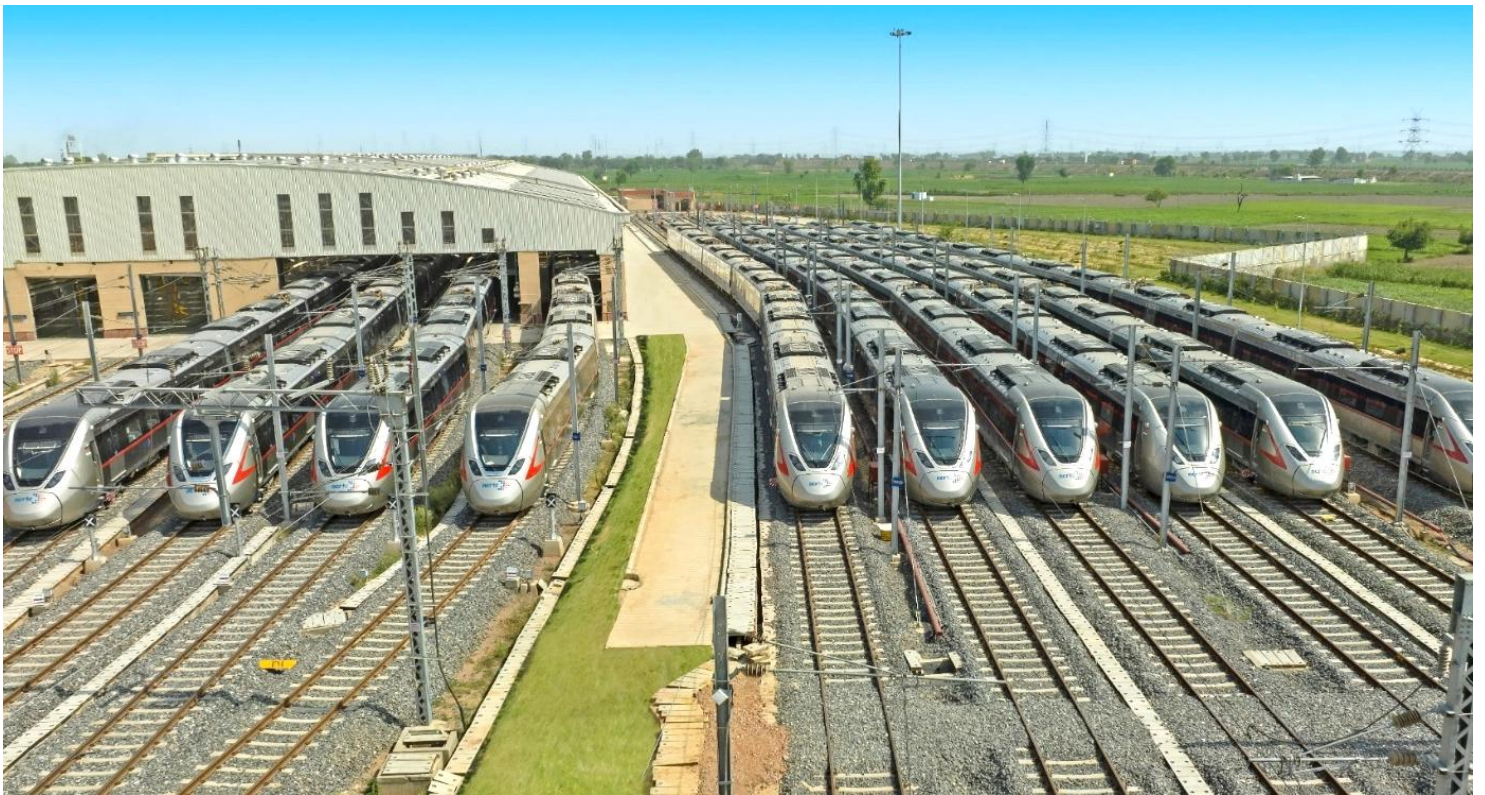


# **NAMO BHARAT Corridor in National Capital Region (NCR), India**

## **Case Study - Procurement Strategy for India's first Namo Bharat Corridor Delhi-Ghaziabad-Meerut**



### Basic Data Sheet

<b>Author's Name &amp; Designation</b>	<ol style="list-style-type: none"> <li>1. Sunil Bhasker (GGM/Procurement),</li> <li>2. Dharendra Mehrotra (General Manager/Contract &amp; Dispute Resolution)</li> <li>3. Saurabh Kohli (AGM/Procurement)</li> </ol>
<b>Phone Number</b>	+91 8700205099 (Sunil Bhasker), +91 9560885949 (Dhirendra Mehrotra) +91 9958864161(Saurabh Kohli)
<b>E-mail</b>	<a href="mailto:sunil.bhasker@ncrtc.in">sunil.bhasker@ncrtc.in</a> <a href="mailto:dharendra.mehrotra@ncrtc.in">dharendra.mehrotra@ncrtc.in</a> <a href="mailto:saurabh.kohli@ncrtc.in">saurabh.kohli@ncrtc.in</a>
<b>Case Study Title</b>	Procurement Strategy for India's first Namo Bharat Corridor Delhi-Ghaziabad-Meerut

**Abstract** National Capital Region Transport Corporation (NCRTC) – a joint venture company of Govt of India and States of Delhi, Haryana, Rajasthan and Uttar Pradesh, under the administrative control of Ministry of Housing and Urban Affairs (MoHUA), is mandated for implementing the Regional Rapid Transit System (RRTS) project across the NCR of India, ensuring a balanced and sustainable urban development through better connectivity and access.

Later on the **RRTS corridor named as Namo Bharat Corridor** and **RRTS trains as Namo Bharat Trains**.

Procurement plays a pivotal role in the successful execution of rail-based infrastructure projects, forming the foundation for achieving project goals.

It is critical in ensuring the project of such magnitude to be delivered in time, with quality and fit for purpose that construction companies selected for executing the work are both technically and financially qualified to meet the stringent requirements of such projects. Any delay in finalizing procurement processes or the selection of improper bidders, even for minor activities, can significantly impact project timelines resulting in time & cost overruns.

The implementation of a multi-state, ₹30,000 crore project (Jointly funded by Multilateral Development Banks (MDBs) and Government of India (GoI)) over six years presents challenges such as regulatory compliance with Make-in-India provisions, managing approvals from over 100 stakeholders and achieving strict timelines for introducing first-of-its-kind technologies. These include unique civil structures for high-speed operations for a design speed of 180 Kmph which was never tried before in the country, ballastless track systems, rigid overhead catenary systems, ETCS Level II with ATO signalling, interoperable Rolling Stock with future RRTS Corridors, Operation and Maintenance operated by a private contractor and revenue contracts —many of which are being implemented in India for the first time.

The procurement strategy was designed to address these complexities while adhering to principles of quality, safety and cost optimization over the lifecycle. Industry engagement phased interfacing and alignment with government policies and multilateral lending agency requirements were key input parameters. Models like BOQ contracting for conventional packages and design-build contracts for high-complexity tasks were adopted to mitigate risks, ensure technology transfer and promote Make-in-India initiatives.

Strategic decisions, such as keeping rolling stock and signaling packages outside Multilateral Development Bank (MDB) funding, helped focus on local capacity building while using MDB funding for packages naturally suited for Indian contractors. This approach successfully balanced innovation, capability development and timely delivery while mitigating risks and fostering competition in the industry. The case study also includes the challenges faced in working during COVID-19 lockdown.

**Keywords to  
support electronic  
searching**

Procurement, RRTS, Namo Bharat, Bidder, Contractor

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## 1. INTRODUCTION: NRTC STATUS AND ACCOUNTABILITY

**History:** The National Capital Region (NCR) is a multi-state region with Delhi as its centre, covering an area of 58,083 km<sup>2</sup> spread over the States of Haryana, Rajasthan, Uttar Pradesh and the National Capital Territory (NCT)-Delhi. The NCR is a highly urbanized region with high population and economic growth, involving large scale transportation of people and goods within the region. The population of NCR is projected to be 890 lakhs by 2031. Efficient movement of people and goods within the NCR is considered as primary concern for the planned development of the NCR. The existing transport system within the region, consisting of a variety of modes like private and public road transport, suburban rail system and metro rail is inadequate to meet the passenger transport needs and there is urgent need to enhance the regional transport system and encourage people to stop migration to Delhi by offering them the alternative of settling in surrounding cities and being able to commute to Delhi through a fast public transport system at a reasonable cost.

To promote the development of the NCR in balanced manner the National Capital Region Planning Board (NCRPB) was constituted under NCRPB Act, 1985 with the consent of all 4 participating states. With the mandate to prepare plans for development of NCR and to coordinate and monitor the implementation of such plans and for evolving harmonized policies for the control of land uses and development of infrastructure in NCR.

Regional plans were prepared with the aim to promote the economic growth and balanced development through an integrated strategy to provide suitable economic base for future growth, efficient and economic rail and road-based transportation networks and developing selected urban settlements with urban infrastructure facilities (such as transport power, communications, drinking water, sewerage and drainage) comparable with National Capital Delhi.

The idea of an integrated commuter railway network to connect the National Capital Region and Delhi was mooted way back in 1998-99 in an Indian Railways commissioned study. The study had identified the possibility of an RRTS network that would provide such a connectivity using fast commuter trains. The proposal was re-examined in 2006 in the light of extension of the Delhi Metro to some of the NCR towns. The idea was subsequently taken up and owned by the National Capital Region Planning Board (NCRPB) while developing its "Functional Plan on Transport for NCR-2032", to promote the development of the NCR in a balanced manner.

In this series, it was proposed to develop Regional Rapid Transport System (RRTS) to connect regional towns with Delhi and with sub-regional centres, orbital rail and Mass Rapid Transit System (MRTS) for Delhi and NCR Towns.

A total of 8 RRTS Corridors connecting Delhi to surrounding cities were studied and out of 8 proposed corridors, three corridors i.e Delhi – Ghaziabad – Meerut (82 Km), Delhi – Gurugram – SNB – Alwar (198 km) and Delhi – Panipat - Karnal (136 Km) were considered for implementation in first phase. Amongst the three corridors it was decided to take up Delhi – Ghaziabad – Meerut as the first RRTS Project of India.

### **The RRTS Proposals were considered with the following vision:**

- i. To create a hi-speed, high capacity, transport system having predominantly seated accommodation and good comfort level for passengers
- ii. The operating pattern may include both non-stop and stopping at all stations journeys. The journey between Delhi and Meerut to be in the order of 60 minutes for the RRTS corridor
- iii. The Delhi terminus shall be integrated with the existing Delhi Metro network including the development of feeder systems, to develop a perfect model of Multimodal Transportation nodes
- iv. Optimized locations of stations for ease of access to commuters and to serve maximum volume of ridership
- v. Optimize route and number of stops so as to achieve good operating speeds



**Creation of NCRTC:** For the successful and timely implementation of RRTS project, a joint venture company in the name of “National Capital Region Transport Corporation limited (NCRTC) consisting of Central Govt. of India (GoI) and other 4 participating states Uttar Pradesh, Haryana, Rajasthan and NCT of Delhi has been created and registered under the company Act 1956 w.e.f. 21.08.2013 with authorised and paid-up capital of INR 100 crores.

The Equity holders of NCRTC are Ministry of Housing and Urban Affairs [MoHUA] (22.5%), Ministry of Railways [MoR] (22.5%), National Capital Region Planning Board [NCRPB] (5.0%), Government of National Capital Territory of Delhi [GNCTD] (12.5%), Government of Uttar Pradesh [GoUP](12.5%), Government of Rajasthan [GoR](12.5%) and Government of Haryana (GoH] (12.5%). NCRTC is mandated for designing, developing, implementing, financing, operating and maintaining of Nammo Bharat projects in the NCR to provide comfortable and fast transit to NCR towns and meet the high growth in transport demand.

NCRTC has one nominated Director each from the participating States and four nominee Directors from the Government of India. The Secretary (HUA) is the ex-officio Chairman of the Board of Directors and the Managing Director, a nominee of MoHUA.

NCRTC became full-fledged operational with the appointment of its first regular Managing Director on 08.07.2016.

## 2. SANCTION OF PROJECT AND PROJECT FUNDING

Government of India accorded its sanction in March 2019, for implementation of first Corridor of RRTS project between Delhi-Ghaziabad-Meerut Nammo Bharat corridor covering a total length of 82.15 k.m. (68.03 km elevated and 14.12 km underground) at a total completion cost of INR 30,274 crores (Indian Rupees Thirty Thousand Two Hundred Seventy Four crores only) (including escalation and Central taxes & duties, Land cost and State taxes), with contribution of Government of India (GoI) and participating states (Delhi and UP) in the form of Grant and interest free Subordinate Debt, funding from Multilateral/Bilateral agencies, Public Private Participation as follows:

Grant and interest free Subordinate Debt from GoI and State of Delhi and Uttar Pradesh	INR 11,268 Crores
Funding from Multilateral/Bilateral agencies	INR 16,904 Crores
Public Private Participation	INR 270 Crores
Contribution towards State Taxes	INR 1,100 Crores
Contribution towards Government Land	INR 732 Crores
<b>Total</b>	<b>INR 30,274 Crores</b>

Funding exercise with MDBs was started through our administrative Ministry MoHUA and Department of Expenditure under Ministry of Finance, GoI. Funding from Multilateral Development Banks, Asian Development Bank (ADB), Asian Infrastructure Investment Bank (AIIB) and New Development Bank (NDB) of about 2049 million USD as a loan and 03 million USD as a Japan Fund for Poverty Reduction (JFPR) grant was finally considered.

### 3. NCRTC's procurement are essentially guided by the following overarching objectives:

#### a) Timely Award of Contracts and Transparent Bidding Process

The primary objective of the procurement exercise was to ensure the **timely award of contracts**, facilitating the seamless implementation of project milestones. Recognizing the criticality of adhering to defined timelines in large-scale infrastructure projects, the procurement strategy was designed to streamline processes, mitigate delays, and ensure all contracts were finalized without disruptions. This approach aimed to achieve operational readiness in a structured and time-efficient manner.

An essential pillar of the procurement exercise was maintaining a transparent bidding process to foster accountability, equity, and trust among stakeholders. By incorporating best practices, the process ensured fair competition and impartiality in selecting contractors and suppliers. Notably, the exercise was designed to encompass all activities—from bid issuance to the signing of the Letter of Acceptance (LOA)—in a single, cohesive approach, reducing redundancies and enhancing procedural efficiency.

#### b) Adherence to Guidelines and Policies

Adherence to established guidelines was paramount throughout the procurement cycle. All actions strictly complied with Multilateral Development Bank (MDB) guidelines and Government of India (GoI) regulations, ensuring alignment with international best practices and national policy frameworks. This dual compliance reinforced the integrity of the procurement process while meeting the expectations of funding agencies and government stakeholders. The synergy between these guidelines underscored the project's commitment to transparency, accountability, and efficiency.

- c) **Deliver Best Affordable Value** – achieve best affordable value in delivering NCRTC's high level objectives. Seek opportunities for efficiency and economies of scale across the programme by working with industry partners. The achievement of best affordable value also requires that the procurement procedures and contractual arrangements support the delivery of Government of India and MDBs policies funding the project.
- d) **Establish Effective Governance and Control** - conduct procurement activities in a manner that satisfies the requirements of accountability and internal control, fulfils NCRTC's legal obligations, complies with financial constraints and effectively manages commercial risk.
- e) **Apply Standardized Approaches**- provide and enforce effective, efficient and consistent commercial arrangements for procuring works, products and services of a common nature.
- f) **Build and Maintain Effective Supplier Relationships** - recognize that in order to achieve best affordable value appropriate relationships must be developed and maintained with suppliers and their supply chains.

#### g) Maximizing Program Benefits

The procurement activities were meticulously aligned with NCRTC's long-term vision and strategic goals, ensuring that each decision contributed to the overarching mission. Emphasis was placed on fostering knowledge-sharing among stakeholders to encourage innovation and drive continuous improvement across all facets of the program. Additionally, sustainable procurement practices were prioritized, taking into account life-cycle costs and the broader socio-economic impacts, thereby reinforcing the commitment to environmental stewardship and community development.

#### 4. PROCUREMENT STRATEGY

As procurement policies of funding agency is required to be followed and procurement policies of MDB varies on various aspects with the policies of Government of India policies, accordingly following procurement strategy was adopted for the implementation of the project:

- It was decided that NCRTC will have centralised procurement cell with a dedicated team of officials in the Corporate Office having past exposure of handling procurement as per the policies of MDB to ensure uniform procurement policies and to control/avoid public grievances.
- Based on the experiences of other operational organizations, NCRTC Schedule of Power, Procurement Manual and other procurement policies were framed.
- Various procurement related documents, procurement regulations, available standard bidding documents of multi-lateral development banks (MDB) and other organizations were collected, studied and analysed for development of Procurement Manual, other procurement related policy document, Project Procurement Strategy, Procurement plan and preparation of various bid documents.
- Bidder's meet were conducted to explain the prospective bidders about the new project coming up and to understand their viewpoints for preparing the Procurement Strategy including the procedures related to Contract Management.
- An exercise was taken up for deciding the e-procurement portal which is mandatory as per the GoI Instructions. Out of several e-procurement portal available, it was decided to adopt Central Public Procurement Portal being handled by NIC (National Informatics Centre (NIC) under the Ministry of Electronics and Information Technology (MeitY).
- NCRTC has made significant efforts to ensure the availability of land required for the project. This involved extensive correspondence and multiple meetings with the Government officials to facilitate land acquisition. Additionally, NCRTC engaged directly with private property owners to negotiate land purchases prior to the award of bids. These proactive measures ensured that utility shifting works could be carried out without hindrance and that construction sites were readily available for civil contractors, enabling smooth project execution.
- As per the ongoing trend in Metro industry, utility shifting and road widening works are kept **under the scope of main civil contractors only**. There are numerous instances wherein the projects were delayed due to delay in approvals/shifting of utilities like gas/water/sewage pipeline, telecom cables, etc. owing to involvement of various Government agencies. Considering this fact, it was decided to **take-up major utility shifting works** like that of EHT/LT lines, gas/water/sewage pipeline, road-widening and initial pile load testing works **in-house directly awarding separate smaller contracts** before on-boarding the main civil contracts. This eventually helps in saving considerable time usually taken up for preparing the site for main civil activities by taking approvals from the various agencies, carry out utility shifting, road widening works and initial pile load testing to take up the first construction activity of piling in case of elevated Viaduct and elevated stations works, taking various access and approvals for utility shifting. The main civil contractor can mobilize and start directly with execution of permanent civil works like piling with the availability of clear site.
- It was also decided that a Contract for the General Consultant (GC) should be in place, as soon as the project of Delhi-Ghaziabad-Meerut is sanctioned so that the GC is on board to assist NCRTC from the initial phases of the project. Keeping in view the lead time required for the procurement process for the GC contract was started from **July 2018 itself** due to which NCRTC was able to issue the Letter of Acceptance to the GC on 25.04.2019 just after the sanctioning of the corridor.



- As it was required to follow the procurement policies of the agency funding a particular package and NCRTC being under obligation to promote Make in India policy, strategic decision was taken to decide on packages for following the procurement policies of MDBs on one hand and promoting GoI policies on other hand.

## 5. CRITERIA FOR PACKAGING

As a better practice for efficient, timely and cost-effective delivery, a thoughtful packaging of the project works is very much essential key parameter. Total quantum of work required for the execution of the Project was drawn from the Detailed Project Report and the most preliminary idea of Packaging was drawn from the information available regarding the capacities of various execution contractors, designers and other consultants. Experience of other similar organizations specially of the capacity of various Vendors available in the market were also sought.

Vendors meet were organized, inviting domestic and the foreign firms either already having the footprints in the country or willing to do so to. The preliminary packaging was discussed during this vendor meet and feedback of the industry with a view to improve the participation and having healthy competition between various available vendors.

Capacity of the bidders in the industry was taken into account to maximize the participation and competition.

Process of Packaging kept on evolving as the project was advanced and this was done to accommodate the industry requirement to get optimum and more professional contractors on one hand and avoiding too small/too high number of contractors for the project on the other hand, so as to avoid any chance of Interfacing problem.

Due consideration to accommodate procurement policy of GoI on Make in India and Bidders from the Countries having Neighbour sharing Land Border were required to be strictly adhered to while procurement of any package was done out of GoI Funding.

Based on the inputs received during various vendors meet and brainstorming with other stake holders, procurement packages were managed and segregated into following parts, to meet the strict timelines for execution of the project of this magnitude:

- Various Consultancies such as Detailed Design Consultants, Proof Consultants and General Consultant on QCBS basis
- Civil- Elevated viaduct, Underground, Depot, Architectural finishing of stations, PEB works, Track works
- Electrical – Traction, Environment Control System & Tunnel Ventilation System, Lifts, Elevators and Escalators
- Rolling Stock
- Signalling and Telecom – S&T System, AFC
- Asset Management System (iDREAMS)
- Operations & Maintenance
- Revenue Contracts

Following criteria was considered for framing the procurement packaging of the project :-

- **Stage-I i.e. “Priority Section” from Sahibabad to Duhai including Duhai depot** was considered for commissioning of Delhi-Meerut Nammo Bharat corridor keeping in view of the lead time for land acquisition and major portion on median of the Highway.

- The priority section was planned with only viaduct portion and no tunnelling portion was included in the priority section. Thus, two packages were decided roughly for same length keeping in mind the construction in densely populated areas having space constrain for construction and keeping in mind the availability of adequate competitors in form of Indian bidders for the given quantum of work. The construction of station buildings were included in the packages for viaduct. Thus by combining both viaduct and stations in same package, the interfacing issues could be minimized.
- In other than priority sections, the packaging for viaduct was done based on the feedback from the construction industry. The length of viaduct packages for non-priority section were higher as compared to the priority section, as these packages were not in as densely populated area as compared to the priority section packages. While deciding the packaging, due consideration was given for the availability of land required for casting yard of segments, its lead to the work site for erection etc. The number of Launching Girders were kept such that a proper cycle of segment casting, lead and erection is maintained to execute the package in such a time frame so that float in this activity is always available to cater any eventualities.
- General Consultant (GC) having several expatriates as experts with exposure of various global projects of very high complexities were engaged for finalization of broad parameters for civil underground contracts and system contracts (except track-works). GC was also given the responsibility of proof checking designs in design and build contracts and supervision of system contracts.
- The underground packages were framed such that the twin tunnels by Tunnel Boring Machine (TBM) are done along with the Stations. The quantum of work for these packages were decided based on the progress of tunnelling of roughly 200-250 m in a month. Here also due consideration was given for the availability of land required for casting yard, its lead to the work site for placing the lining. Packages were designed with four number of TBMs working parallelly in all the tunnels so as to execute the package in such a time frame so that float in this activity is always available to cater any eventualities. The diameter of tunnel was also kept in the eligibility and qualification criteria for evaluation of credentials of the bidders.
- Several thought processes were given for choosing the track technology system for Namo Bharat project. Accordingly precast Ballast less track slab (BT) and fitting systems were chosen as the design of BT for a speed of 180 kmph and a separate customised package for this work was created.
- Based on the recommendations of BT Design and track fittings, a separate package for track installation was created, so that vendors having adequate credential are developed.
- In System contracts, where new technology was decided to be used such as for Signalling and Rolling Stock, it was required to have a single package for the complete project length. Same policy was adopted where a work was non-divisible in nature and was required to be designed and used in totality such as Automatic Fare Collection. Through this, economies of scale was also achieved in future maintenance of the Assets.
- Keeping in view the achievable rate of progress, the OHE and Substation work was planned into two packages in the complete corridor, so as to get the Indian bidders matching the desired credentials in the qualification criteria and also single package does not become a critical activity in completion of the project.

- Strategically, Rolling Stock Package was kept out of ADB funding to incorporate MII guidelines, as it was expected that none of the Indian bidder shall meet the Qualification criteria and there will be no option left other than to get the expatriate bidders. However, MII policy shall force such successful bidders to manufacture trainsets in the Country and this resulted in 100% of trainsets being manufactured at Savli, Gujarat. It also includes provisions of comprehensive maintenance for 15 years for reduction in spares cost.
- On same lines Signalling & Telecommunication Package was also strategically kept out of ADB funding to incorporate Make-in-India (MII) guidelines, 50% minimum local content and promote expatriate successful bidders to add local content to fulfil the MII in policies.
- Platform Screen Door (PSD) is provided for safety of commuters at platform. NCRTC has proactively taken step to contribute to the 'Atma Nirbhar Bharat' mission through development and indigenisation of PSD System in collaboration with Bharat Electronics Limited (BEL). Technical experience and in-depth knowledge of principle of PSD working, functional requirements, development fund etc. will be provided by NCRTC. System design, tools, testing and manufacturing by BEL. This will reduce the dependence on foreign parties and reduce the cost of system. Ownership of patent, IPR and source code- jointly and equally owned by NCRTC & BEL. NCRTC and BEL shall have right to jointly exploit commercialisation of PSD.
- Operation & Maintenance: This type of projects require large number of lower/entry level manpower at O&M stage – approx. 2000 people. Salary cost is significantly lower and productivity of Human Resources is higher for private operator, as compared with Government entities. To optimise the manpower cost, first time in the country O&M for the publicly constructed rail-based project is undertaken through private participation.
- Revenue Contracts- To ensure financial sustainability and diversify revenue streams, NCRTC has initiated revenue contracts focused on Non-Fare Box investment opportunities. In Metro and RRTS organizations, reliance solely on fare box revenue is insufficient for maintaining and expanding systems. Identifying and capitalizing on innovative investment opportunities becomes imperative. Recognizing this, NCRTC integrated revenue generation into its station design, strategically planning for long-term value creation. For operational stations of Namo Bharat corridors, the following revenue-generating contracts are planned:
  - Station Naming Rights: Offering exclusive branding opportunities.
  - Outdoor Advertising: Leveraging station exteriors for advertisements.
  - In-Station Advertising: Utilizing platforms and concourses for promotions.
  - In-Train Advertising: Including train wraps and digital displays.
  - Property Development Floors: Repurposing spaces for commercial use.
  - Virtual Stores: Facilitating e-commerce integration at stations.
  - Cab Access: Providing dedicated pick-up and drop-off zones.
  - Pouring Rights: Allowing exclusive beverage partnerships.
  - Innovative Options: Solar roofs, EV charging stations, VR kiosks and E-bike stands.
  - Telecom Infrastructure: Installation of telecom towers and optical fiber cables.

Through these initiatives, NCRTC not only aims to enhance commuter experience but also ensures the long-term financial viability of its projects.

## 6. SELECTION OF CONTRACTING i.e BOQ vs Lumpsum based

NCRTC was required to strategically decide the choice between BOQ or Design & Built based contracting in the procurement plan for efficient and timely delivery of the project. This was decided based on following factors :-

- Success of Project depends on proper risk allocation to the party who is in the best position to handle it and effective risk mitigation.
- Vendors meets were organised to understand the capability of execution contractors and designers available in the market for a particular package specially of higher complexity. During these vendor meets, discussions were also done as regards to understanding the industry perception of the intended scope of work of a particular package. It was understood that industry was not conversant with design detailing of Namo Bharat being done for the first time in the country for a design speed of 180 kmph. DDCs were not having adequate experience for such type of special designs.
- All such packages based upon risk allocation, having higher level of uncertainty, for which no prior experience was available in the country were segregated.
- BoQ based contracts were decided to mitigate the uncertainty such as alignment issues, approvals for utility and availability of land for seamless execution of the project. The discussions were also done to understand about the industry readiness for the specific design requirement for higher speed i.e. 180 kmph, enhanced axle load, separate Schedule of Dimensions (SoD) and dynamic behaviour of structure for such speed.
- Accordingly, packages for construction of viaduct and stations and other civil works except tunnelling were decided to be done on BoQ basis, as it was felt that separate DDCs contracts were required for design of the viaduct and station as per special requirements of Namo Bharat corridors. General Consultant to NCRTC having experienced personnel (expatriates') were given the responsibility of proof checking of these designs. Based on these designs BoQ could be handled with fairly accurate quantity and rates for civil packages except tunnelling.
- Design and build type of contracts were adopted in all such packages having high complexity or where no prior experience was available in the country i.e for the custom works where no prototypical replications are available. General Consultant (GC) having several expatriates as experts with exposure of various global projects of very high complexities were engaged for finalization of broad parameters for civil underground contracts and system contracts.
- Underground packages were decided to be done on design and built basis, as other uncertainties were there but once tunnel diameter, Schedule of Dimensions and alignment were fixed, too much variation was not expected. Thus, limiting the risk involved. Though the data of initial bore logs and utility shifting was undertaken as pre-construction activities by NCRTC, package for underground tunnel are full of geological uncertainties. Adopting BoQ type of contract would have resulted in Employer owning these uncertainties and risk, resulting in time and cost overruns in the form of variations. Accordingly, tunneling packages were proposed on 'Design & Built' basis wherein responsibility of some of the risks and design efficiency being owned by the contractor. This type of work can be executed by contractor based on availability of specialized equipment with them and customized methods of execution.
- The design and build type of contracts were the preferred mode also for the system packages like traction, Elevator/Escalators, S&T works, AFC wherein there are not much uncertainties, if technology is frozen. Contractors have most of their own designs and work is executed by JV or consortiums. Hence these types of works are not possible to be covered in the BoQ based contracts. Contractors essentially share the responsibility of timely delivery of fit to purpose project.

- For track-works, as similar system for a design speed of 180 Kmph was never adopted before in the country, a separate technology selection was done for ballast less precast track slab and fastening system. DDC along with system provider were taken onboard which was an expatriate consulting firm having adequate experience for such design speed. Once the design was freezed, it was strategically decided to have the track-installation contract to be executed through Indian contractors on BoQ/item rates basis. IPR rights of the track design was obtained and this was also done with a strategy to help the technology transfer to the Indian firms and promote Make in India in subsequent contracts. The supply of fittings and rails was also proposed on BOQ/item-rate basis.
- It was decided in design and build contracts to keep the design of the similar project as one of the eligibility criteria, wherein these eligibility criteria were permitted to be fulfilled either through execution contractor itself (having in-house capable and experienced design team) or designer as a JV partner or as a specialist sub-contractor. This ensured to make the contractor responsible of design and execution complete as a single job and leaving no room for time and cost overruns due to delay for any issues between design and execution.

## 7. DEVELOPMENT OF VARIOUS PROCUREMENT RELATED DOCUMENTS

- 7.1.** Procurement is the whole process of acquiring works, supplies and services from the market, managing variations to those transactions, settling claims for additional payment, imposing contractual remedies for breach of an obligation and maintaining supplier performance data. The responsibility for the implementation of the project and therefore for the award and administration of contracts under the projects, rests with the project executing agency.
- 7.2.** The most important activity in project execution i.e procurement process was standardized for ease of project execution at various stages. For this all-procurement related documents such as Procurement Manual, other policy documents, bid documents etc. were prepared with due consideration of following six basic procurement principles:
- Economy:** Taking into account factors such as price, quality and any nonprice attributes as appropriate without adversely affecting the viability of the project.
  - Efficiency:** Ensuring that procurement processes are proportional to the value and risks of the required outcome and underlying project activities, taking into account of implementation capacity, time constraints and cost-effectiveness.
  - Fairness:** Ensuring (i) equal opportunity and treatment for eligible bidders; (ii) equitable distribution of rights and obligations between borrowers and providers of goods, works and services; and (iii) credible mechanism for addressing procurement related complaints and providing recourse.
  - Transparency:** Through appropriate documentation and review of the procurement process activities, ensuring that (i) relevant procurement information is made publicly available to all interested parties, in a consistent and timely manner, through readily accessible and widely available sources at no (or reasonable) cost; (ii) there is appropriate reporting of procurement activity (iii) confidentiality provisions in contracts are used.
  - Quality:** Structuring procurement arrangements to procure inputs and deliver outputs of appropriate standard in a timely and effective manner to achieve the project outcomes and development objectives, taking into account the context, risk, value and complexity of procurement.



- vi. **Value for money:** Enabling the borrower to obtain optimal benefits through effective, efficient and economic use of resources, by applying as appropriate, the Core Procurement Principles and related considerations, which may include life-cycle costs and socioeconomic and environmental development objectives of the project executing agency. Price alone may not sufficiently represent value for money.

Due consideration shall also be given in the development of these documents to ensure that all procurement activities carried out by, or on behalf of NCRTC:

- a. are compliant with the regulatory framework of all relevant legislation, the NCRTC governance and audit framework and delegated levels of authority.
- b. The best practice of ethical Procurement – The ground rules for good ethics in procurement are simple enough. Practice integrity, avoid conflicts of interest and personal enrichment, treat suppliers equally and fairly and comply with legal and other obligations. Quite simply, the overriding principle is “do the right things” However simple is not the same as easy. One of the challenges as of ethical procurement is to know how to make it into a practical reality that people can apply consistently.
- c. adhere to Government procurement policies and to be in line with the procurement policies of the MDBs.

### 7.3. Delivering Best Affordable Value – Key Principles

#### 7.3.1.1. Approach to Delivering Best Value

- i. NCRTC's procurement activities are carried out on the basis of achieving best affordable value. This means delivering NCRTC's high level objectives within the affordability criteria.
- ii. The achievement of best affordable value is facilitated by:
  - a. Maintaining a strong focus on the baseline budget and the affordability of proposals.
  - b. applying the Key Principles set out in the Procurement Manual and other policies.
  - c. securing the external capability necessary to deliver NCRTC's business needs on competitive best value terms, a fair allocation of risk and rewards, on fully specified terms and with predictable outcomes.
  - d. adopting recognized best practice and guidance from the Ministry of Finance, Department of Expenditure, Central Vigilance Commission and other organizations where appropriate.
  - e. learning lessons from other similar major projects.
  - f. developing, implementing and managing procurement strategies and plans based on a robust risk-based approach.
  - g. developing and implementing standard procurement procedures which are kept under review to identify efficiencies in the procurement process
  - h. working with suppliers to create relationships that are professional and productive and are appropriate to the value and importance of supplies.

#### 7.3.1.2. Other Procurement Policies

- i. The achievement of best affordable value must ensure that the procurement procedures and contractual arrangements support the delivery of Government of India and NCRTC policies. The other procurement policies of NCRTC have been developed to align with the following principles:
  - a. Proper control on the expenditure ensuring the timely bill payments of the contractors with having adequate tiers of bill checking, before any payments are released. This ensured adequate cash flow for the contractors, in turn facilitating the speedy project execution.

- b. The small value works below a threshold value have a liberalized Evaluation and Qualification criteria to develop the vendors and giving them a conducive atmosphere for them gaining experience so that they could be of use for the future procurement of the project with greater values.
- ii. Extensive use of IT tools has been made for developing inhouse software like Systematic Program Evaluation for Efficient Delivery of Project (SPEED) etc. to monitor the progress, tracking of issue of LOAs and expenditure on any contract agreement along with the pictorial progress of all pre-construction activities along with the main construction activities.

### 7.3.1.3. NCRTC Key Principles for procurement.

On the basis of the various key policy documents of GoI and other organizations, NCRTC Key Principles (KPs) which are applied to the delivery of the NCRTC's procurement requirements are set out in the following main areas:

- i. General Procurement.
- ii. Supply Chain Management and Engagement.
- iii. Contractor Selection Procedures.
- iv. Contracting Arrangements.
- v. Risk Allocation.
- vi. Fair Payment Procedures.
- vii. Performance Management.
- viii. Maximum usage of IT based system for better cost and performance control

### 7.3.1.4. General Procurement Key Principles

**KP1** – NCRTC adopted a risk-based approach for the development and evaluation of procurement strategies, detailed procurement plans and processes.

Risk based procedures to evaluate the optimal approach to procurements are adopted based on best practice and guidance issued by GoI and other organizations. These are aimed at ensuring that delivery risks are identified, evaluated and allocated appropriately to achieve best affordable value in the management of the risks. The procedures are designed to meet the requirements set out in policy guidelines of GoI and MDBs funding the project so that the project passes through their review group and projects are reviewed as efficiently as possible and with minimal impact on the programme.

**KP2** – NCRTC's procurement activities are carried out on the basis of achieving best affordable value.

The achievement of best affordable value means delivering NCRTC's high level objectives for the NCRTC's Programme within the affordability criteria.

**KP3** – NCRTC ensures that it has access to the necessary experienced and competent resources needed to deliver the project successfully.

NCRTC's approach to procurement and project delivery are aimed at ensuring the availability of the skilled resources required for the delivery of the NCRTC's programme. Expert delivery partners and specialist advisers are used as necessary to support NCRTC. Strong client capability helps establish NCRTC's reputation as a best practice client which helps to attract the best suppliers and ensure strong competition for its contracts. NCRTC undertakes reviews of resource pressures in the supply chain and develop plans to address potential shortages.

**KP4** – NCRTC ensures that its procurement plans and procedures support delivery of NCRTC Health, Safety and Environment policies.

NCRTC's procurement plans and procedures are aligned with the policies and requirements set out in the NCRTC publication "Safety, Health and Environment" (SHE) Manual.

**KP5** - NRTC implements best practice responsible procurement policies and processes based on GoI and other MDBs funding the project, approach to responsible procurement.

**KP6** - NRTC collaborates with industry partners and other clients where appropriate to deliver efficiencies and savings through innovative technical and purchasing techniques.

#### 7.3.1.5. Supply Chain Management and Engagement Key Principles

**KP7** – NRTC establishes early and regular consultation arrangements with the market to develop well informed and well-prepared suppliers to help achieve strong competition for its full range of contracts.

NRTC undertakes early engagement and consultation with the market and suppliers to review options for procurement plans and programmes and to help ensure that suppliers are well prepared for opportunities as they come to the market, ensuring that none of its procurement process is done without the conduct of meaningful Pre-bid conferences with the prospective bidders.

**KP8** – NRTC incorporates optimized contractor involvement principles into its contracting arrangements to involve contractors and suppliers as early as possible prior to construction or manufacture phases.

NRTC aims to achieve the early involvement of the supply chain in a flexible manner which is being referred to as Optimized Contractor Involvement (OCI). This ensures the involvement of the supply chain in the finalization of the designs and delivery plans in a way that is best suited to the scope of the works package.

The objective of this approach is to bring the skills and expertise of the supply chain into the development of the final engineering solution to produce better solutions and improved value for money. The earlier involvement of the supply chain in the finalisation of the detailed design is aimed at delivering the following benefits:

- i. Improved buildability of the works.
- ii. Identification of better solutions and cost savings through value engineering.
- iii. Elimination of unnecessary scope or unnecessarily elaborate specifications.
- iv. Improved understanding and management of health and safety issues.
- v. Improved understanding and management of construction risks.
- vi. More time for the planning of resource requirements.
- vii. More time for the contractor to become familiar with the environmental and local community requirements
- viii. Creation of integrated delivery teams who are incentivised to work together to resolve problems as quickly and efficiently as possible.

**KP9** - NRTC develops and maintain effective collaborative working relationships with the supply chain.

NRTC develops and implement appropriate arrangements with its suppliers to support the successful delivery of the project objectives and individual contracts. They are promoted to develop and establish integrated and co-located teams where appropriate.

#### 7.3.1.6. Contractor Selection Procedure Policy Principles

**KP10** – NRTC ensures that its procurement procedures are competitive, efficient, fair and transparent in accordance with its legal obligations, particularly those arising under the General Financial Rules.

It is important to ensure that procurement procedures are fully compliant with the Regulations (as amended) as this will ensure that competitive best value bids are submitted and that they are not exposed to the risk of challenge which could result in significant delays to the programme, particularly if the challenge were to be successful.

**KP11** – NCRTC award contracts on the basis of the lowest price from the substantially responsive and technically compliant bidder.

The procurement regulations provide for the award of contracts on the basis of the lowest price received from substantially responsive and technically compliant bidder in case of works and goods from the point of view of the contracting authority. It has been well established that awarding contracts on the basis of lowest price bids in the case of consultancy contracts often results in unrealistically low tenders and adversarial behaviours as the consultants seek to recover costs through deputing poor-quality personnel, claims and disputes. Government policy permits not to use lowest price tendering in consultancy contract but to take account of quality criteria which will deliver added value in the delivery of the consultancy.

**KP12** - NCRTC contracts with financially robust and technically competent bidders.

NCRTC has developed and implement procedures and criteria to assess the financial strength and technical capability of suppliers to be invited to tender for Namo Bharat contracts, based on the guidelines of GoI and MDBs funding the project. NCRTC also monitors the financial robustness of its suppliers on an ongoing basis.

### 7.3.1.7. Contracting Arrangements Key Principles

**KP13** – NCRTC developed contractual incentives aligned with project objectives for the Value engineering efforts by contractor.

NCRTC developed contractual incentive mechanisms to support the delivery of the key project objectives. This was properly aligned with project objectives for the value engineering efforts by sharing the cost saved due to the result of value engineering efforts by contractor.

**KP14** – NCRTC applies standard timescales for managing Interim Payment Certificate (IPC) and payment release processes.

In line with its approach of dealing with matters promptly as they arise, the NCRTC contracts provides for the standard timescales for managing Interim Payment Certificate (IPC) and payment release processes. This is reinforced by “deemed acceptance” provisions where the parties fail to meet various deadlines for their respective actions. Some contracting authorities apply extended deadlines and delete “deemed acceptance” provisions because of concerns about achieving the deadlines. NCRTC however, intends to retain the standard provisions in order to encourage the right behaviours and to incentivize the parties to operate in the manner envisaged by the NCRTC contract. Provisions of paying interest on delayed payments also exists in NCRTC Contracts.

**KP15** – In line with the existing policies of GoI and MDBs funding the project, NCRTC have well defined procedures in contracts for operating any variation, either as a new item or in quantity of the existing schedule items, to ensure that the contract is delivered as close to the budget as possible.

Any variation proposed by the NCRTC's contractors are required to be scrutinized in several tiers depending upon the value of variation as compared to the accepted contract price. This ensures that the contract is delivered as close to the budget as possible.

**KP16** – NCRTC does not withhold retention money from the contracts.

Provision of retention money is usually kept in contracts to provide protection for the employer following completion in the event of incomplete or defective work. Traditionally, provision of retention money is kept by withholding a 10 percentage from each interim payment till the time it reaches 5% of the contract price. There is little evidence however, to show that keeping the provision of retention money results in better quality work but on the contrary the practice has a significant impact on the contractor's cashflow.

**KP17** – NCRTC permits parent company guarantees from the ultimate parent company in consultancy contracts and where the contract is with a joint venture, NCRTC also normally require guarantees from the ultimate parent of each joint venture member of the consultancy.

A parent company guarantee provides protection for the employer through a guarantee that the contract will be properly performed by its subsidiary. If the consultant is in breach of contract, then the guarantor must perform in his place or be liable for any resultant loss. The value of the guarantee is only as good as the strength of the parent company and generally therefore, NCRTC seeks guarantees from the ultimate parent to minimize the risk that voluntary corporate restructuring reduces the net asset value of the guarantor company.

**KP 18** – NCRTC requires on default, a performance security to enhance the financial covenant of the contractor if the cost of the security represents value for money.

Performance Security from a bank or other financial institution are an additional source of funding for compensation, up to a fixed amount, in the event that the contractor causes the employer to suffer loss. The performance security can be encashed by NCRTC unconditionally on default of contractor.

**KP 19** – NCRTC has established a panel of adjudicators with a range of experience and expertise appropriate to the nature of the NCRTC works.

All of NCRTC's contracts are subject to a statutory right for either party to refer disputes to adjudication at any time. The availability of a panel of adjudicators will facilitate the resolution of disputes.

#### **7.3.1.8. Risk Allocation Key Principles**

**KP 20** – NCRTC seeks to place contracts on the basis of a fair and sensible allocation of risk to the party best able to manage the risk.

It is considered that the achievement of best affordable value will be supported by a sensible and fair allocation of risks between the parties to the contracts. Requiring contractors to take responsibility for risks which they cannot assess or manage would be likely to result in either high risk premiums or commercial pressures caused by insufficient provision.

**KP 21** – NCRTC normally retains the risk of unexpected physical conditions using geotechnical baseline reports to provide a baseline. Taking care for unexpected physical conditions is a standard provision in NCRTC contracts. The provision of geotechnical baseline reports in the tender documents will fix the baseline as appropriate to each contract and will achieve consistency in tendering assumptions.

**KP 22** – NCRTC retain the risk of exceptional weather conditions. Taking care for weather conditions are adopted as it provides an objective approach to the measurement of the effects of weather and ensures consistency between bidders in the tender process.

**KP 23** – NCRTC retains the risk of changes in law. Under NCRTC contracts, the default position is that the NCRTC bears the risk of changes of law. This does not result in contractor loading their markups unreasonably on this ground.



**KP24** – NCRTC puts in place Contractor Controlled Insurance Programme to cover:

- i. Insurance of works and contractor's equipment
- ii. Insurance for injury to persons and damage to property.
- iii. Insurance for contractor's personnel.
- iv. Insurance for liability for breach of professional duty

### 7.3.2. Effective Governance and Control

#### 7.3.2.1. Governance

- i. The Procurement Manual and other policies adopted provides the high-level framework for the detailed guidelines and other documentation which is available locally in the form of standards and procedures and which support this policy.
- ii. Procurement activities within NCRTC are carried out to the professional standards required by best practice and in compliance with all prevailing legislation.
- iii. The procurement governance framework ensures that all obligations and liabilities undertaken by NCRTC will be wholly and necessarily associated with delivery of the project objectives and business needs.
- iv. Any obligation or liability of NCRTC to any other party are well documented by a properly authorized and executed agreement before the obligation or liability is undertaken.
- v. Appropriate IT enabled contract management tools are used where appropriate to support the efficient and effective management of the contract. Liabilities that accrue under contracts will be accurately captured, periodically monitored and analysed for improvement follow-up and management reports.
- vi. Standard purchase orders are appropriate in many cases but are only used where services or supplies are operational, transient or of minor scale.

#### 7.3.2.2. Delegation of Authority

- i. NCRTC maintains a well-defined Schedule of Power (SoP) which authorise the personnel or committees to make procurement decisions has been delegated by the NCRTC Board, including the financial limits in each case. The Head of Procurement normally proposes any necessary revisions to the SoP to ensure the efficient and proper approval of procurement decisions.
- ii. No contract or agreement is entered into by NCRTC unless budget is both available and authorised. Financial approvals are based on best estimates of contract outturn costs including appropriate risk allowances. No liability for payment is accrued unless a contract or agreement is in place. Only persons with delegated procurement authority are allowed to authorise commitments to third parties.
- iii. Responsibility for the dissemination and application of this policy lies with senior management of NCRTC and with those to whom the NCRTC Board or Managing Director delegates authority for the application of policies. NCRTC Heads of Departments are responsible for ensuring that everyone involved in the procurement cycle is aware of these Policies and that there is clear definition of responsibility for specifying contract requirements and for managing expenditure within budget.

#### 7.3.2.3. Internal Controls

- i. The Head of Procurement Cell of NCRTC, ensures the implementation of this Policy by establishing and maintaining a procurement management system that integrates with and supports all NCRTC functional management systems.
- ii. The systems include the following:
  - a. The procurement management framework incorporating the authorities for procurement decisions.
  - b. procurement processes and procedures supporting the procurement objectives and which integrate with those of guidelines issued by GoI.
  - c. a thorough review of Bidding and contract documentation prior to Bid invitation including a formal signing of the Contact Agreement.

- d. building and maintaining supplier relationships including producing and implementing performance measurement and development plans for key Bidders/Contractors.
  - e. establishing and maintaining a contract database that will record all NCRTC commitments under contract or agreement, their kind, currency and scale;
  - f. producing management information and reports
  - g. ensuring that this Policy and its supporting process, procedures and systems are communicated throughout NCRTC and ensuring that they are applied.
- iii. The NCRTC framework of internal controls over procurement activities will ensure that:
  - a. More than one person is involved in and responsible for a transaction end to end.
  - b. Transparent procedures are adopted throughout the procurement process.
  - c. A clear documented audit trail exists.
  - d. The appropriate authorisations are obtained and documented; and
  - e. Systems are put in place for appropriate equality monitoring and performance measurement.
- iv. NCRTC publish standards and procedures in support of this policy, which ensures that NCRTC seeks best affordable value in its procurement activities. These will focus on being relevant and appropriate whilst providing a guideline on how procurement activities within NCRTC will be carried out.
- v. An official from Procurement Cell and an official of Finance are nominated for each work package or agreement. They handle the procurement process and work in partnership to achieve the work package objectives. To keep the uniformity across the various packages, a dedicated finance team for procurement has been formed which is working under the Head of the Department of Procurement Cell.
- vi. To deliver the things for which NCRTC is established, much will depend on work contracted out to advisers, consultants, suppliers and affected parties. In turn these organisations may be required to procure works, supplies and services that fall within their own scopes of work but where the contracts will nevertheless be held directly by or on behalf of NCRTC.
- vii. The commitments that NCRTC makes under these contracts create obligations on and risks to, the company that must be fully understood, documented and managed in a clearly defined and accountable way. Accordingly, no Contract Agreement is issued unless these are vetted by associate finance, who shall ensure that verifiable and accurate records using consistent and fair process describe the origin, development and management of these commitments in the Contract Agreement.
- viii. All employees are required to comply with NCRTC's Anti-Fraud and Corruption Policy.
- ix. Procurement activities are carried out in a way that supports employees in meeting their obligation to ensure information of a commercially sensitive or confidential nature is obtained, stored, processed, published (where applicable) in an appropriate manner.

**7.3.2.4. Risk Management**

- i. All procurement activities adhere to the NCRTC Risk Management Policy Statement. Procurement ensure that risk management is appropriately applied at all stages of procurement activities. The risk profile of any contract or agreement are fixed at a commercially viable level consistent with NCRTC's funding and risk management strategy.
- ii. Procurement and contracting plans developed for work packages are evaluated on a risk-based approach in line with best practice.
- iii. In order to contribute to NCRTC's position on resilience which includes security and emergency, contingency and business recovery planning, the Head of Procurement ensures that, where relevant, procurement activities are properly planned and carried out in a manner will ensure protection and enhancement NCRTC's capability to prevent, withstand and recover from interruption to the supply of goods, services and works.
- iv. Contingency plans shall be made to ensure that procurement activities can continue in the event of an emergency.

**7.3.2.5. Procurement Thresholds and Competition**

- i. The development of procedures for the selection of potential suppliers are based on the need to generate effective competition whilst avoiding unnecessary tendering costs for both suppliers and NCRTC.
- ii. Single sourcing – i.e., purchases that are not competitively priced and performance contested - is inappropriate for a publicly funded project as it exposes the company to cost risk, complaint or legal challenge. Single sourcing lacks transparency and in most circumstances does not enable value for money to be demonstrated. Accordingly, it has been ensured that the decision for any procurement authorising single sourcing is used sparingly, at a very senior level and is done for exceptional circumstances and normally only for a low value procurement only.

**7.3.2.6. Contract Terms**

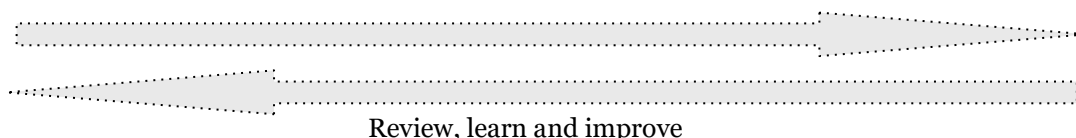
- i. All contractual relationships are documented in writing based wherever possible on NCRTC standard terms and conditions or on the terms and conditions of MBDs funding the project.
- ii. To protect the best interests of NCRTC, terms and conditions must be settled in advance of any commitment being made with a supplier. Any exceptions must be authorized by the competent authority with the concurrence of the associate finance and if required with advice from NCRTC legal cell where relevant.

**7.3.3. Standardized Processes**

- i. The NCRTC Procurement team established effective commercial arrangements covering standard products and standard service provisions across NCRTC to enable the organisation's procurement requirements to be delivered in an effective and efficient manner.
- ii. Procurement activities for works services or supplies are recognised as taking place within a sequence of seven stages. The NCRTC planning team, procurement team and finance team members are responsible for activities through all stages whereas other NCRTC team members and suppliers are closely involved only with parts of this process. The NCRTC committees for procurement are involved in key decisions on appropriate contract at the A2, A3 to A6 stages.

A1.	A2.	A3.	A4.	A5.	A6.	A7.
Plan requirements	Develop Procurement Plan	Assess and select tenderers	Invite tenders	Evaluate tenders	Award contract	Administer contract

Implement processes



- iii. The standard processes are applied to individual work package plans. Scopes of work and work package interfaces are clearly defined and matched to an agreed business need. The assessment of optimal packaging arrangements takes into account of interface risks.
- iv. Contracts and agreements are compiled and concluded taking professional advice where ever required. Contracts & agreements and any amendments hereto, are entered into in accordance with the requirements of GoI, MDB and NCRTC's policy.
- v. Procurement activity integrates with and reinforce NCRTC's other policy and process objectives, including those for quality, inclusion, health, safety and environment.

#### 7.3.4. Building and Maintaining Effective Bidder/Contractor Relationships

- i. The NCRTC Procurement team recognise the importance of effective and open working relationships with its Bidders/Contractors and is committed to the following:
  - a. Early engagement with market and Bidders/Contractors to discuss delivery options and to identify issues which would affect the achievement of best value.
  - b. Delivering tangible savings through the building of collaborative relationships and strategic alliances with key Bidders/Contractors.
  - c. Measuring and managing the performance of Bidders/Contractors to support the delivery of best value.
  - d. Working with the market to achieve maximum competition to ensure as far as possible that all potential Bidders understand requirements and programmes and can put in place the capacity and capability to bid for opportunities
  - e. Working with the market and suppliers to understand areas of possible resource pressure and to develop plans and programmes which allow resources to be used as effectively and efficiently as possible.
- ii. The complexity and scale of the Nammo Bharat Project and more important that it is being implemented for the first time in the country requires collaborative behaviours from all. By its policy objectives and behaviours, NCRTC foster such a culture in contracts, contract management and in all relationships.
- iii. NCRTC trade only with reputable and stable organisations whose delivery capability and financial robustness has been fully assessed and who continue to perform to requirements.
- iv. Relationships with suppliers are established, conducted and concluded honestly, fairly and effectively. Procurement and related business activities meets the highest standards of integrity and ethical behaviours whilst meeting the best interests of the project.
- v. Information of a commercially sensitive or confidential nature are used and stored in an appropriate manner.

More upfront meetings with prospective Bidders to consider the best option of bidding i.e. **BOQ based bidding** or **Request for Bid proposal** or **direct selection**, depending upon package specific requirement, are being considered for ensuring capable Suppliers/ Bidders.

Detailed clear and unambiguous technical specification, Special Condition of Contract, Other requirement of the project i.e. functional requirement, SHE requirement and design requirement were clearly specified in a recognizable and digestible format.

**Above procurement strategy is used to determine the optimum Procurement approach to ensure right procurement result which improve participation of right Bidders. It also provides structured approach as to achieve Value for Money (VFM).**

## 8. PROCUREMENT PLAN

Best Fit for – purpose requires procurement arrangements to appropriately reflect the strategic needs and circumstances of the situation. In case a standardized approach cannot effectively and efficiently meet project outcomes and development objectives, including in capacity – constrained environments, a customized approach may be adopted, entailing transaction-specific methods and documentation.

The specific methods that may be followed for procurement under a given project are being specified in the procurement plan. Open competitive bidding (OCB) properly administered is likely to result in value for money in most cases and is considered as the most appropriate method.

Procurement Plan explain the procurement process identify the different roles and responsibilities, identify the procurement needs, determine the optimum project timeline, describe how changes can be made and approved, explain how vendors will be managed, identify relevant legal jurisdiction, define the payment methods.

Need of proper procurement plan shall be well understood. It promotes economic and efficient procurement process, increases the procurement transparency and predictability. Collect similar request under one contract, as well as divide complex requirement into multiple contract packages to maximise cost saving. Allows organizations to determine any additional staffing needs upfront including external assistance. At last departments to adjust process that are off track.

**After giving due thoughts to key factors, NCRTC strategically prepared the Procurement Plan for Delhi- Meerut RRTS Corridor: -**

Following is the distribution of the major packages which was done in procurement plan.

SI. No.	Type of Procurement	Total No. of Packages Planned
1	Procurement Based on Design & Built methodology	16
2	Procurement Based on BOQ methodology	21
3	Procurement for Supply	12
4	Procurement for consultancy services	20

## 9. EFFECT OF PROCUREMENT POLICIES ADOPTED

- 9.1. The effect of procurement policies adopted by NCRTC infused the confidence in the market which is evident from the fact that footprints of total of almost **450 Bidders** from across the globe is available in the bidding of various packages, as these many bidders participated in various Bids floated by NCRTC till 31.12.2024. Information of a commercially sensitive or confidential nature of all these firms are used and stored in an appropriate manner.



- 9.2.** Initially around 20 Bids, mostly for small consultancy for preparatory works were done through manual mode and all subsequent bids were done on e-tendering portal of NIC as the same was adopted for the procurement.
- 9.3.** ADB mission team studied the procurement procedures being adopted by NCRTC, in detail, prior to loan sanction and requested for some minor changes in the e-procurement portal of NIC. The changes desired were discussed with NIC officials and it was informed by them that the same is not possible on the same organizational structure. NCRTC, under discussion with NIC officials immediately decided to create a separate organization for ADB in CPP portal. Accordingly, two organizations are being operated on CPP Portal i.e One with the name of NCRTC and the other with the name of NCRTC-ADB. The organizational structure with the name NCRTC on CPP Portal follows Procurement policies of GoI and the organizational structure with the name NCRTC-ADB on CPP Portal follows Procurement policies of ADB.

## **10. CHALLENGES FACED DURING PROCUREMENT**

### **10.1. Covid-19**

By December-2019, World was sinking into panic of the looming threat from Covid-19, about which, much was not known. NCRTC, inspite of having the feel of this panic, was keeping the morale of its officials, especially the procurement cell high.

When on the evening of 24<sup>th</sup> March 2020, complete lockdown was announced in India due to Covid-19, it was felt that everything has come to a standstill, with no hope of how the procurement process will proceed for the **total of 14 number of Bids** which were live at that time.

Management of NCRTC swung into action and following decisions/actions were taken:

- 10.1.1.** All officials were permitted to work from home and the non-use of desktop computers in the office from the very start of the NCRTC office paid well. All the officials were already in a habit to work only through their laptops as such, they did not feel any hardships.
- 10.1.2.** All officials were given acquaintance to work on Microsoft teams.
- 10.1.3.** It was decided that none of the Bidding process out of the 06 numbers of Bids for Non-ADB funded works and 08 numbers of Bids for ADB funded which were live on the date of announcement of Covid restrictions are going to be annulled and the date of the Bids at whatever stages they are, shall be extended, till NCRTC finds a way out.
- 10.1.4.** Pre-Bid meeting which is the integral part of procurement in NCRTC, use to take place in the form of In-person meeting. This was however tried for the first time on virtual platform. NCRTC was perhaps the first organisation in India to attempt the pre-bid meeting for a Bid on Virtual platform. This was well taken by the industry and a total number of 24 representatives of 09 prospective bidders including that from Korea, France, Germany, China and Turkey participated in the first ever pre-bid meeting conducted by NCRTC on Virtual platform for Package-8, Construction of Underground tunnel in Meerut region for Nammo Bharat Project. The success could be gauged that queries from several other organizations were raised to learn the experience of the Pre-Bid meeting on Virtual Platform. NCRTC has since then, made the Pre-Bid meeting on Virtual Platform its norms.
- 10.1.5.** The closing date for submission of Bids were postponed till the time, no single representations were pending for extending the date. This was done to ensure that no Bidder is left because of getting the Bid Security issued by the Banks, which started operating by then.
- 10.1.6.** Arrangements were made for the tender Box in office, even during the restricted movement and any call if received from Bidders were promoted to send their Bid securities through Courier, which were operating as essential services.
- 10.1.7.** The Bid Evaluation meetings were conducted by the BEC through Microsoft teams meeting. Once the BEC report was finalized through virtual meetings, a lot of deliberation was done, on the methodology to be adopted for getting the BEC report signed. It was finally decided to get signatures done on the BEC report. A special lockdown movement Pass was got issued for one of the official and he was required to get the signature done by all the BEC members.

**10.1.8.** It was felt that once the team of Procurement cell got acquainted with this new type of working, their efficiency increased manifold as the commutation time of around four hours which they were taking for commutation to office was saved along with no fatigue in movement to office. This resulted in their working even at odd hours and achieving the progress much ahead of the targets fixed for them.

It is evident from the figures mentioned below that management of NCRTC was able to sail through the pandemic period of Covid 19 by handling the procurement of much higher value than, that was done during the normal period.

**From 01.04.2019 to 31.12.2024 (Total Period)**

<b>Bids Floated</b>	<b>No. of LOA Issued</b>	<b>LOA Amount (in Crores of INR)</b>
Works/Civil	123	11,965
Electrical	20	1,123
S&T	1	911
Consultancy	41	549
Revenue	3	12
Rolling Stock	2	2,610
Services	7	38
Misc	8	25
Goods	6	284
<b>Total bids awarded</b>	<b>211</b>	<b>17,517</b>

**From 01.04.2020 to 31.03.2021 Period involving Covid -19**

<b>Bids Floated</b>	<b>No. of LOA Issued</b>	<b>LOA Amount (in Crores of INR)</b>
Pre-Construction Works	5	333
Non-Consultancy Service	4	3
Consultancy Service	6	45
Viaduct	7	2341
Under Ground	2	2823
Systems	6	1774
Goods	9	3647
<b>Total value of the awarded work</b>	<b>39</b>	<b>10966</b>

**10.2. False Alarms for provisions of Make in India.**

Government of India during the year 2017 issued an order regarding Purchase preference Policy to support Make in India (PPP-MII) under their scheme Atmanirbhar Bharat. DPIIT under Ministry of Commerce was made the nodal department to look into any issue related to it. This policy was new, but by the year 2020, GoI started giving lot of emphasis to this policy and seriously tracking each and every representation received in this regard. DPIIT adopting zero tolerance on this account, ordered halting the procurement process at the stage when a grievance is received by them. This led to stalling of procurement process and having serious consequences on the timely execution of the project.

NCRTC from the very beginning remained an active supporter of the Make in India policy and actively pursued with MDBs to include the provisions of this policy in the Bidding Documents, during obtaining the NOC of the Bidding documents of the package funded by them. However, the MDBs did not permitted the same as their procurement policies does not permit the same.

NCRTC handling high valued procurement also faced several instances of false alarms under PPP-MII Policy which were raised by various firms in following Bids:

- i. Rolling Stock
- ii. HH Rails
- iii. Supply of fittings
- iv. Signaling
- v. OHE

NCRTC considering the importance and seriousness of the issue immediately nominated one of its official as the Nodal Officer to handle all the issues on the subject matter and nominated three member Head of the Department level officials to look into all representations raised on the issue.

It was also decided that any such reference received from DPIIT or MoHUA, is to be handled with the approval of top management and blockage of any of the procurement process was taken and pursued very seriously by the top management, to bring the progress of a stalled contract back on track.

The result of this approach could be seen, in the form that though these false alarms resulted in the cumulative delay of procurement process of around 200 days, but while DPIIT was ordering for re-tender in several case of other Ministries and departments, none of the case of NCRTC was ordered for retender. All such false alarms were turned down by DPIIT which shows the robust procurement procedures followed by NCRTC.

## 11. Commissioning of India's first Nammo Bharat Corridor – Delhi-Ghaziabad-Meerut

As on 05.01.2025, out of 82.15 km of Delhi–Ghaziabad-Meerut Nammo Bharat Corridor, 55 km has been commissioned for public operation:

### *Hon'ble Prime Minister of India dedicated to Nation:*

- India's first Nammo Bharat Train for 17 km long priority section between **Sahibabad and Duhai Depot** on 20<sup>th</sup> October, 2023.
- 25 km stretch of Nammo Bharat corridor from **Duhai to Modi Nagar North** on 6<sup>th</sup> March, 2024
- 13 Km stretch of Nammo Bharat corridor between **Sahibabad and New Ashok Nagar** on 05<sup>th</sup> January, 2025

Balance 27.15 kms. is planned to be commissioned soon

## 12. CONCLUSION


NCRTC's holistic procurement strategy, which included comprehensive training for procurement officials, the integration of advanced technologies, and active involvement of top management in addressing critical challenges, was instrumental in achieving following outcomes:

- Despite facing numerous constraints, almost all bids were successfully awarded in the first instance.
- Generally, no issues related to document interpretation were faced which reflects the clarity and effectiveness of the procurement documents and procurement process.
- None of the case of NCRTC with respect to PP-MII policy was ordered for rebid by DPIIT
- This rigorous and well-coordinated effort not only adhered to the planned schedule but also led to the timely construction of the project within the expected cost and commissioning of the Delhi-Meerut Nammo Bharat Corridor Project.
- **NCRTC efficiently completed the procurement of 211 packages valued at INR 17,517 crores which also included finalisation of 39 major packages costing INR 10,966 crores during COVID-19 period.**





# नमो भारत

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