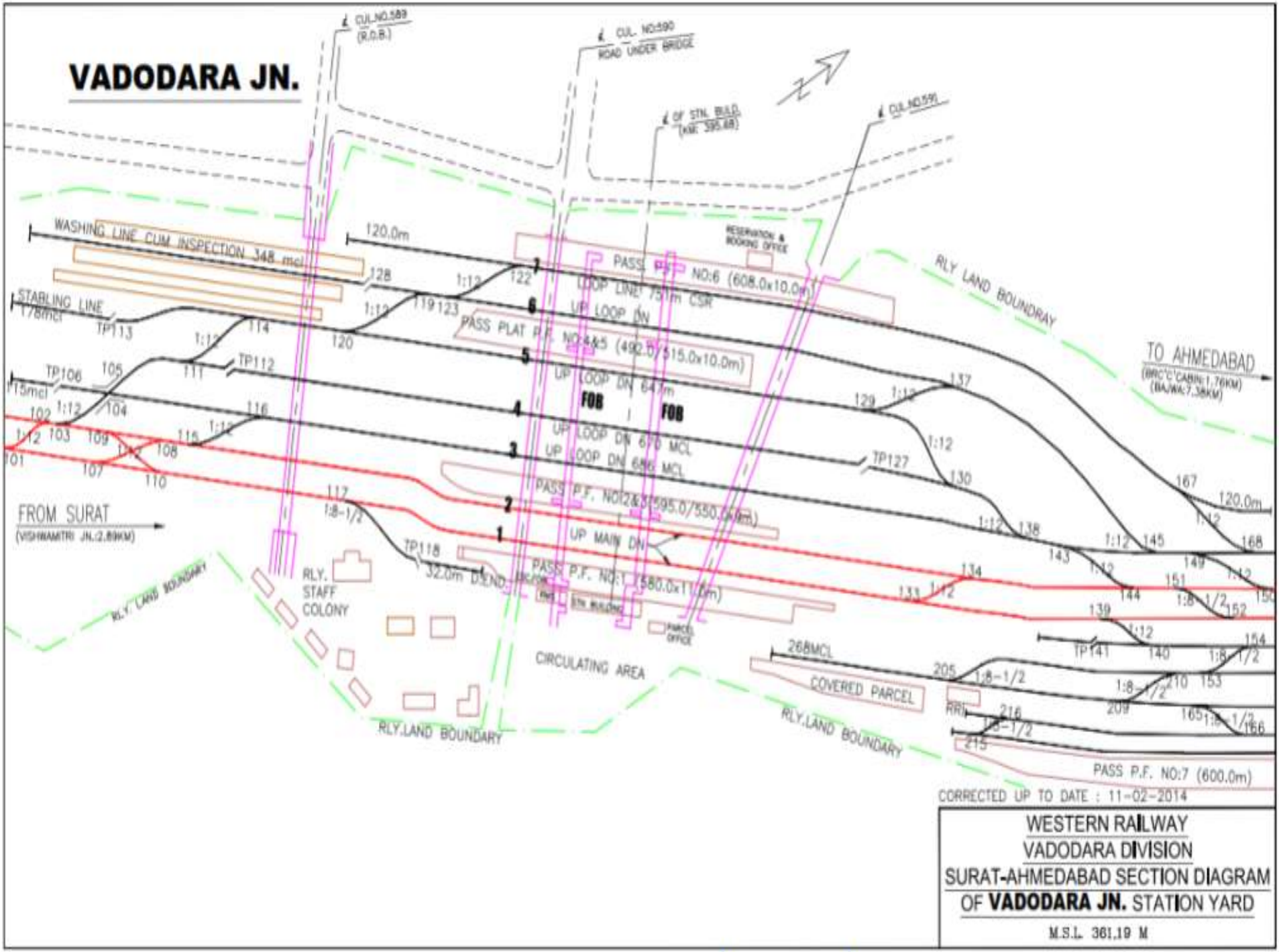
- **Power plan** – No. of locos shed is suppose to provide for train operations
- **Outage** – No. of locos actually provided by loco shed
- **Schedules** – Major & Minor maintenance schedules
- **Unscheduled repairs** – Failures on line before normal schedules

Ordering of trains

Control Office - finding path and ordering the train

- Ordering is done by Dy. CTNL (R) and same is advised to PCR/TLC for arranging crew
- Lobby is simultaneously advised for arranging crew.
- Lobby will advise crew about their booking to work a train through a call boy/SMS
- Crew reports accordingly for duty at Lobby and sign on duty and take charge of train


VADODARA 'C', 'D', 'E' & YARD
TO AHMEDABAD
YARD DETAIL
VADODARA
VADODARA
VADODARA
TO GODHRA
VADODARA


VADODARA JN.
CUL.NO.589 (R.O.B.)
CUL. NO:590 ROAD UNDER BRIDGE
OF STN. BLD. (KM: 595.68)
CUL.NO.591
WASHING LINE CUM INSPECTION 348 mcl
STABLING LINE 178mcl
PASS P.F. NO:6 (608.0x10.0m)
LOOP LINE 751m CSR
UP LOOP DN
PASS PLAT P.F. NO:4&5 (490.0/515.0x10.0m)
UP LOOP DN 647m
UP LOOP DN 670 MCL
UP LOOP DN 686 MCL
UP MAIN DN
PASS P.F. NO:2&3 595.0/550.0(x)m)
PASS P.F. NO:1 (580.0x11.0m)
FOB
FOB
RESERVATION & BOOKING OFFICE
RLY LAND BOUNDRAY
TO AHMEDABAD
(BRC'C'CABIN:1.76KM)
(BA/WA:7.36KM)
FROM SURAT
(VISHWAMITRI JN.:2.89KM)
RLY. STAFF COLONY
CIRCULATING AREA
RLY.LAND BOUNDARY
RLY.LAND BOUNDARY
268MCL
COVERED PARCEL
PASS P.F. NO:7 (600.0m)
TP113
TP112
TP106
TP118
TP127
TP141
120.0m
32.0m DEND
CORRECTED UP TO DATE : 11-02-2014
WESTERN RAILWAY
VADODARA DIVISION
SURAT-AHMEDABAD SECTION DIAGRAM
OF VADODARA JN. STATION YARD
M.S.L. 361.19 M

Vadodara - Yard

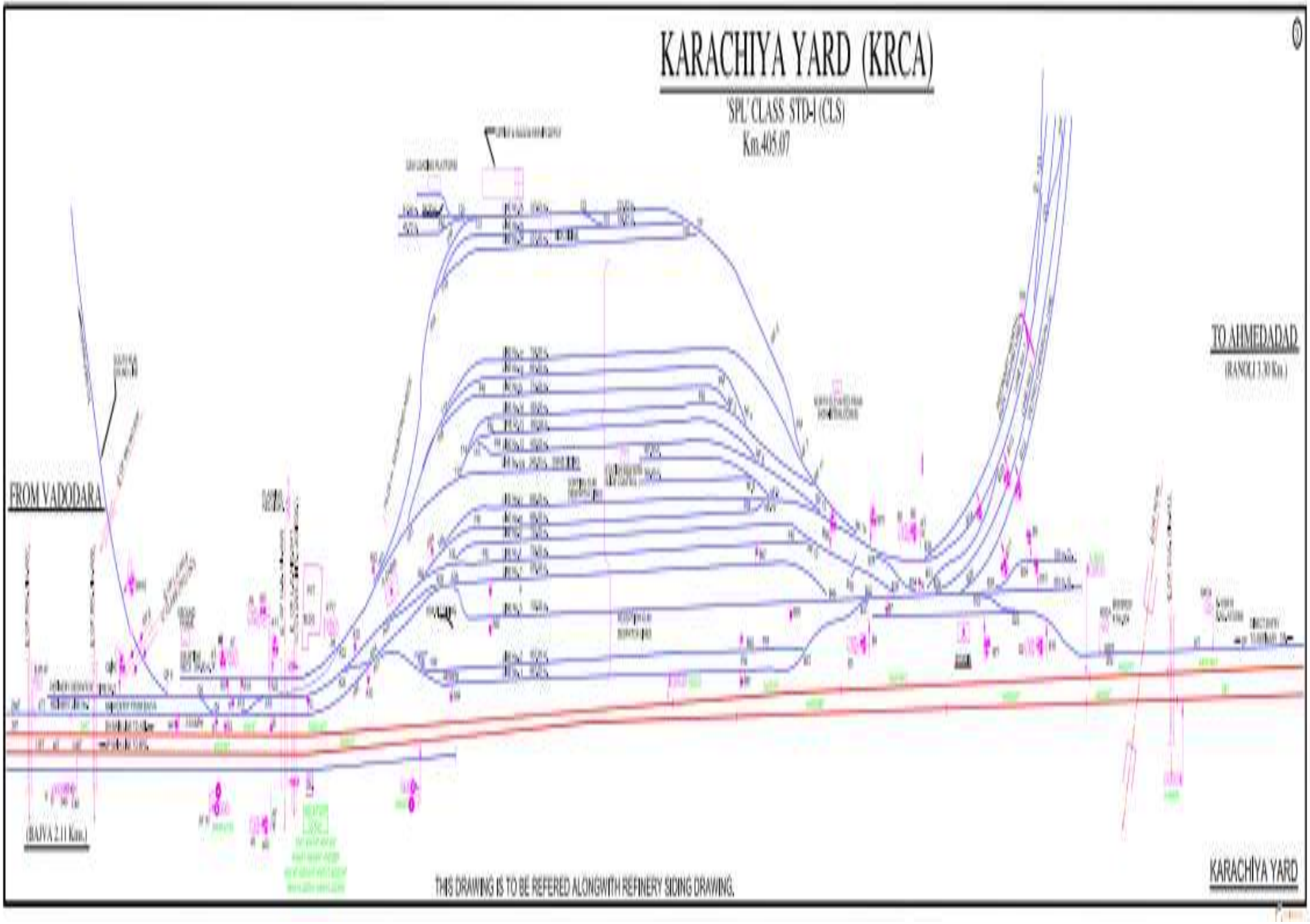
Vadodara - Yard

Vadodara - Yard

Vadodara - Yard

Vadodara - Yard

Vadodara - Yard


KARACHIYA YARD (KRCA)
'SPL' CLASS STD-I (CLS)
Km.405.07
TO AHMEDABAD
(RANOLI 7.30 Km.)
FROM VADODARA
(BAJVA 2.11 Km.)
KARACHIYA YARD
THIS DRAWING IS TO BE REFERED ALONGWITH REFINERY SIDING DRAWING.

Karachiya -Yard

Karachiya -Yard

Karachiya -Yard

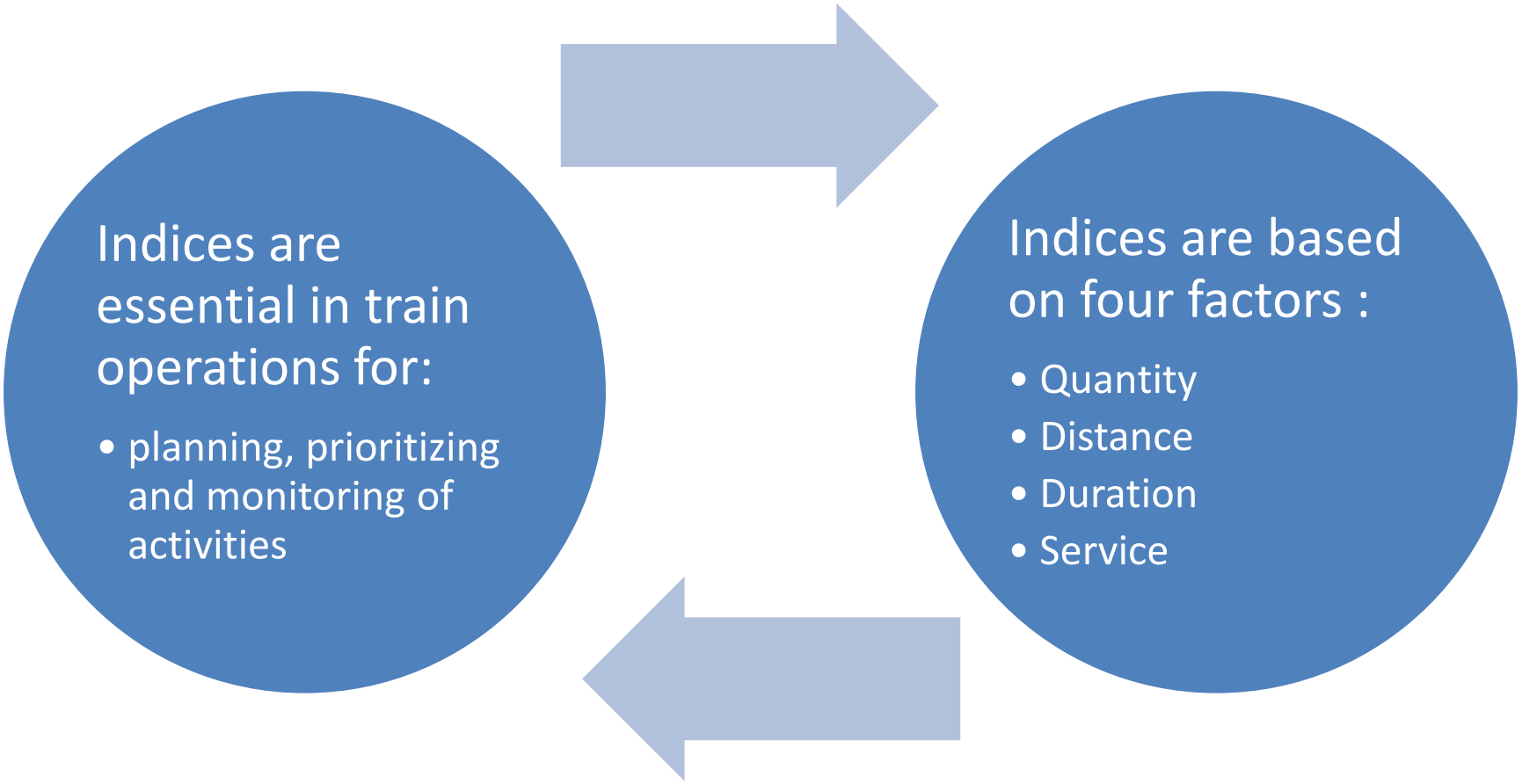
Karachiya -Yard

Karachiya -Yard

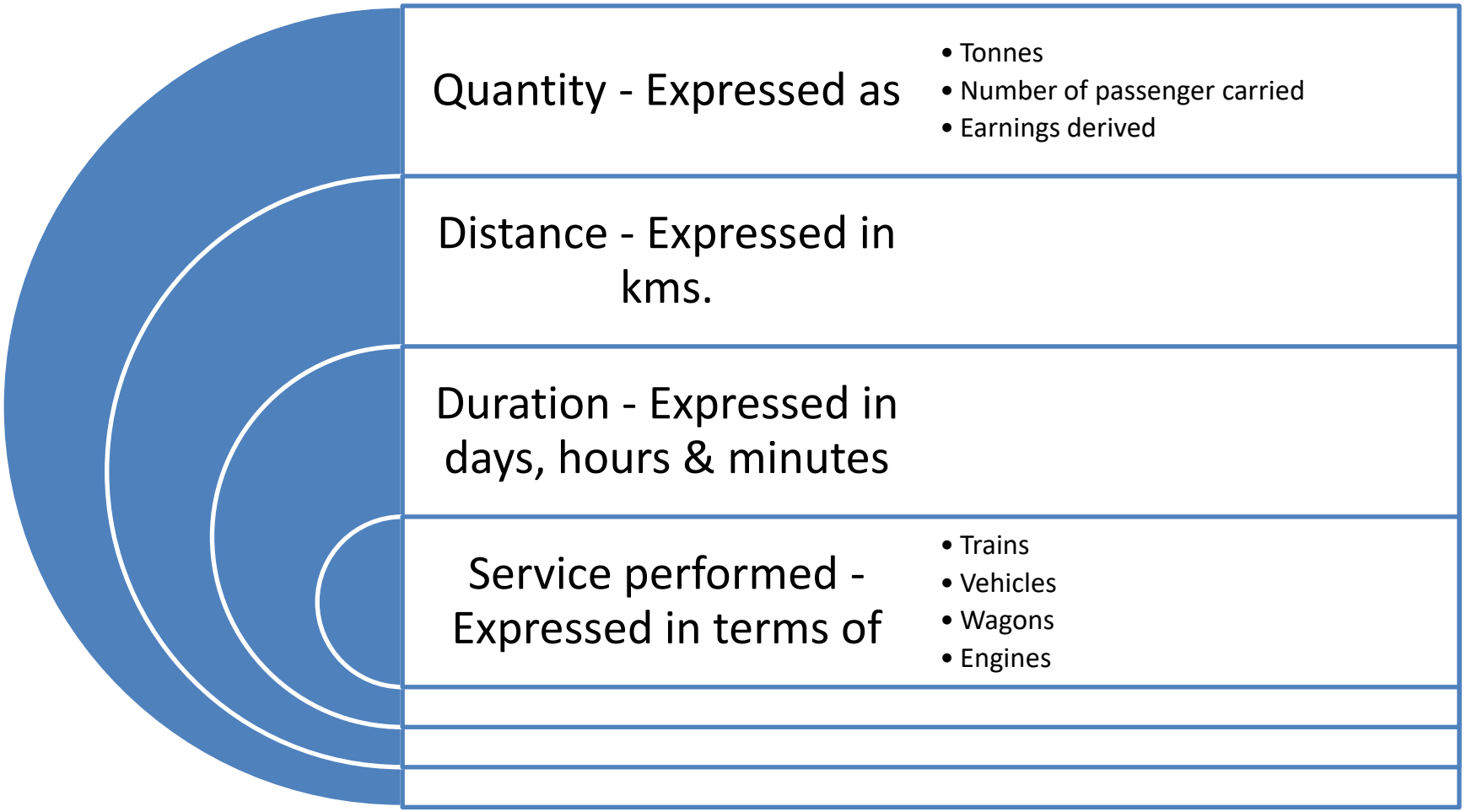
Karachiya -Yard

Efficiecny Indices

Operating Indices



Primary Units



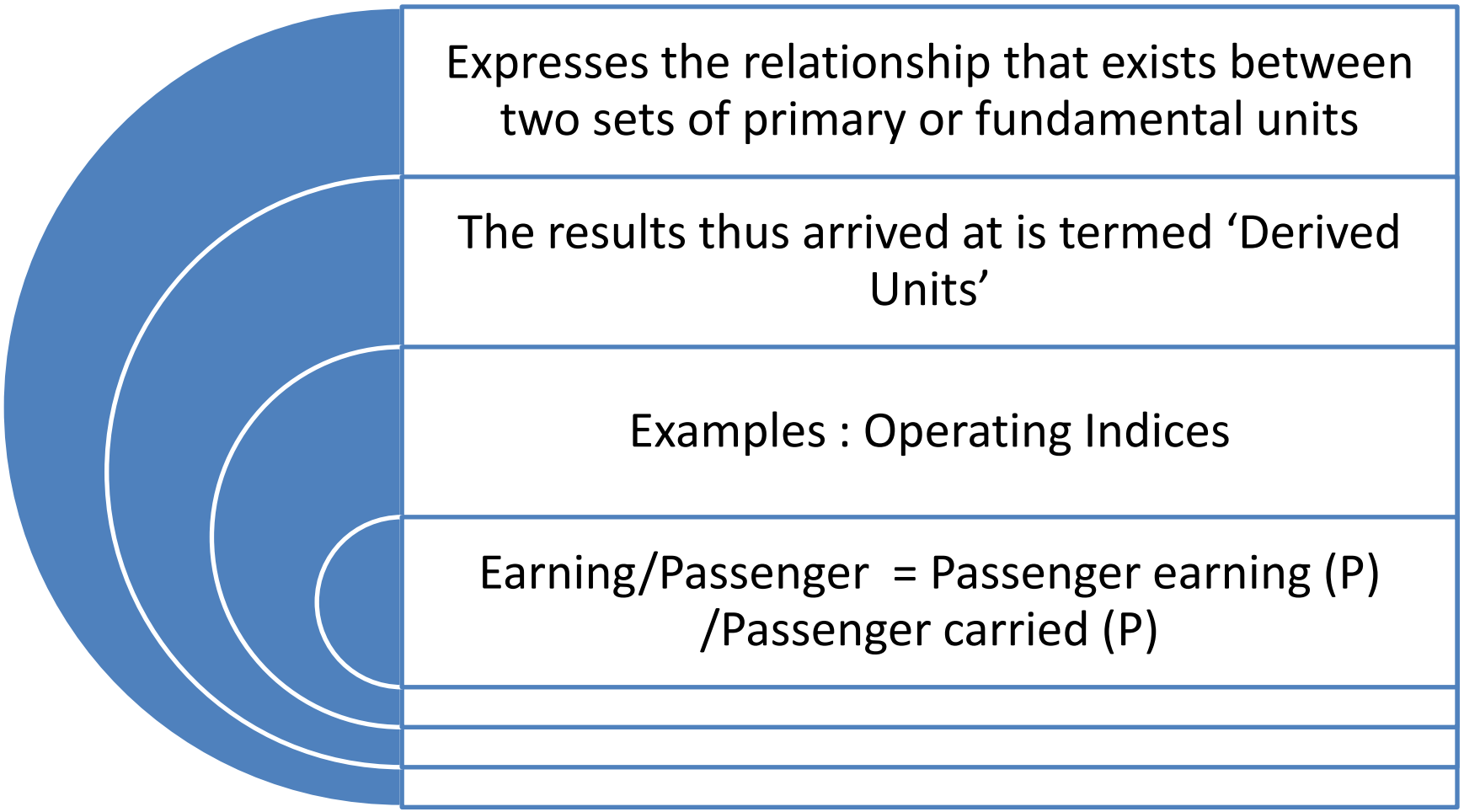
Fundamental Units

Relationship between primary units, expressed in composite terms is called 'Fundamental units'

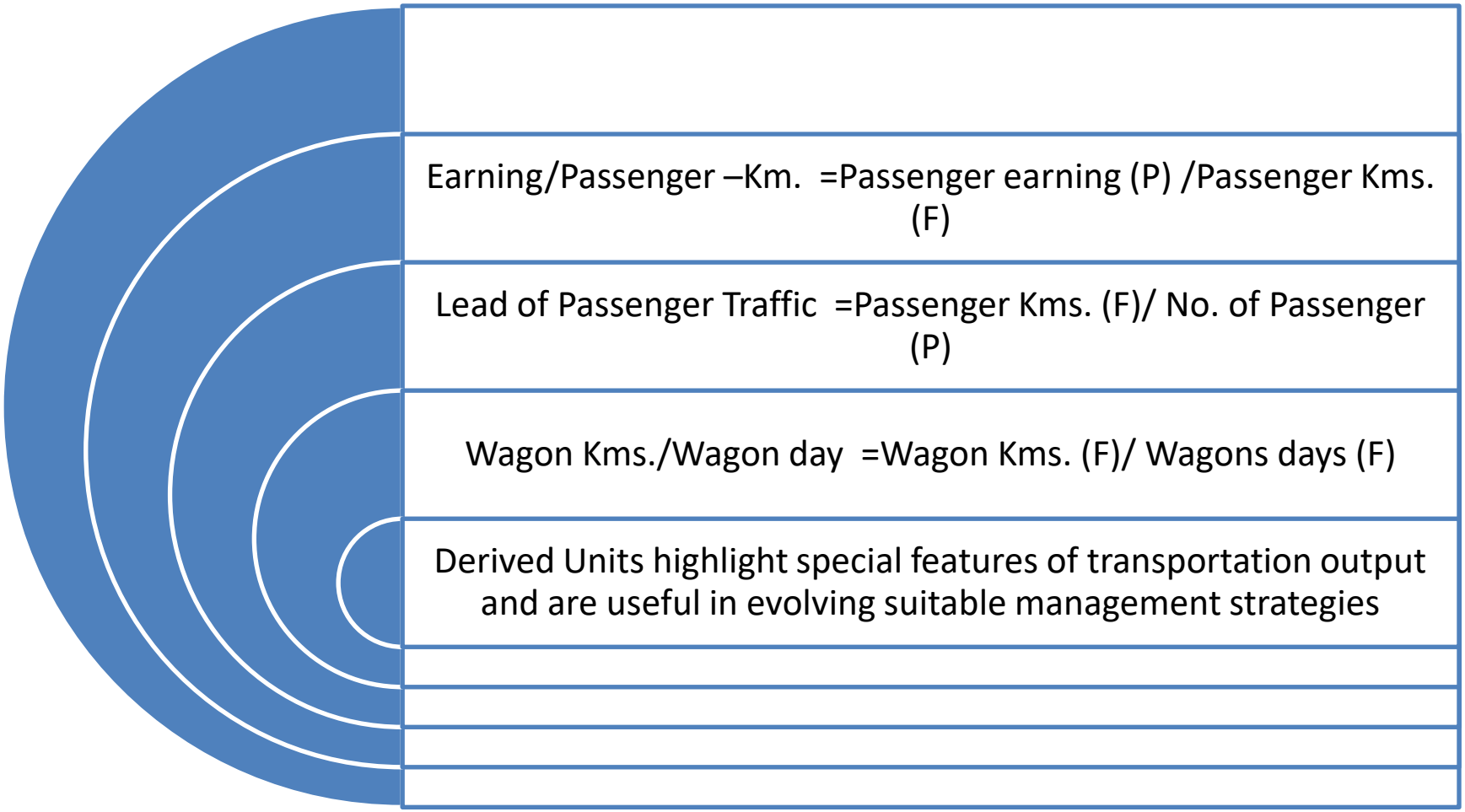
Fundamental units express two primary units in their relationship to one another, such as :

- Tonne - kms.
- Passenger – kms.
- Train - kms.
- Wagon - kms.
- Engine - hours
- Wagon - days etc.

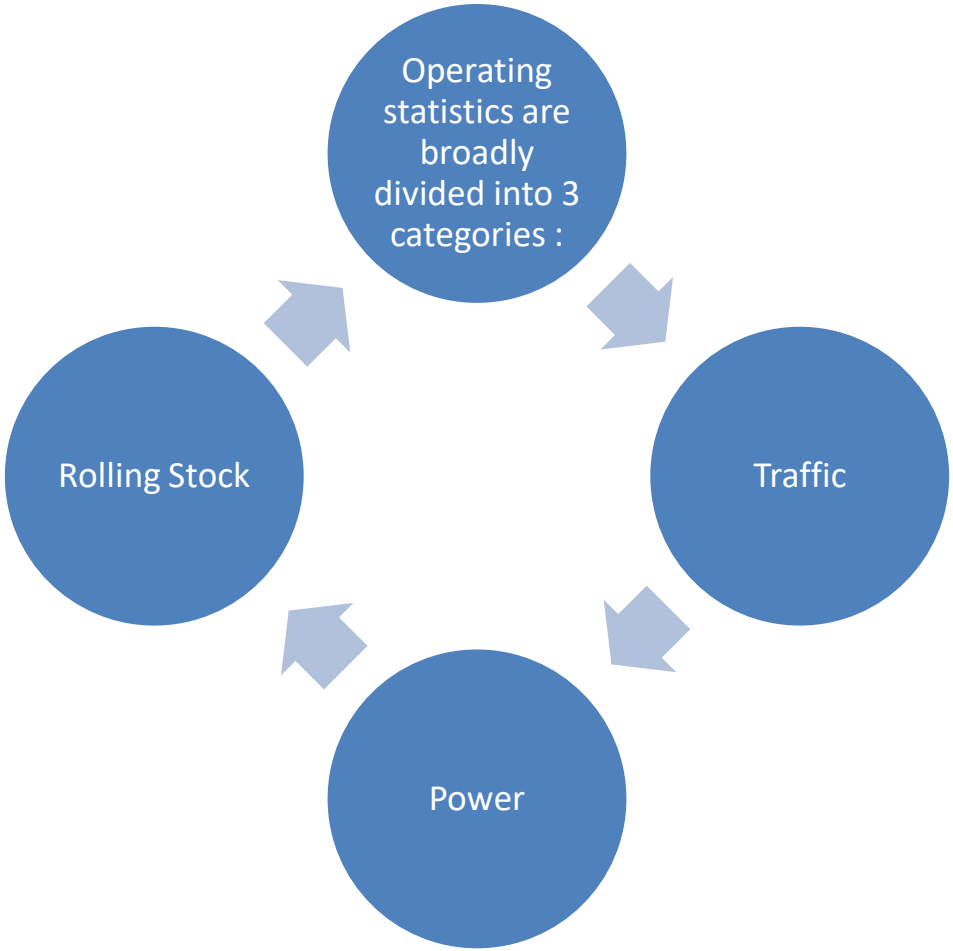
Derived Units



Derived Units



Operating Indices



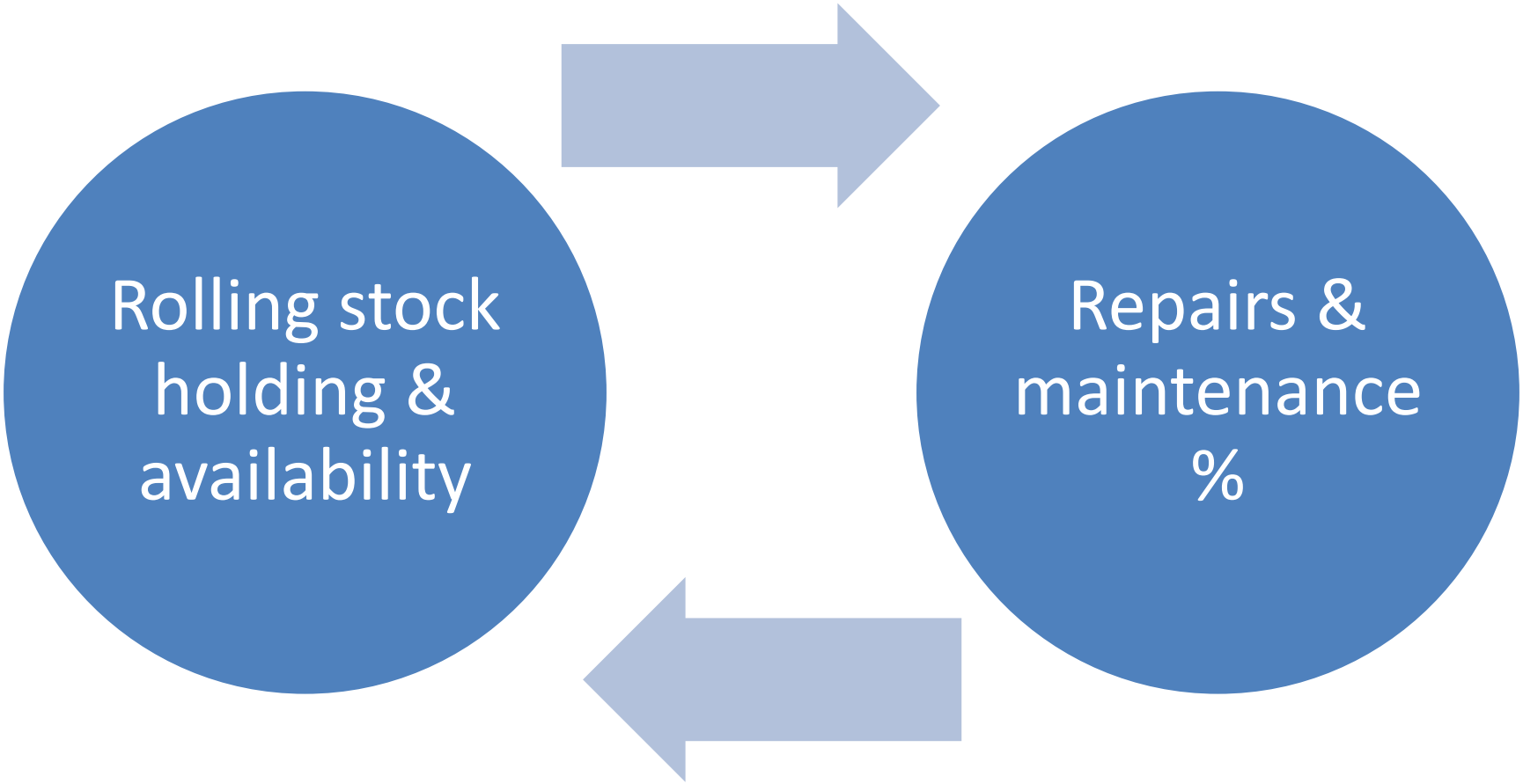
Traffic statistics

- Wagons loaded
- Wagon mobility
- Wagon usage
- Train loads
- Train mobility
- Productive and unproductive services
- Wagon detention
- Marshalling yard
- Terminal goods station
- Punctuality

Power statistics

- Engine usage
- Fuel and energy consumption
- Engine failure statistics etc

Rolling stock statistics



Operating Statistics

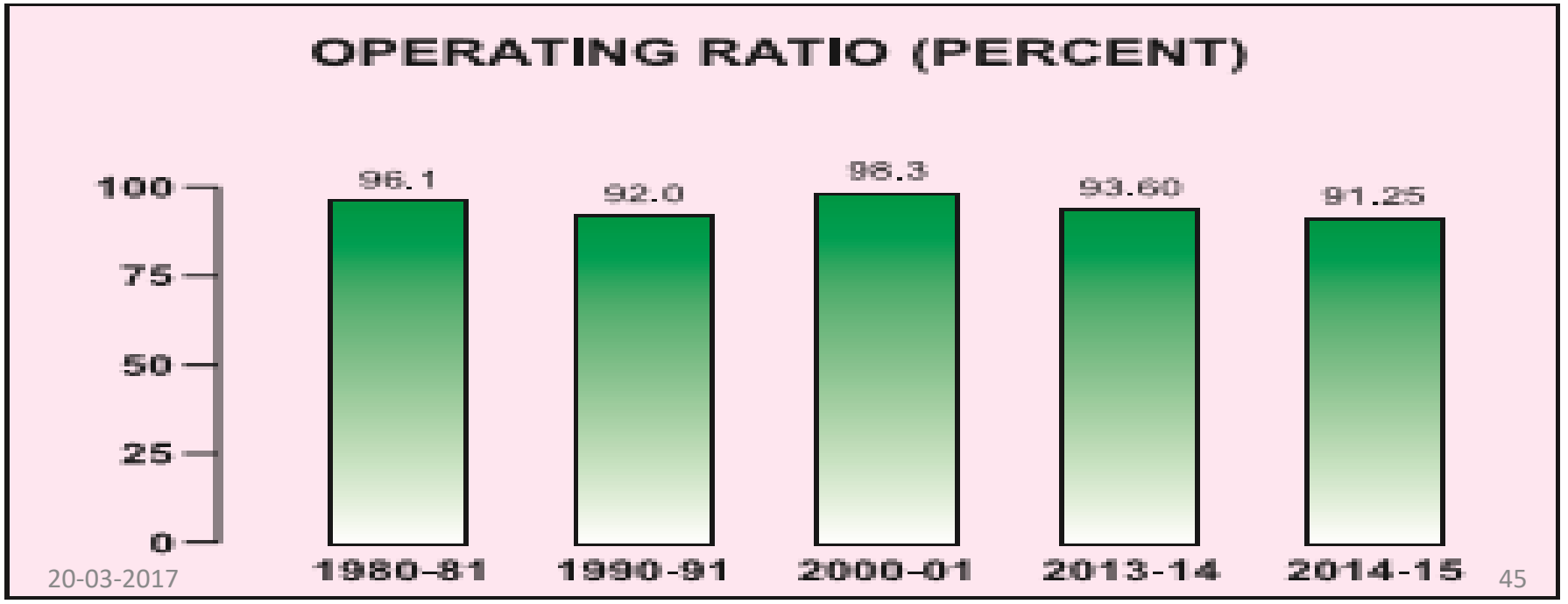
Operating ratio. –The ratio of workings expense (excluding suspense but including appropriation to Depreciation Reserve Fund and Pension Fund) to Gross Earnings

Expenditure incurred in connection with Administration, Operation, Maintenance and repairs of open line traffic

EXPENSES

(₹ in millions)

	2011-12	2012-13	2013-14	2014-15
Genl. Superintendence	46,104.8	51,722.3	55,854.3	60,225.6
Repairs & Maintenance	237,500.6	257,999.7	289,594.3	317,625.5
Operating Expenses	384,402.0	446,134.6	540,234.7	574,451.5
Staff welfare	42,332.9	45,753.6	52,420.8	59,609.1
Misc. Wkg. Exp.	36,263.0	40,232.2	43,246.3	51,399.4
Suspense	(-)1,229.2	(-)1,684.2	-2795.2	(-)3,610.4
Total Ordy. Wkg. Exp.	745,374.1	840,120.4	975,707.6	1,069,958.8
Contribution to Funds	2,41,300.0	275,600.0	327,500.0	370,000.0
Total Working Exp.	986,674.1	1,115,720.4	1,303,207.1	1,429,958.8
Other Misc. Exp.	7,962.7	9,932.0	11,440.9	11,828.8
Gross Wkg. Exp.	994,636.8	1,125,652.4	1,314,648.0	1,441,787.6



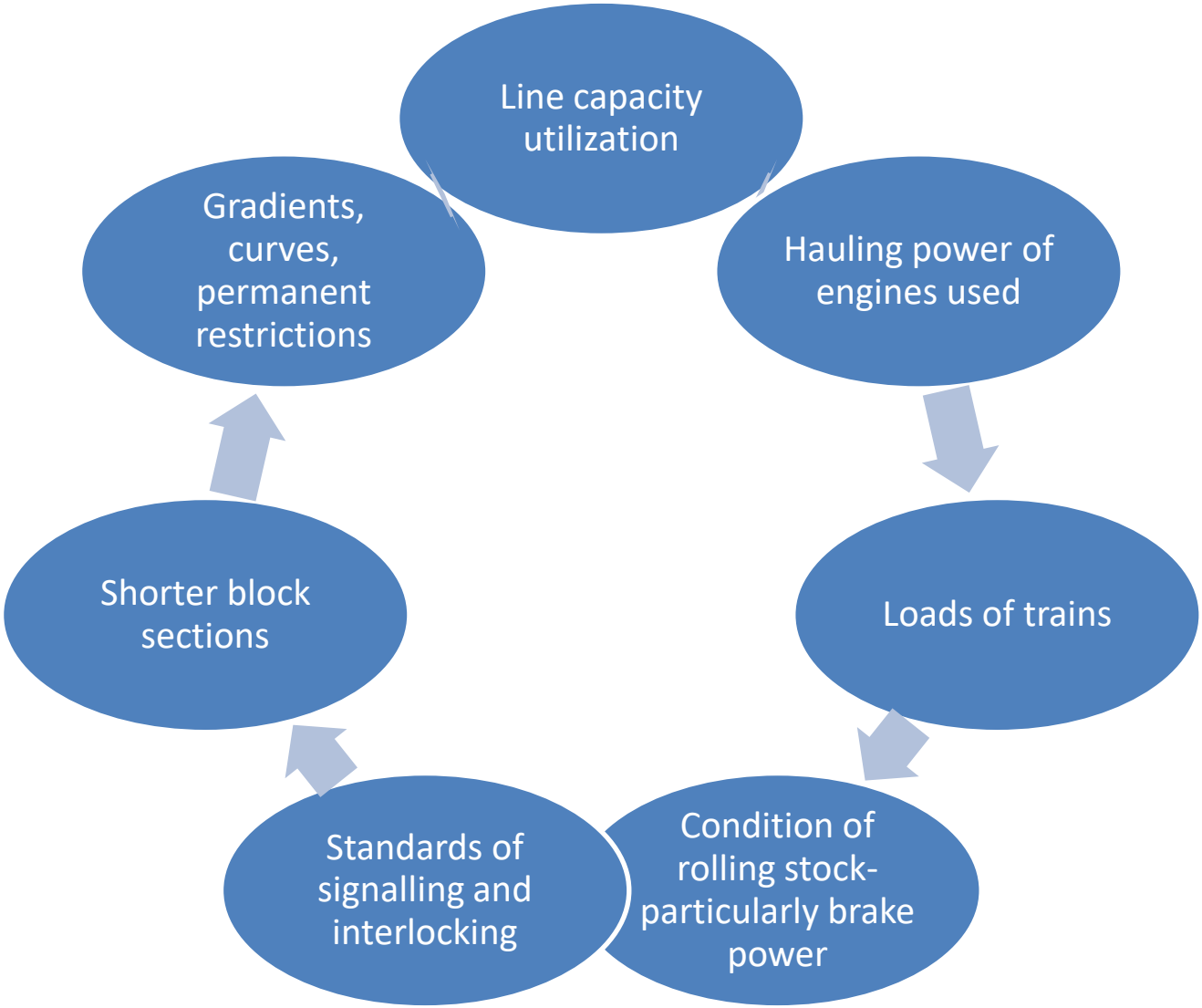
Wagon Usage

Average Speed of Goods Trains

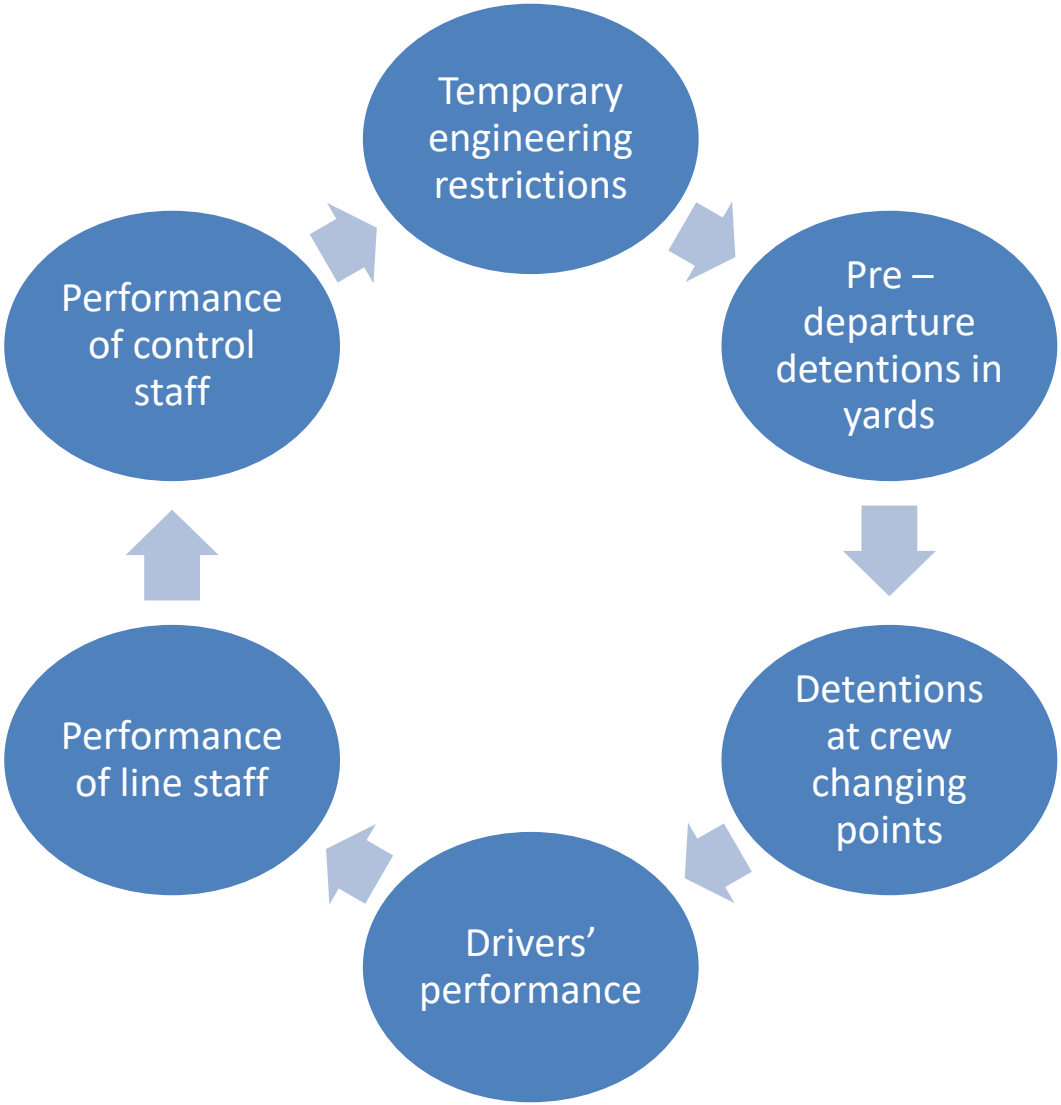
- This figure is a measure of wagon mobility
- Result is calculated separately for ‘through goods trains’ and all goods trains
- Detentions to through goods trains at roadside stations has the effect of bringing down average speeds

Average speed of Goods Trains =Train kms. /Train Engine hrs.

Average Speed of Goods Trains - Factors



Average Speed of Goods Trains - Factors



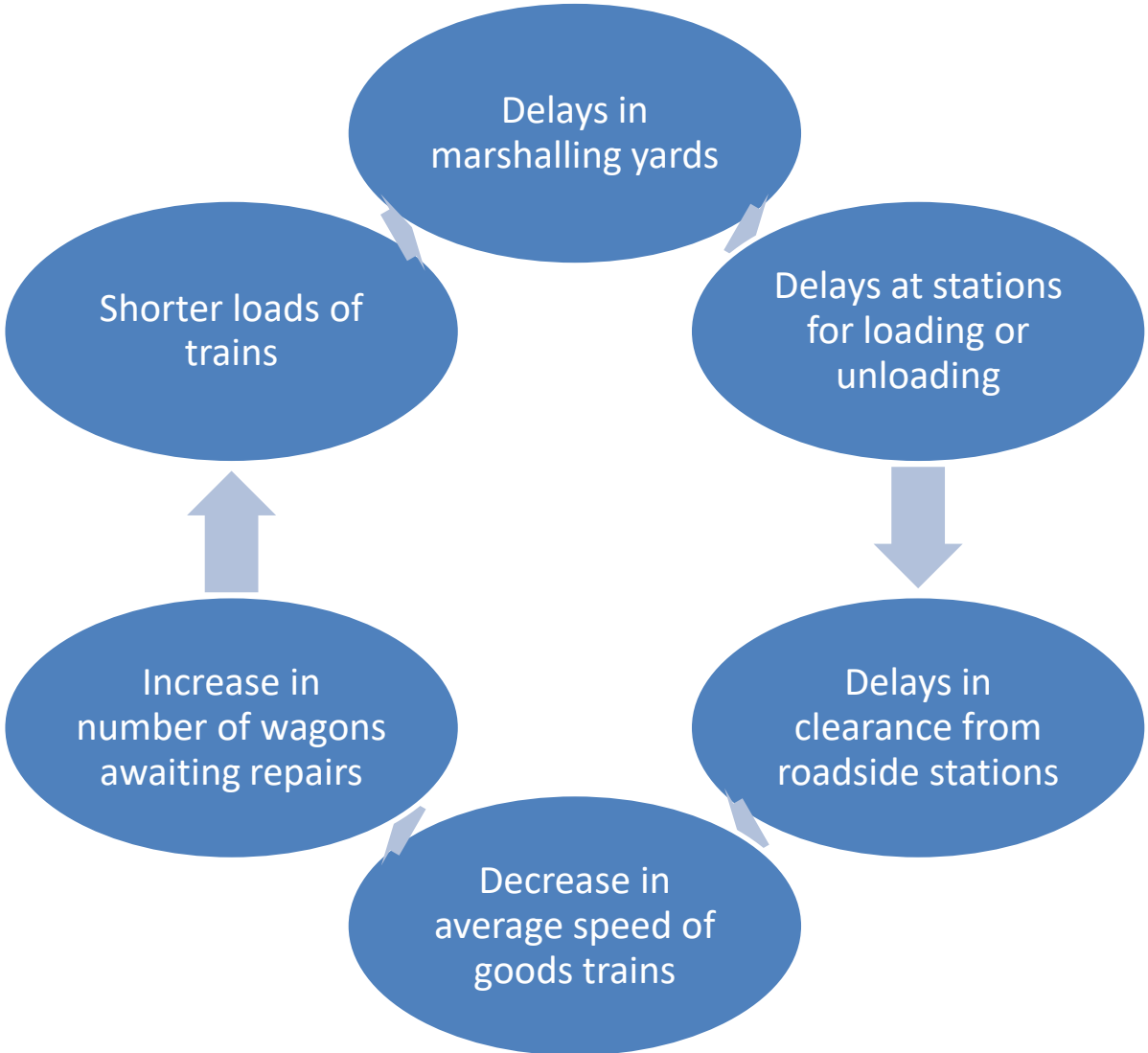
Wagon Usage

Wagon kms./wagon day

This figure is a measure of wagon mobility

It indicates the average number of kms. moved by a wagon, per day, both loaded and empty

Wagon kms./wagon day - Factors



Freight Train & Wagon Kms.

Year	FREIGHT TRAIN KMS. Total (Millions)	Per running track km. per day	WAGON KMS. + Total (Millions)	Percentage of loaded to total
1980-81	199	7.2	12,165	69.5
1990-91	245	8.5	19,230	65.5
2000-01	261	8.7	27,654	60.9
2010-11	368	11.6	17,749	66.5
2013-14	419*	12.9	19,546	65.1
2014-15	**402**	**12.1**	**18,930**	**65.2**

+ in term of 8-wheelers from 2008-09 onwards

* revised

Net Tonne kms./wagon day

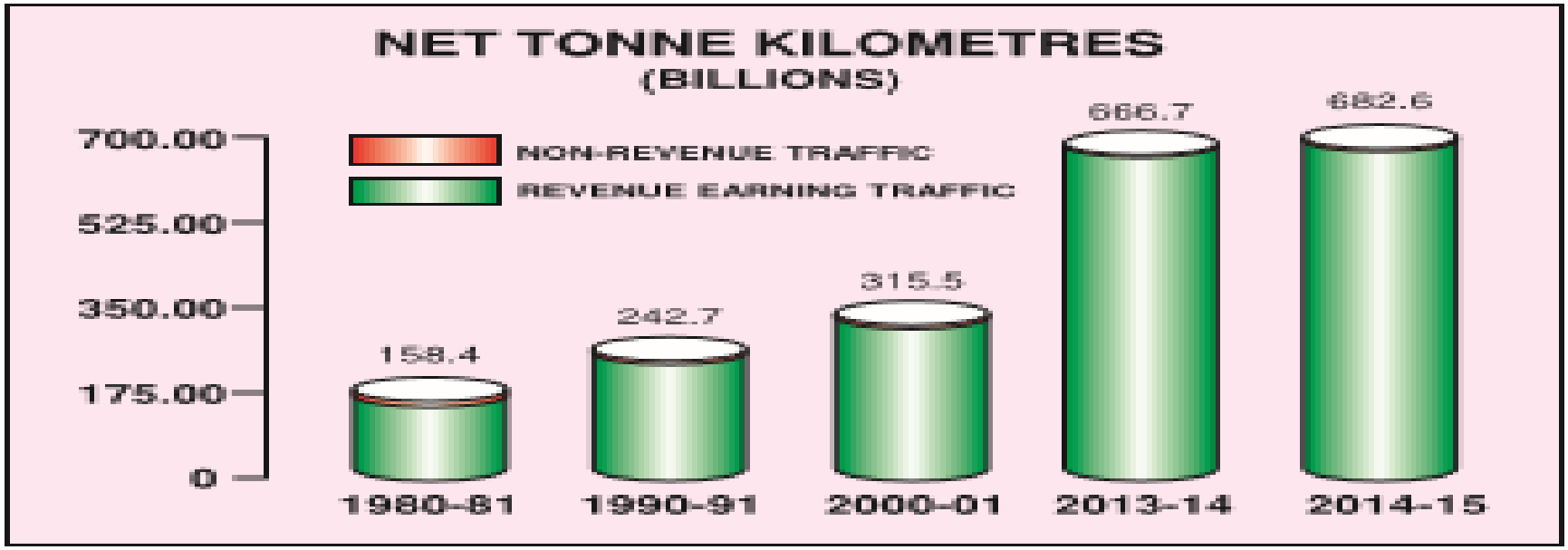
This unit is a measure of the revenue earning work done by wagons and reflects both mobility and loading

Factors responsible

- Any of the causes which effect figure of wagon kms./ wagon day
- Decrease in the proportion of loaded to total wagon kms.

Net Tonne Kms.

Year	Net Tonne Kms. (Millions) Revenue-earning traffic	Total traffic
1980-81	147,652	158,474
1990-91	235,785	242,699
2000-01	312,371	315,516
2010-11	625,723	626,473
2013-14	665,810	666,728
2014-15	**681,696**	**682,612**



Commodity-Wise NTKMs.

COMMODITY-WISE NTKms. (Billions)

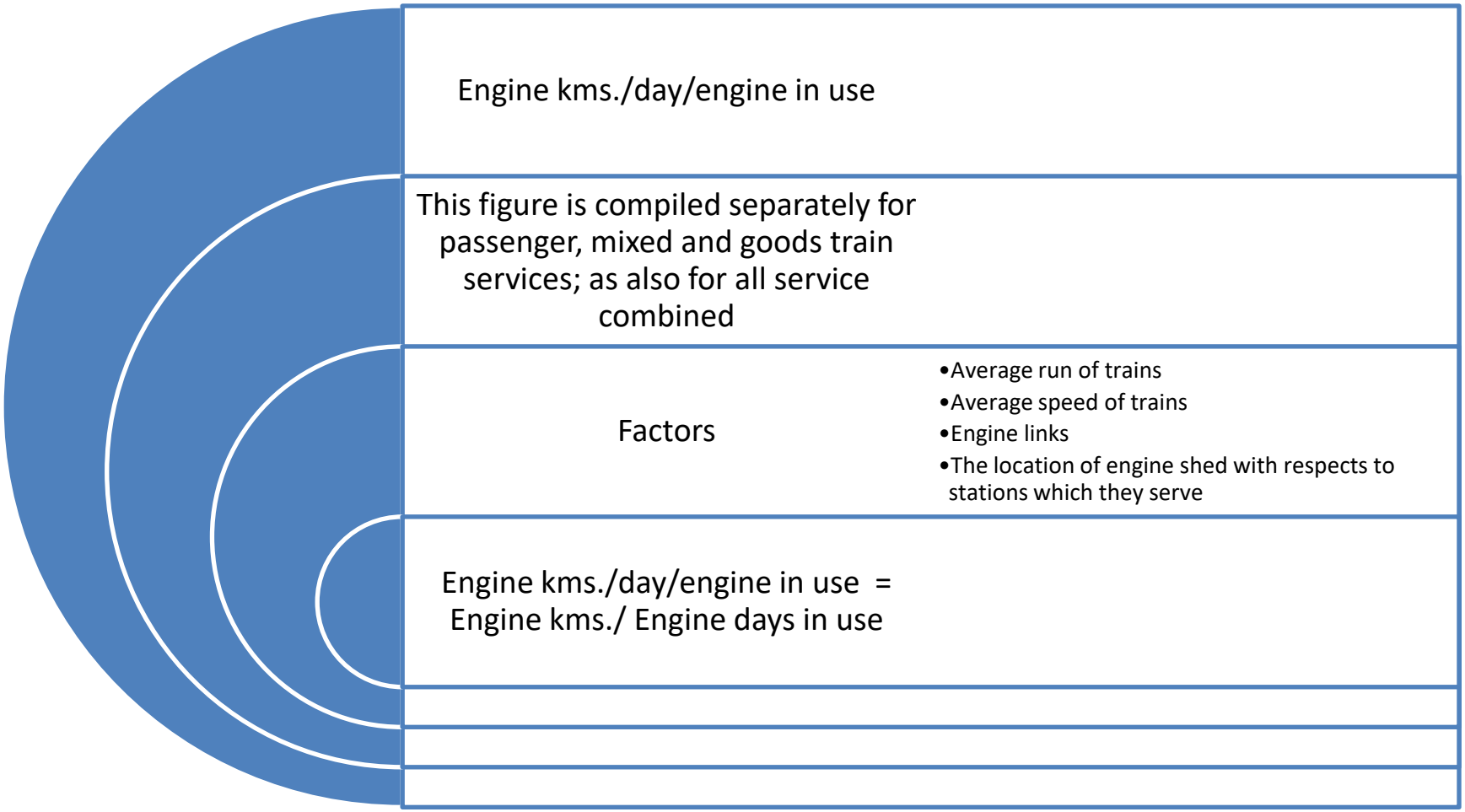
Bulk Commodities	2011-12	2012-13	2013-14	2014-15
Coal	281.79	276.18	271.92	301.52
Iron Ores	40.30	38.04	37.22	36.74
Cement	62.04	60.78	60.50	59.08
Mineral Oils	26.10	28.08	29.74	27.22
Foodgrains	57.93	63.82	70.54	66.98
Fertilisers	43.81	39.04	34.50	38.75
Iron & Steel	33.92	33.56	34.95	37.38
Limestone & Dolomite	11.76	11.76	12.20	12.96
Stones other than marble (incl.gypsum)	6.37	5.80	5.79	7.89
Total	**564.02**	**557.06**	**557.36**	**588.53**
Commodities other than above	103.59	92.59	108.45	93.17
Grand Total	**667.61**	**649.65**	**665.81**	**681.70**

Wagon Turn Round

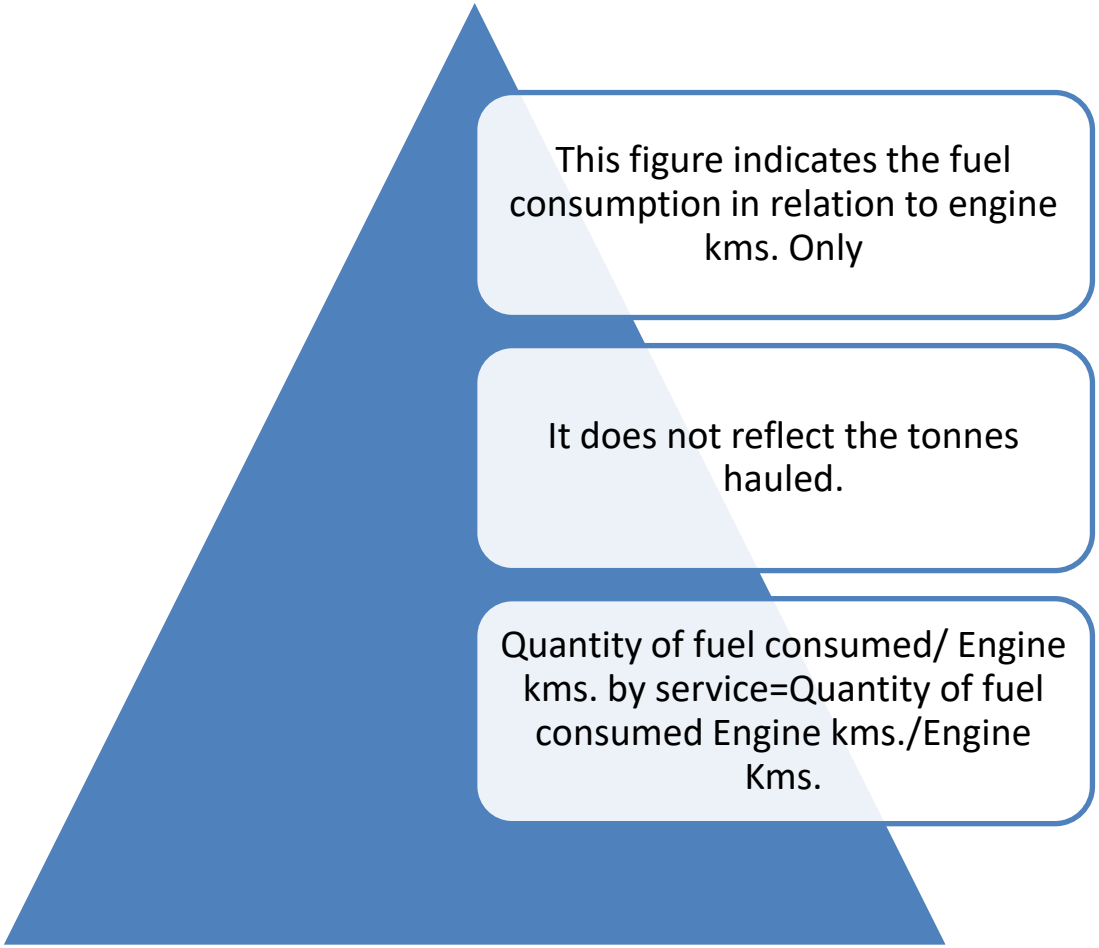
This figure expresses the average period between two successive loading of a wagon

Wagon Turn Round =No. of effective wagon holding/ Loaded wagons + loaded receipts

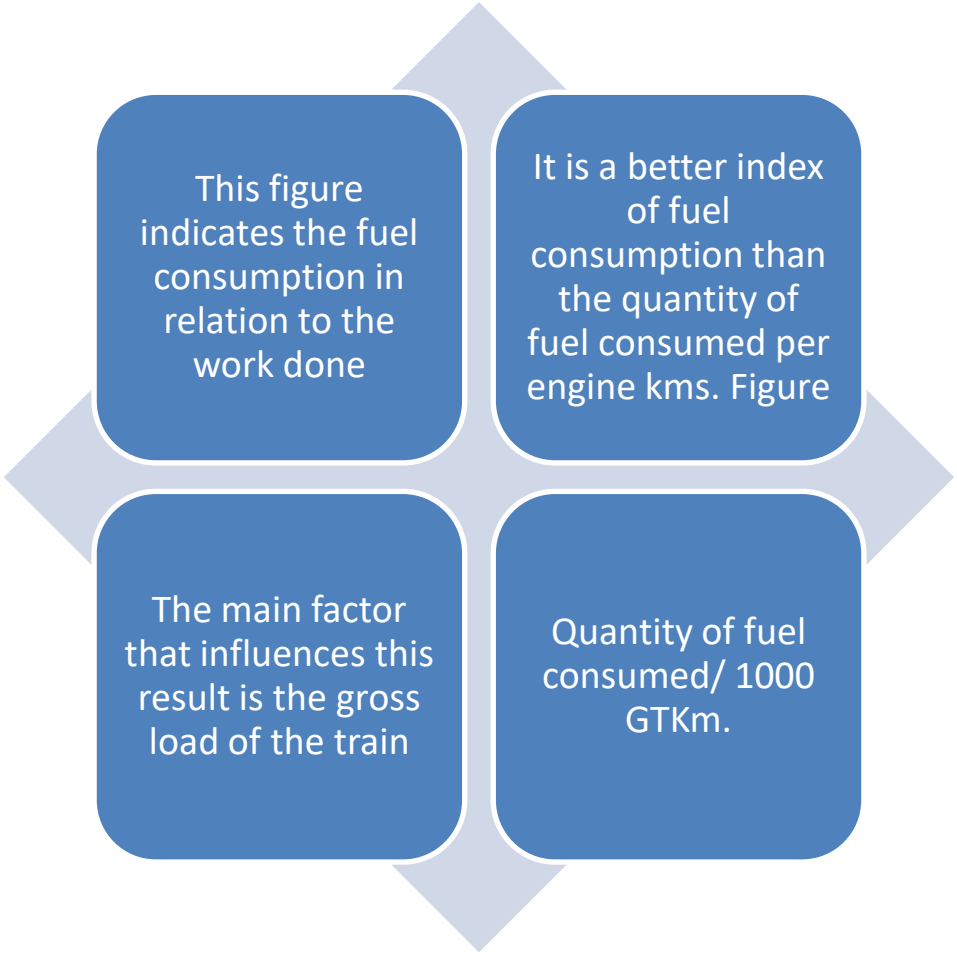
Locomotive Performance



Quantity of fuel consumed/Engine kms.

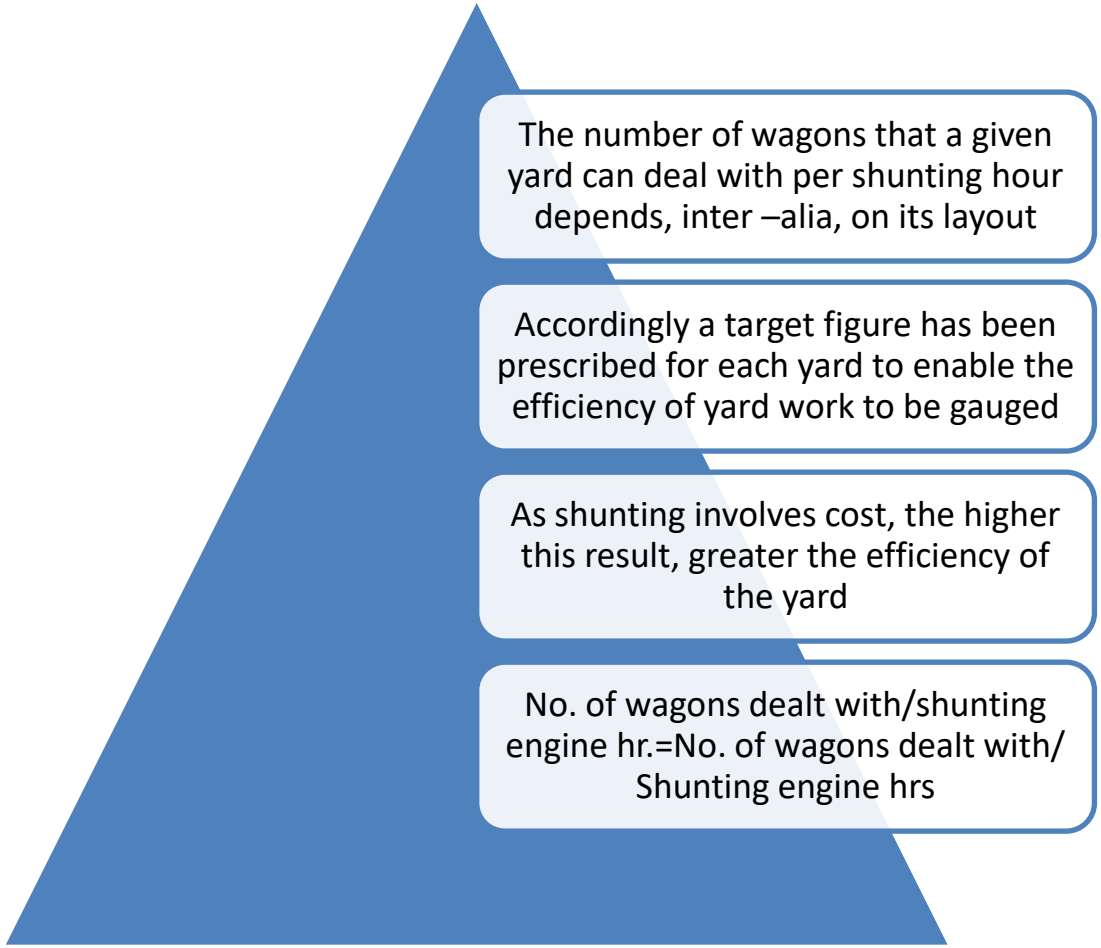


Quantity of fuel consumed/1000 GTKm.



Shunting Engine Kms./100 Train Kms.

No. of wagons dealt with/shunting engine hr.



COMMODITY-WISE REVENUE EARNINGS
(₹ in millions)

Bulk Commodities	2011-12	2012-13	2013-14	2014-15
Coal	281,790	358,944	391,444	**479,385**
Iron Ores	74,111	74,441	76,887	**78,929**
Cement	64,098	80,012	85,074	**87,382**
Mineral Oils	36,264	47,179	53,440	**55,157**
Foodgrains	49,119	69,852	79,975	**81,383**
Fertilisers	37,725	42,525	41,252	**51,521**
Iron & Steel	39,258	48,458	55,969	**65,444**
Limestone & Dolomite	13,196	16,812	18,601	**21,781**
Stones other than marble (incl.gypsum)	7,409	8,828	8,499	**12,172**
Total	**602,970**	**747,051**	**811,141**	**933,144**
Commodities other than above	74,466	87,737	104,568	**97,858**
Grand Total	**677,436**	**834,788**	915,709	**1,031,002**

Commodity-wise Loading

(Millions)

Bulk Commodities	2011-12	2012-13	2013-14	2014-15
Coal	455.81	496.42	508.06	**545.81**
Iron Ores	104.70	111.41	124.27	**112.77**
Cement	107.66	105.87	109.80	**109.80**
Mineral Oils	39.77	40.61	41.16	**41.09**
Foodgrains	46.40	49.03	55.10	**55.47**
Fertilisers	52.69	46.21	44.70	**47.41**
Iron & Steel	35.15	35.31	38.95	**42.84**
Limestone & Dolomite	17.66	19.64	20.71	**21.20**
Stones other than marble (incl. gypsum)	12.96	11.77	11.61	**14.98**
Total	**872.80**	**916.27**	954.36	**991.37**
Commodities other than above	96.25	91.82	97.28	**103.89**
Grand Total	**969.05**	**1,008.09**	1,051.64	**1095.26**

Originating Tonnage

(Million tonnes)

Year	Originating tonnage: Revenue-earning traffic*	Originating tonnage: Total traffic
1980-81	195.9	220.0
1990-91	318.4	341.4
2000-01	473.5	504.2
2010-11	921.73	926.43
2013-14	1,051.64	1,058.81
2014-15	1,095.26	1,101.09

* Excludes loading of Konkan Railway.

Asset Utilisation

	1980-81	1990-91	2000-01	2013-14	2014-15
Wagon kms. per wagon per day (+)	73.4	110.5	179.0	264.6	265.9
Net tonne kms. (millions) per route km.	4.34	6.30	6.96	11.45	11.60
NTKms. per wagon per day (+)	986	1,407	2,042	8547*	8,642
Passenger kms. (millions) per route km.	5.15	7.12	9.49	19.31*	19.24
NTKms. per engine hour	6,295	10,393	12,850	18,804*	18,586

(+) From 2009-10 onward figures in terms of 3-wheelers

* revised

Source – IR year Book 2014-15

Engine Kilometres Per Day Per Engine In Use

GOODS

Year	Broad Gauge			Metre Gauge		
	Steam	Diesel	Electric	Steam	Diesel	Electric
1980-81	89	303	274	107	276	206
1990-91	52	445	398	88	399	224
2000-01	–	398	450	18	345	203
2010-11	–	384	478	–	102	–
2013-14	–	429	473	–	129	–
2014-15	**–**	**383**	**405**	**–**	**370**	**–**

* revised

PASSENGER

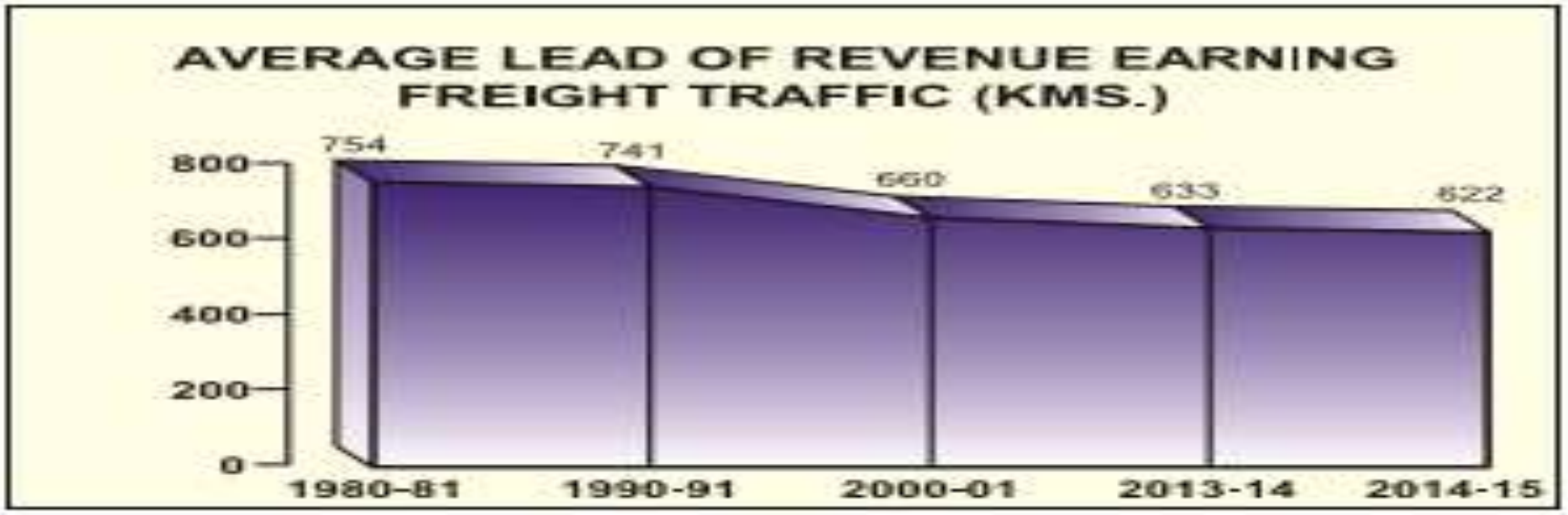
Year	Broad Gauge			Metre Gauge		
	Steam	Diesel	Electric	Steam	Diesel	Electric
1980-81	210	610	453	199	541	405
1990-91	189	673	482	185	569	382
2000-01	–	577	542	36	447	385
2010-11	–	594	671	34	390	–
2013-14	–	615*	697	30*	377	–
2014-15	**–**	**614**	**713**	**29**	**361**	**–**

*revised

Source – IR year Book 2014-15

Average Lead

Year	Average lead of revenue-earning freight traffic (Kms.)	Index (1980-81=100)
1980-81	754	100.0
1990-91	741	98.3
2000-01	660	87.5
2010-11	679	90.1
2013-14	633	84.0
2014-15	**622**	**82.5**



? Please

Thank You

Key Statistics – IR

2014-15

- **Total No. of Station: –** 7,137
- **Total Route Kms: –** 66,030
- Electric: – 22,224,Diesel,43,806

Key Statistics – IR

2014-15

- **Total No. of Coaches: –** 61,558
- **Total No. Wagons: –** 2,54,006
- **Total Engines: -** 10,730
- Electric: – 5,016
- Diesel: - 5,714

Key Statistics – IR

2014-15

- **Total Man Power: -** 1,326 (in Thousand)
- **Total Revenue: -** 1,61,017.25 (Rs. In Cr)
- **Passengers originating: -** 8,224 (in Million)
- **Passenger kms.: -** 1,147,190 (in Million)

Key Statistics – IR

2014-15

- **Total Expense: -** 1,44,178.76 (in Crore Rs.)

- Wage bill of
  regular employees : 84,748.01 (in Crore Rs.)

Key Statistics – IR

2014-15

- **Passenger Statistics: -**

- Passenger Train kms.: -759.3 (in million)
- Vehicle kms.: - 24,802 (in million)

- **Freight Statistics: -**

- Freight Train kms.: - 401.9 (in million)
- Wagon kms.: - 18,930 (in million)

Key Statistics – IR

- Maximum Speed: -
- Passenger – 160 KMPH
- Freight - 100 KMPH
- Average Speed: -
    - Superfast – 55 KMPH
    - Mail/Exp. – 52 KMPH
    - Passenger – 40 KMPH
    - Goods – 25 KMPH

Goods Train Operation (2014-15)

- Total originating goods earnings:

  -Rs. 1,03,100.15 Crores
- Revenue Earning Traffic : 1,095.26 (MMT)
- No. of trains per day – 7421
- No. of wagons loaded per day – 48259
- NTKM – 681,696 (in Million)
- Wagon Turn Round – 5.6
- Lead Average – 622 Km

Commodity Wise Loading (2014-15)

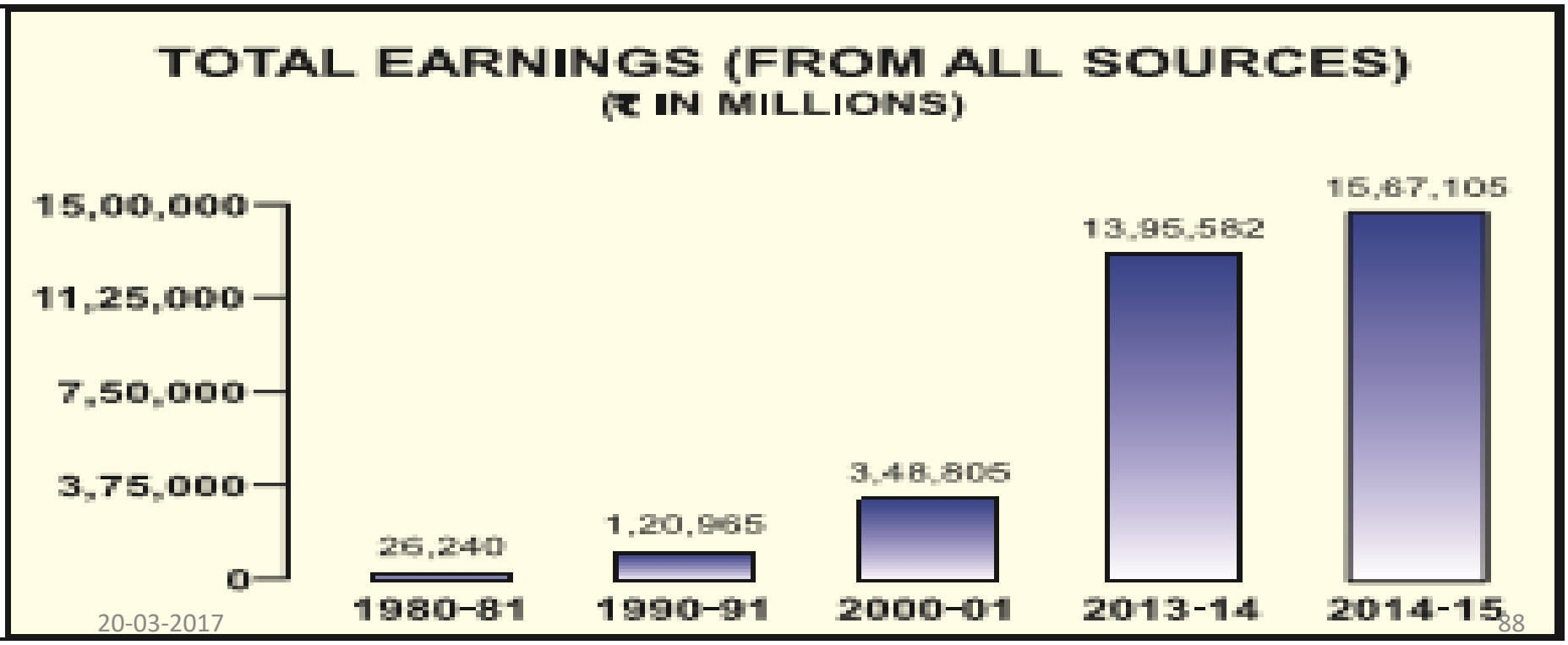
Sr.No.	Commodity	Loading in MMT
1	Coal	545.81
2	Iron Ore	112.77
3	Cement	109.80
4	Food grain	55.47
5	Fertilizer	47.41
6	POL	41.09
7	Iron & Steel	42.84
8	Others	140.07
TOTAL		**1095.26**

COMMODITY-WISE ORIGINATING TONNAGE
(Millions)

Bulk Commodities	2011-12	2012-13	2013-14	2014-15
Coal	455.81	496.42	508.06	**545.81**
Iron Ores	104.70	111.41	124.27	**112.77**
Cement	107.66	105.87	109.80	**109.80**
Mineral Oils	39.77	40.61	41.16	**41.09**
Foodgrains	46.40	49.03	55.10	**55.47**
Fertilisers	52.69	46.21	44.70	**47.41**
Iron & Steel	35.15	35.31	38.95	**42.84**
Limestone & Dolomite	17.66	19.64	20.71	**21.20**
Stones other than marble (incl. gypsum)	12.96	11.77	11.61	**14.98**
Total	**872.80**	**916.27**	954.36	**991.37**
Commodities other than above	96.25	91.82	97.28	**103.89**
Grand Total	**969.05**	**1,008.09**	1,051.64	**1095.26**

REVENUE (₹ in millions)

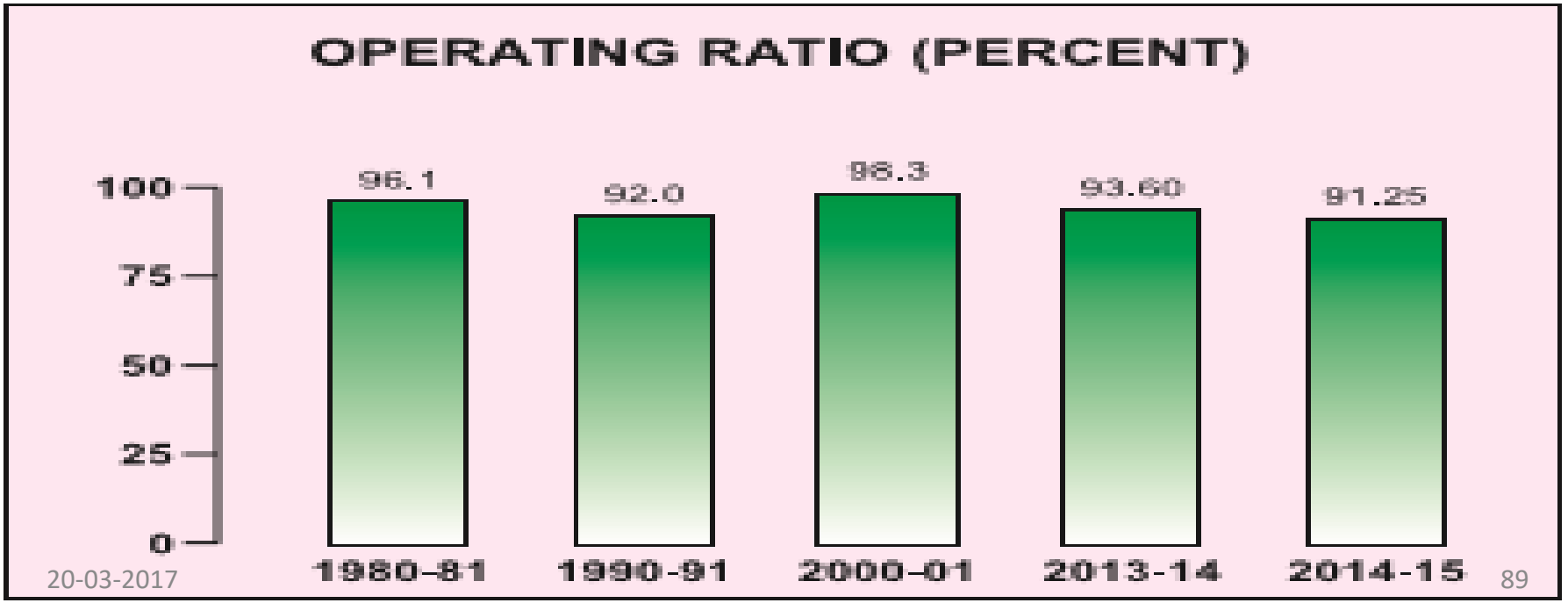
Year	Passenger	Parcels and other Coaching	Freight	Misc.	Suspense (Bills Receivable)	Gross Traffic Receipts
1980-81	8,274.7	1,157.1	16,175.2	820.8	(–)187.6	26,240.2
1990-91	31,475.0	3,363.8	84,078.7	2,417.6	(–)370.2	120,964.9
2000-01	105,150.7	7,641.6	233,051.0	7,032.5	(–)4,071.0	348,804.8
2010-11	257,056.4	24,698	628,447.2	34,182.7	(+)101.7	945,356.3
2013-14	365,322.5	36,785.2	939,056.3	57,212.9	(–) 2,795.3	1,395,581.8
2014-15	**421,896.1**	**39,978.9**	**1,057,913.4**	**50,927.4**	**(–) 3,610.4**	**1,567,105.4**



EXPENSES

(₹ in millions)

	2011-12	2012-13	2013-14	2014-15
Genl. Superintendence	46,104.8	51,722.3	55,854.3	60,225.6
Repairs & Maintenance	237,500.6	257,999.7	289,594.3	317,625.5
Operating Expenses	384,402.0	446,134.6	540,234.7	574,451.5
Staff welfare	42,332.9	45,753.6	52,420.8	59,609.1
Misc. Wkg. Exp.	36,263.0	40,232.2	43,246.3	51,399.4
Suspense	(-)1,229.2	(-)1,684.2	-2795.2	(-)3,610.4
Total Ordy. Wkg. Exp.	745,374.1	840,120.4	975,707.6	1,069,958.8
Contribution to Funds	2,41,300.0	275,600.0	327,500.0	370,000.0
Total Working Exp.	986,674.1	1,115,720.4	1,303,207.1	1,429,958.8
Other Misc. Exp.	7,962.7	9,932.0	11,440.9	11,828.8
Gross Wkg. Exp.	994,636.8	1,125,652.4	1,314,648.0	1,441,787.6



OVERALL PERFORMANCE OF IR - CUMULATIVE (Up to September -16)

		TARGET (R.E)	CURRENT YEAR (P)	LAST YEAR ACTUAL	+/- VARIATION		% VARIATION	
		2016-17	2016-17(P)	2015-16	Target (BE)	Last Year	Target (BE)	Last Year
1	**Goods**							
	(i) Tonnage (Millions Tonnes)	566.54	531.23	539.62	-35.31	-8.39	-6.23	-1.55
	(ii) Freight Earnings (Rs. Cr.)	56159.82	47974.03	52771.83	-8185.79	-4797.80	-14.58	-9.09
2	**Passenger/ Coaches**							
	(i) No of Passengers (Millions)	4123.80	4122.68	4111.23	-1.12	11.45	-0.03	0.28
	(ii) Passenger Earnings (Rs. Cr.)	25717.13	23345.05	22480.02	-2372.08	865.03	-9.22	3.85
3	**Other Coaching**							
	(i) Parcel & Luggage Earnings(Rs. in Cr.)		847.62	799.22		48.40		6.06
	(ii) Other Coaching (Rs. in Cr..)	3007.41	2183.18	2067.41	-824.23	115.77	-27.41	5.60
4	**Sundry**							
	Earnings (Rs in Cr.)	3758.63	2764.65	2156.16	-993.98	608.49	-26.45	28.22
5	**Grand Total of Gross Receipt**	**88642.99**	**76266.91**	**79475.42**	**-12376.08**	**-3208.51**	-13.96	-4.04
6	Working Expenses(Rs. Cr.)	66423.78	67936.48	59446.29	1512.70	8490.19	2.28	14.28

- **Passengers carried** – refers to the number of passengers originating on each railway as well as the number of passengers received from other railways and also those crossing the railway
- **Passenger kilometre** – Unit of measure of passenger traffic corresponding to the conveyance of a passenger over a distance of one kilometre

- **Tonnes originating** – This includes tones of all traffic originating on each gauge, whether it terminates on the gauge itself or on some other gauge of the home line, or on other railways

- **Gross tonne kilometre (excluding weight of engine)** – Unit of measure of work which corresponds to the movement over a distance of one kilometre of one tonne of vehicle/wagon and contents excluding the weight of the motive unit
- **Gross tonne kilometer (including weight of engine)** – Unit of measure of work which corresponds to the movement, over a distance of one kilometre of one tonne, including the weight of the motive unit vehicle and contents

- **Net tonne kilometer** – Unit of measure of goods traffic which represents the transport of one tonne of goods (including the weight of any packing, but excluding the weight of the vehicle used for transport) over a distance of one kilometre

- **Turn round of a wagon** – Interval of time between two successive loadings of a wagon.

- **Operating ratio** – The ratio of working expenses (excluding suspense but including Appropriation to Depreciation Reserve Fund and Pension Fund) to gross earnings

- **Engine kilometer** – An engine kilometer is the movement of an engine, under its own power, over a distance of 1 kilometre