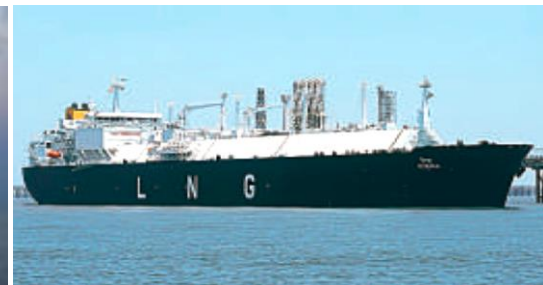
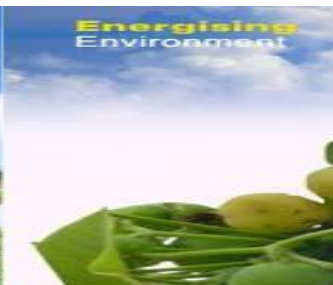
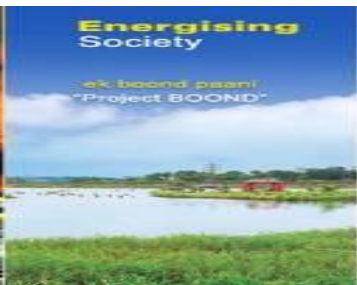
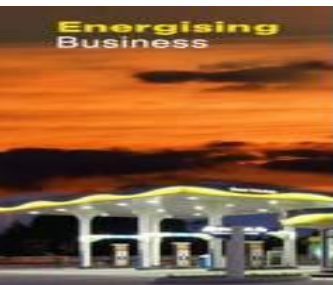


Bharat Petroleum Corporation Limited - Mumbai Refinery

Welcomes

INVESTORS AND ANALYSTS

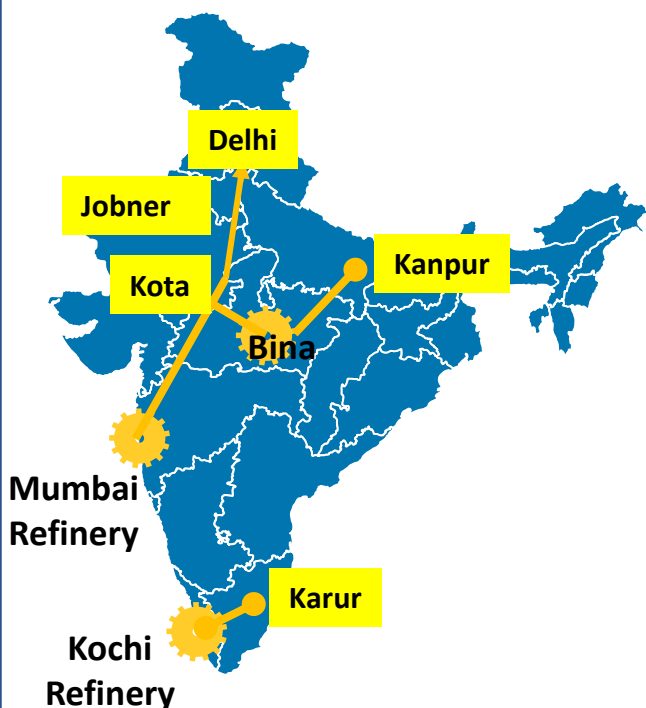
1st September 2022



MUMBAI REFINERY

KOCHI REFINERY

BINA REFINERY



- **12.0** MMTPA
- NCI of **8.7**
- Processed **97** types of crudes
- API Range: **32 to 48**
- **Lubes** Refinery
- Hydrocracker & 2 Nos. FCCU's

- **15.5** MMTPA
- NCI of **11.25**
- Processed **103** types of crudes
- API Range: **24 to 48**
- VGO Treater, PFCC & FCCU
- Delayed Coker unit
- PDPP

- **7.8** MMTPA
- NCI of **11.6**
- Processed **41** types of crudes
- API Range: **28 to 40**
- Integrated Hydrocracker
- Delayed Coker unit

*NCI- Nelson Complexity Index

- **BS VI & IMO Compliant**
- **Versatile Refineries to process variety of Crudes, swing product mix**
- **Strategically located refineries in West / South and Central India**

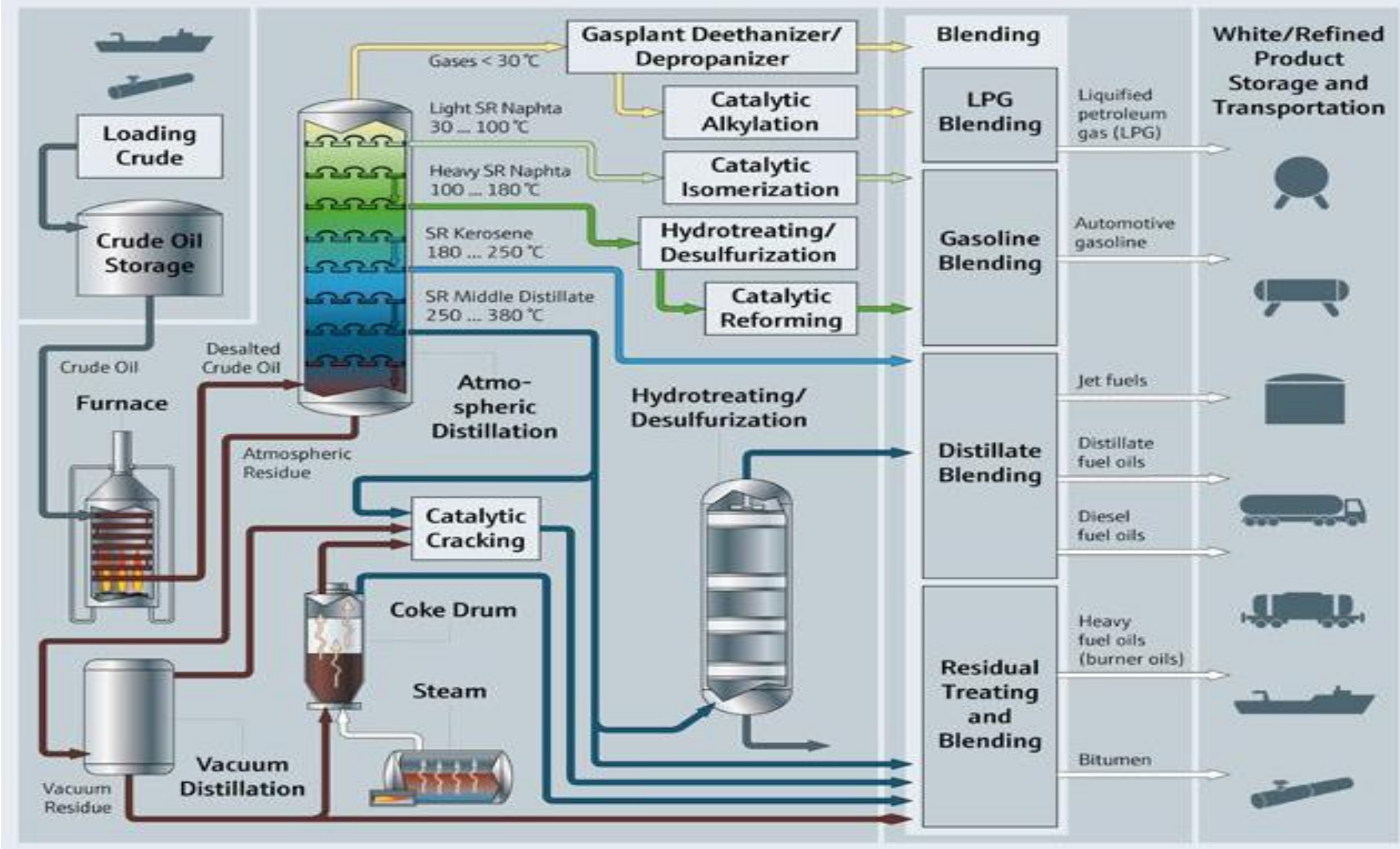




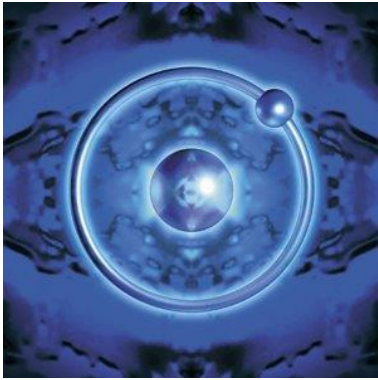
- Crude Oil is a mixture of Hydrocarbons.
- Crude Oil is categorized based on Sulphur / Contaminants

What Refining does:

- Fractionates Hydrocarbons based on Boling Point
- Removes contaminants to meet requirements of end users
- Adjusts and reshapes molecules to get value added Products

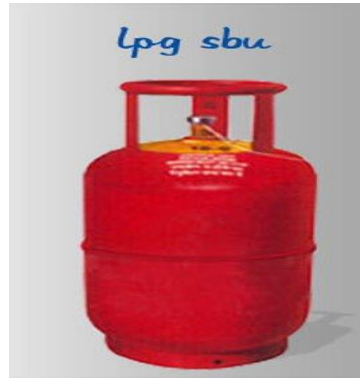


Hydrogen



- Clean fuel
- Fertilizer industry
- Phenol manufacturing

LPG



- Clean fuel
- Feed stock
- Cooking Fuel

Petrol / Motor Spirit



- Motor Fuel

Kerosene



- Fuel
- Detergent Manufacturing

Refinery Products

ATF



- Aviation fuel

Diesel



- Motor fuel
- Power generation (DG sets)

Bitumen / Asphalt / Tar



- Paving roads

Sulphur



- Fertilizer Industry
- Manufacture of Sulphuric Acid

Mumbai Refinery - 1955



Mumbai Refinery - 2022





1951

MOU between Burmah Shell and GOI

1955

Refinery Went On-stream

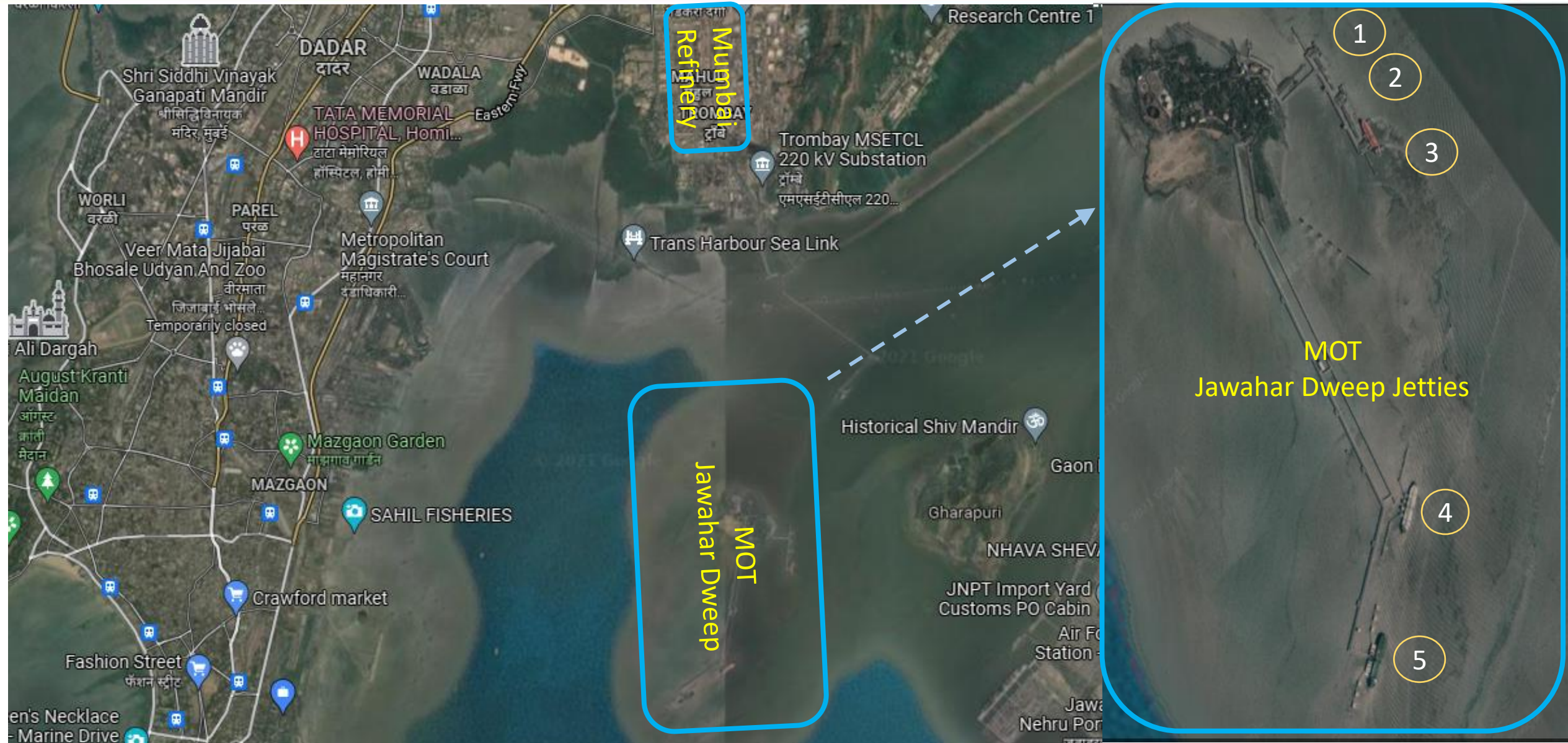
1976

Nationalization of Burmah Shell to BPCL

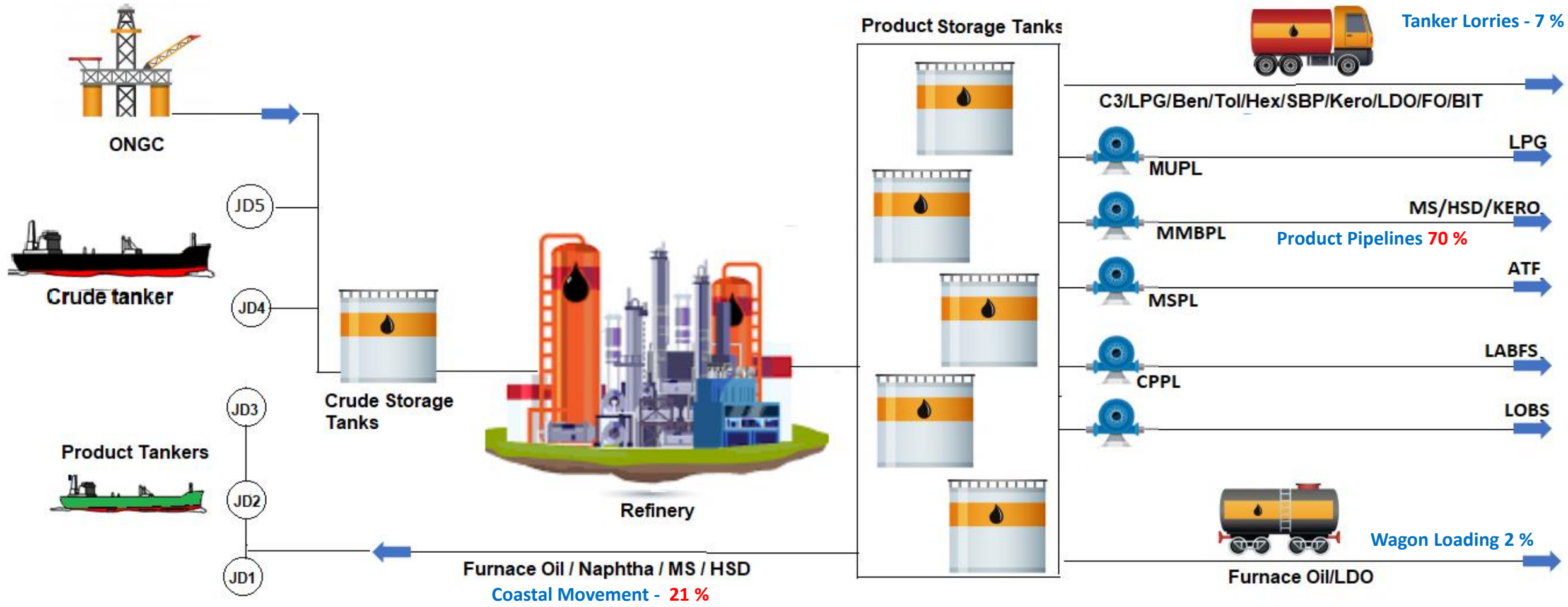
2022

Integrated Modern Refinery

Refinery – MOT Overview



Logistic Linkages



90% of product evacuation through Pipelines



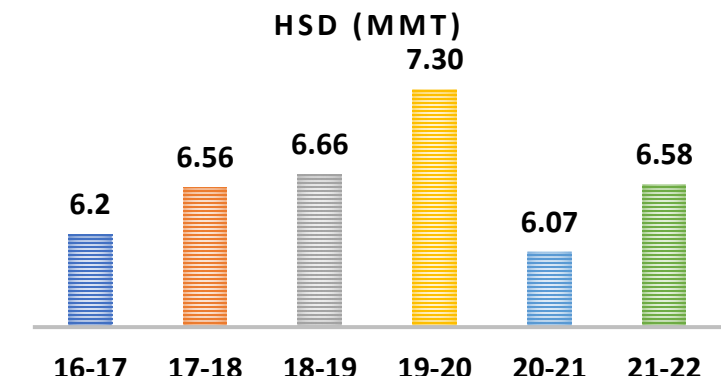
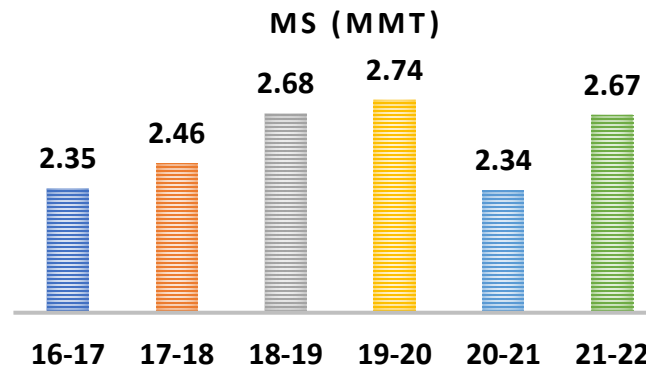
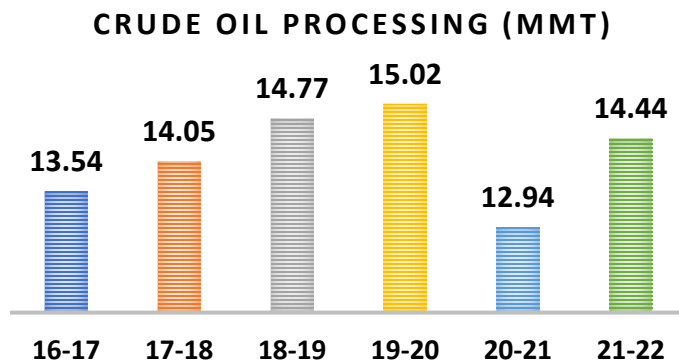
- Processed Crude oil **14.44 MMT** (120 % of Design capacity of 12 MMTPA).
- Launched New Product “**100 N Group III LOBS**”. This increases market base of LOBS products.
- Completed accident free **10 Million Man hours** and 1072 Man days for Staff.
- Achieved highest ever annual production of **Propylene** (96 TMT), **Hexane** (34.6 TMT), **MTO** (119 TMT), **LOBS** (343.5 TMT) & **VLSFO** (366 TMT).
- 27 nos. of Energy conservation schemes have been completed with potential annual savings of **18,000 MTOEs/year** and EII reduction by 2.06.
- Planted **1000 tree saplings** of native species using MIYAWAKI method at LTT Railway Station and **145 tree saplings** at Panna Tiger Reserve, MP.

Operational Performance

Particulars	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Crude Oil Processed (MMT)	13.54	14.05	14.77	15.02	12.94	14.44
Distillate Yield (wt%)	86.2	84.3	82.2	84.9	85.6	84.4
Fuel & Loss (wt%)	6.0	6.2	5.4	5.7	6.2	5.9
Operational Availability (%)	98.1	98.1	96.2	99.4	99.1	98.3
Energy Intensity Index (EII)	95.8	92.9	88.2	86.4	88.9	89.0
MBN (MBTU / bbl / NRGF)	71.4	66.7	64.5	62.5	64.3	64.4

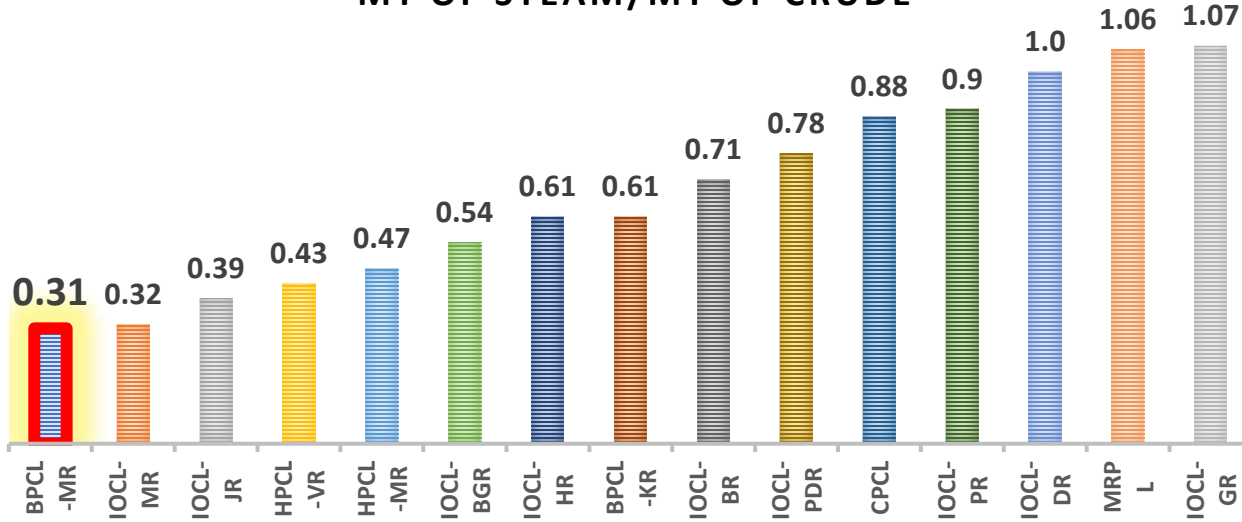
MR Contributes

- 35% of BPCL MS sales.
- 40% of BPCL HSD Sales.
- 60% of I&C sales.
- 80% of Lubes Sales



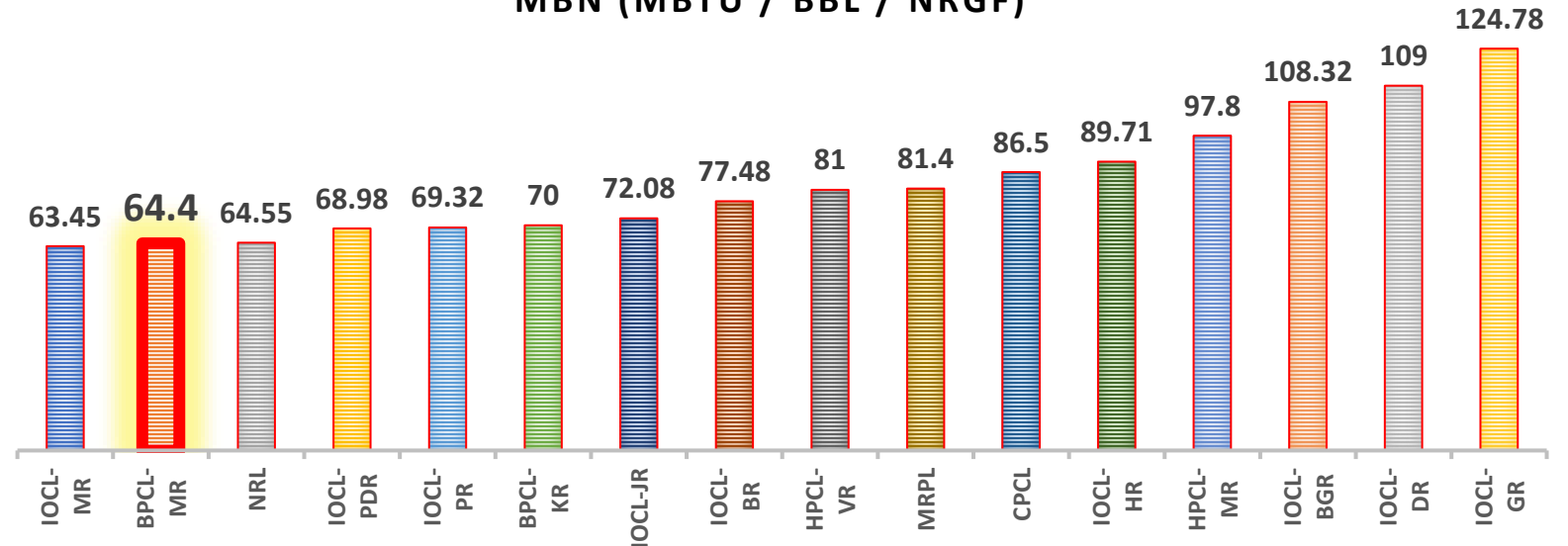
Key Performances

MT OF STEAM/MT OF CRUDE



- ❑ Replaced CDU1 & 2 with new heat integrated Crude Distillation Unit CDU 4.
- ❑ Commissioned of flare gas recovery system (FGRS)
- ❑ First Refinery in India to convert 100% LED lights.
- ❑ Installed Solar Panel capacity of 1508 KWp.

MBN (MBTU / BBL / NRGF)



Waste water Treatment Plant

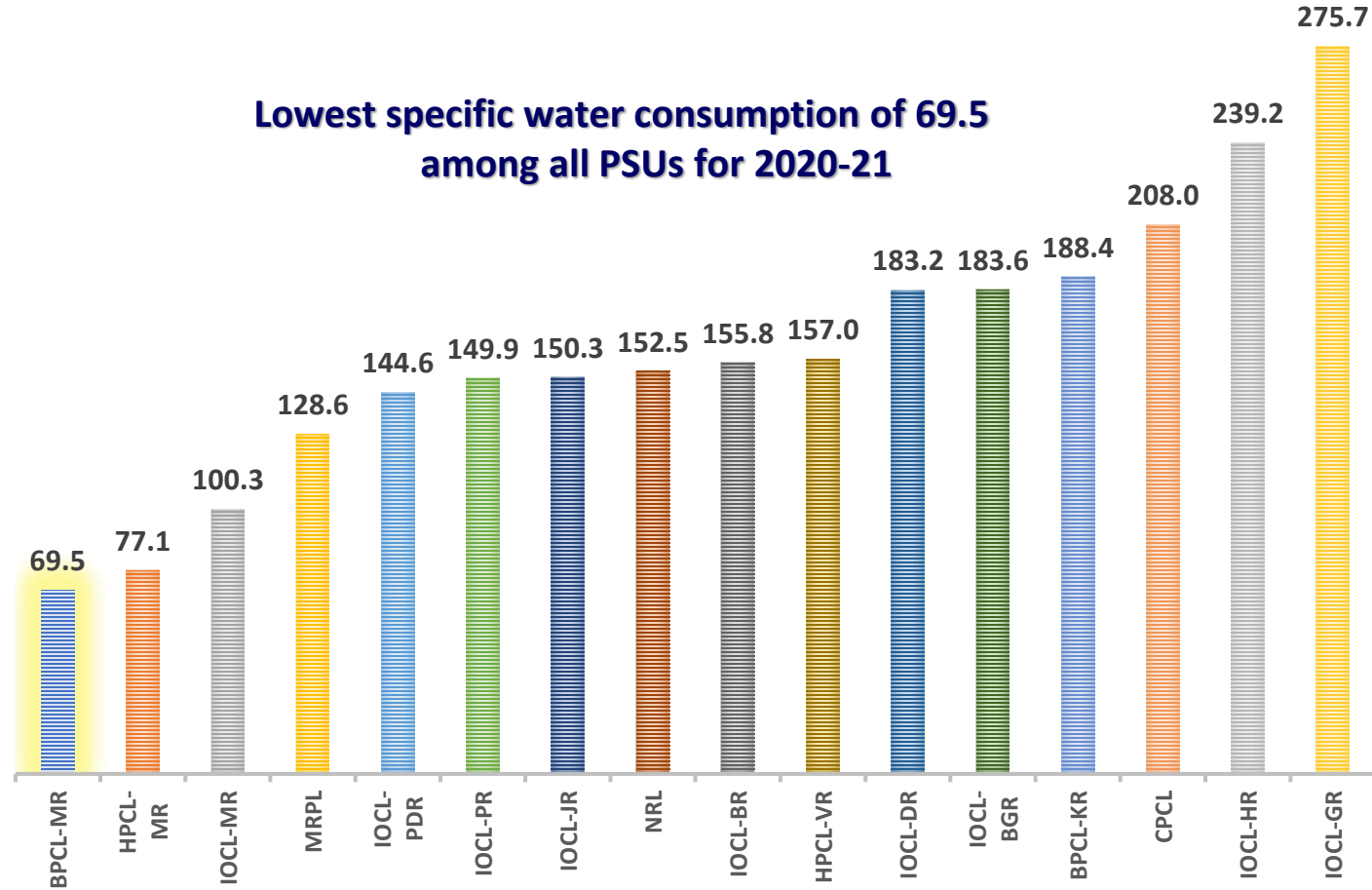
Flare Gas Recovery System

Solar power

Tail Gas Treatment Unit for SRUs

M3 OF FRESH WATER /TMT OF CRUDE PROCESSED/NRGF

Lowest specific water consumption of 69.5 among all PSUs for 2020-21



Lowest SOX emission refinery 5.2 TPD (permitted 10.44 TPD)

Light Liquid Paraffin Oil (LLPO)

100N Group-III Lube Oil

Own catalyst for LOBS

Production of Pharma Grade Hexane



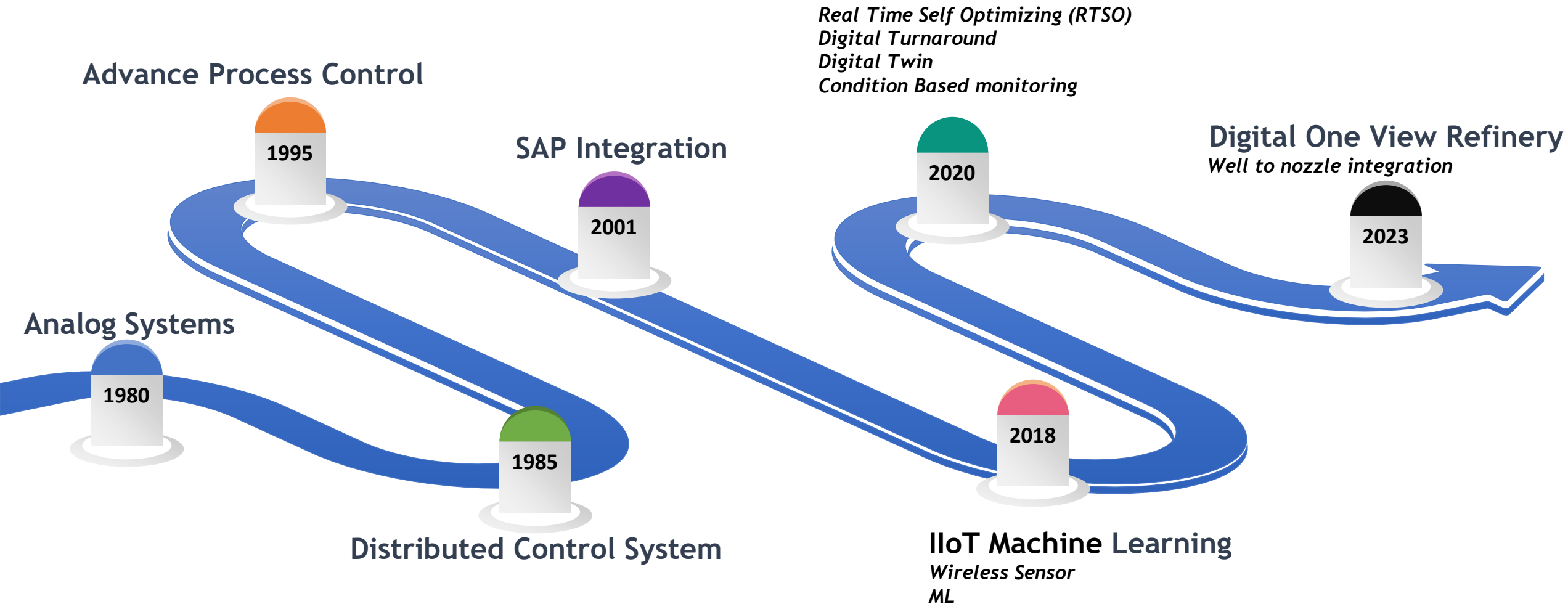
Divided Wall Column

Gasoline Sulphur Reduction additive

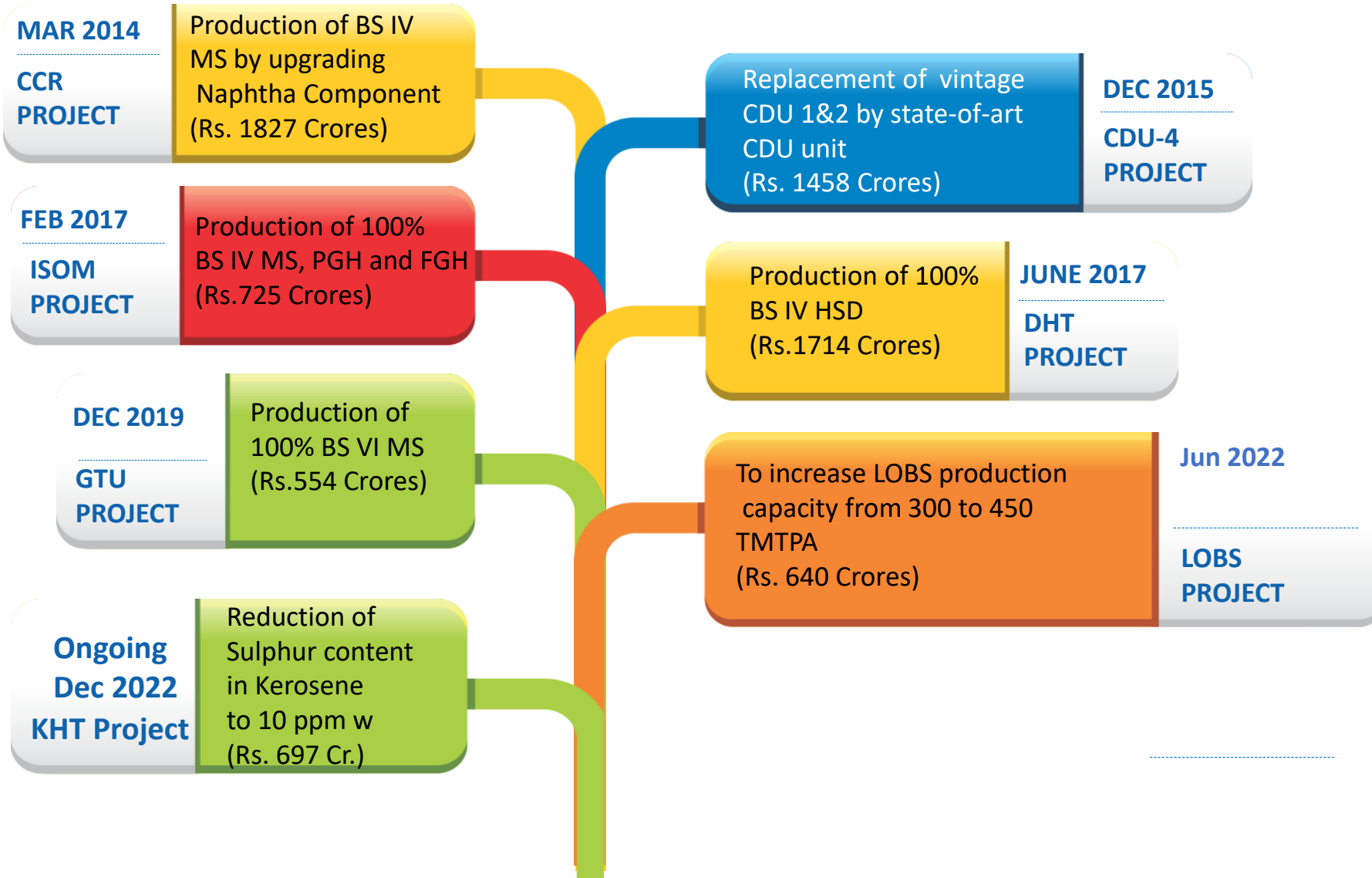
Production of D80 solvent

MAK Drillol

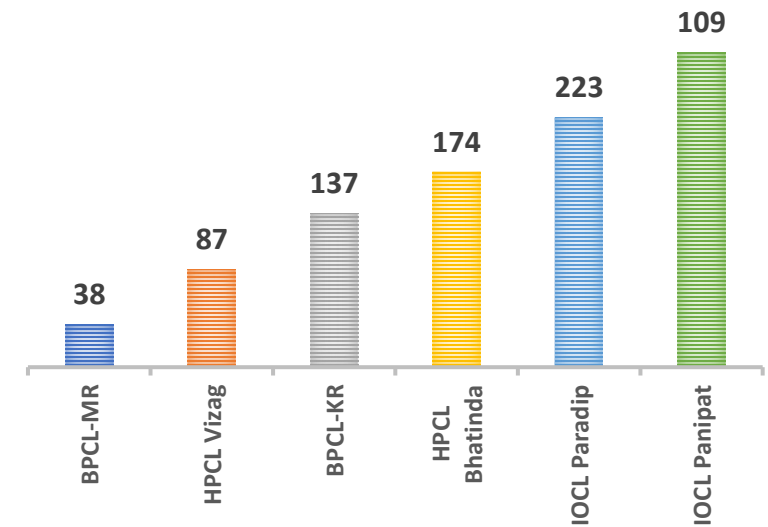
Refinery Digital Journey - In the forefront of Change



Projects



ACRES/MMT



No cost and time overrun in projects through excellent project management.

Recent Awards and Accolades:



- BPCL-MR adjudged 'Winner' in '**Best Innovation in Refinery**' category under CHT Performance & Innovation Awards 2020-21 and 2021-22.
- Received “**Chairman HSSE Excellence**” Award / “**Best Near Miss Reporting**” Award / “**HSSE Appreciation**” Award (QA Laboratory) for 2020-21 in the “PRAVAHA - HSSE Summit - 2022” organised by Corporate HSSE.
- Mr. Arun Kumar Das, GM (HSSE) was conferred **President's Fire Service Medal** for Distinguished Service on the occasion of the Independence Day 15th Aug'21.
- Mr R. Suresh, Manager (Advance Control & Optimization) was conferred with “**FIPI Young Achiever of the year-Male**” award for the year 2021 by Federation of Indian Petroleum Industry (FIPI).
- BPCL Mumbai Refinery has been adjudged as **WINNER** of the prestigious “**Greentech Quality & Innovation Award 2022**” for outstanding achievement in “**Technology Innovation**” category
- BPCL Mumbai Refinery won **Gold Award** in **Grow Care India Environment Management Award-2021** in petroleum refinery sector for outstanding achievement in Environment Management.

Recent Awards and Accolades:



CSR – 5 Major Thrust Areas

Education



Water Conservation



Health/ Hygiene



Skill Development



Community Development



COVID Management - In House Sanitizer(Aroma)



COVID Management - Social Initiatives

Hygiene Kits (10,500 beneficiaries); Grocery Kits (22,500 beneficiaries); Homeopathy Medicines for immunity (1200 beneficiaries) and Meal Distribution to surrounding community & migrant labours (15,200 beneficiaries).

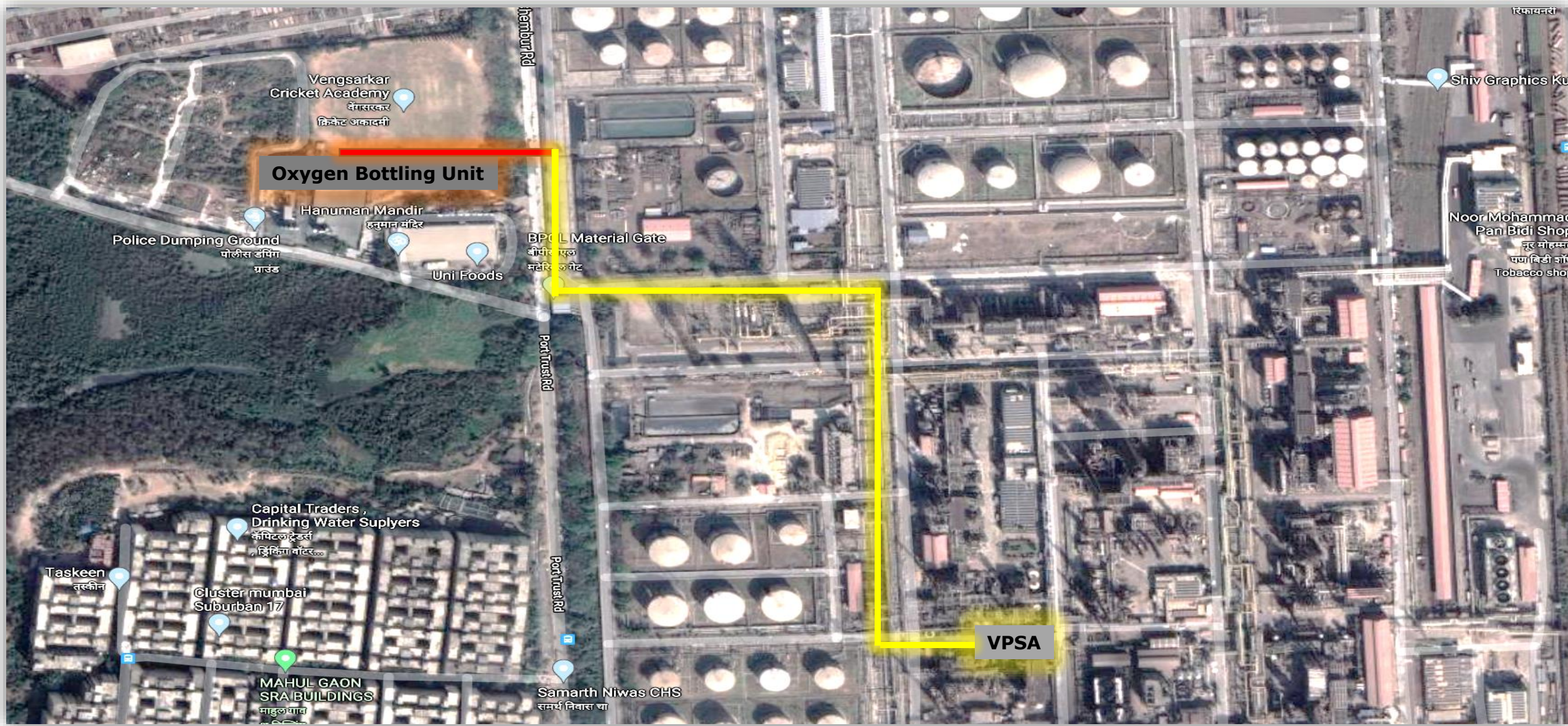


COVID Management - Workplace vaccination



Vaccination of contract labors and family members started.

COVID Management - Oxygen Supply



THANK YOU

