

Industrial Park Rating System (IPRS) 2.0

Rapporteur report on the National Workshop 1 July 2023

Advancing India's Industrial Competitiveness (AIIC)

Department for Promotion of Industry and Internal Trade, Ministry
of Commerce and Industry, Government of India



उद्योग संवर्धन और आंतरिक व्यापार विभाग
DEPARTMENT FOR
PROMOTION OF INDUSTRY AND
INTERNAL TRADE

Abbreviations

ADB	– Asian Development Bank
AIIC	– Advancing India's Industrial Competitiveness
AURIC	– Aurangabad Industrial City
BRAP	– Business Reform Action Plan
CAF	– Common Application Form
CCTV	– Closed Circuit Television
CETP	– Common Effluent Treatment Plant
CFC	– Common Facilitation Centre
CRM	– Customer Relationship Management
CSTP	– Common Sewage Treatment Plant
DFI	– Development Finance Institution
DoE	– Department of Expenditure
DPIIT	– Department for Promotion of Industry and Internal Trade
DSC	– Distributed Control System
EIP	– Eco Industrial Park
EoDB	– Ease of Doing Business
ESDM	– Electronics System and Design Manufacturing
ESR	– Elevated Service Reservoir
ETP	– Effluent Treatment Plant
EXIM	– Export Import
FDI	– Foreign Direct Investment
FFI	– Foreign Financial Institution
GIS	– Geographic Information System
GoI	– Government of India
GDP	– Gross Domestic Product
IALA	– Industrial Area Local Authority
ICT	– Information and Communication Technology
IDC	– Industrial Development Corporation
IDCO	– Odisha Industrial Infrastructure Development Corporation
IFC	– International Finance Corporation
IFCAP	– Innovative Finance Facility for Climate in Asia and the Pacific
IIFCL	– India Infrastructure Finance Company Limited
IILB	– India Industrial Land Bank
IUS	– Industrial Infrastructure Upgradation Scheme
INR	– Indian Rupees
IPRS	– Industrial Park Rating System
KV	– Kilo Volts
MIDC	– Maharashtra Industrial Development Corporation
MITRA	– Mega Integrated Textile Region and Apparel
MLD	– Million Litres per Day
MPIDC	– Madhya Pradesh Industrial Development Corporation
MSME	– Micro Small and Medium Enterprise
MT	– Metric Tons
NaBFID	– National Bank for Financing Infrastructure and Development
NALCO	– National Aluminum Company Limited

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NICDC	– National Industrial Corridor Development Corporation
NIIF	– National Investment and Infrastructure Fund Limited
NOIDA	– New Okhal Industrial Development Authority
NTTF	– Nettur Technical Training Foundation
OFC	– Optical Fibre Cable
OHT	– Over Head Tank
PBL	– Policy Based Lending
PPP	– Public Private Partnership
R&D	– Research and Development
RBF	– Ready Built Factory
RE	– Renewable Energy
SCADA	– Supervisory Control and Data Acquisition
SGST	– State Goods and Service Tax
SEZ	– Special Economic Zone
SIDC	– State Industrial Development Corporations
SIPCOT	– State Industries Promotion Corporation of Tamil Nadu
SOP	– Standard Operating Procedure
SPV	– Special Purpose Vehicle
STU	– State Transport Unit
TIES	– Trade Infrastructure for Export Scheme
TPD	– Tons Per Day
TSIIC	– Telangana State Industrial Infrastructure Corporation
TTRO	– Tertiary Treated Reverse Osmosis
UGR	– Underground Reservoir
UNIDO	– United Nations Industrial Development Organization
USD	– United States Dollar
UT	– Union Territory
WAIPA	– World Association of Investment Promotion Agencies
YEIDA	– Yamuna Expressway Industrial Development Authority
ZLD	– Zero Liquid Discharge

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INTRODUCTION

The Industrial Park Rating System 2.0 (IPRS 2.0) is an Indian government initiative to enhance the country's industrial competitiveness. It aims to improve industrial infrastructure by identifying challenges in existing industrial parks and special economic zones. IPRS 2.0 draws from a successful pilot study by DPIIT in 2017-18. It assessed 449 industrial parks and SEZs, using four pillars: Internal Infrastructure, External Infrastructure, Business Support Services, and Environment & Safety, each with varying weights. Ratings categorize parks into Leaders, Challengers, and Aspirers based on their overall scores. Tenant feedback and workshops help gather insights. DPIIT shares findings and a roadmap through workshops and reports, with the goal of strengthening the industrial ecosystem's competitiveness.

The National Workshop on IPRS 2.0 concluded the study aimed at enhancing industrial competitiveness in India through recognition of best practices, gap identification, investment promotion, and strategic planning. Leading up to the workshop, 25 sessions were held to disseminate findings, addressing internal infrastructure, external infrastructure, business support, and environment & safety pillars. These workshops shared global and local best practices and discussed improvement strategies. The National Workshop united stakeholders, including government bodies, private developers, and multilateral organizations, exploring ways to boost industrial infrastructure. The follow-up report captures IPRS 2.0 findings, tenant insights, workshop proceedings, and outlines future steps and financing options for enhancing the industrial ecosystem.

Finding of IPRS 2.0: Areas of enhancement

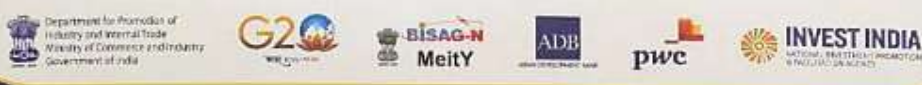
The IPRS 2.0 assessed 316 Industrial Parks and 49 Special Economic Zones, showcasing exemplary practices and highlighting areas for improvement through tenant feedback. These parks are mostly publicly owned (95%) with varied environmental categorization, covering 1.62 lakh acres and 57,050 acres, respectively. Findings from the assessment across four pillars were deliberated through workshops, with the National Workshop uniting stakeholders for further recommendations. Notable findings include improvements in utilities monitoring, enhanced Ready Built Factory facilities, and need for housing provisions. Last-mile connectivity, skill development centers, and common facilitation centers were areas for betterment. Transport linkages, external infrastructure, and business support services also showed areas for enhancement. The rapporteur report captures these insights and workshop discussions, guiding future steps and financing options. Tenant responses supported these findings, shedding light on satisfaction levels across internal infrastructure, external infrastructure, business support services, and environmental safety parameters.

I/36693/2023 **Proceedings of the National Workshop**

The IPRS 2.0 concluded with the IPRS National Workshop held in Vanijya Bhawan at New Delhi on 1 July 2023. It was organised by DPIIT with support from Invest India, Asian Development Bank (ADB) and PricewaterhouseCoopers (PwC). The workshop was attended by more than 100 participants representing State Governments, Union Territories, multilateral agencies, financing institutions, park developers, tenants, Ministries/Departments etc.

As States and UTs continue their journey of improving industrial infrastructure, the National Workshop was organised with the objective of promoting collaboration between the various stakeholders involved and identifying measures for enhancing the industrial ecosystem.

Figure 1: Agenda of the National Workshop on IPRS (AIIC)

	
<h2 style="text-align: center;">National Workshop on IPRS</h2> <h3 style="text-align: center;">Minute by Minute Agenda</h3> <p style="text-align: center;">1st July 2023, 9:30 AM to 1:30 PM Room No. 22, Vanijya Bhawan, New Delhi – 110001</p>	
Time/ Duration	Topic and Speaker
9:30 AM – 9:35 AM (5 Mins)	Welcome address: Joint Secretary, DPIIT
9:36 AM – 9:40 AM (5 Mins)	Context Setting: Additional Secretary, DPIIT
9:41 AM – 9:50 AM (10 Mins)	Opening remarks: Secretary, DPIIT
9:51 AM – 9:55 AM (5 Mins)	IPRS Gap Assessment Study: ADB's commitment for enhancing India's industrial competitiveness: Country Director, India Resident Mission, ADB
9:56 AM – 10:00 AM (5 mins)	Address by COO, Invest India
10:01 AM – 10:10 AM (10 Mins)	Presentation on Industrial Park Rating System: ADB/ PwC and Invest India
10:11 AM – 10:40 AM (30 Mins)	3 State Led Presentations on Best Practices (10 Minutes each/ 8-10 slides)
Tea Break (20 Minutes)	
11:00 AM – 11:40 AM (40 Mins)	4 State Led Presentations on Best Practices (40 Minutes each/ 8-10 slides)
11:41 AM – 12:40 PM (60 Mins)	Panel Discussion: Creating Smart Resilient & Eco Industrial Parks with Innovative Financial Solutions
12:41 PM – 12:50 PM (10 Mins)	Experience Sharing: 2 Private Park Developers (5 Minutes each)
12:51 PM – 1:10 PM (20 Mins)	Open House: Inputs and Suggestions from Participants
1:11 PM to 1:20 PM (10 Mins)	Summing up: Additional Secretary, DPIIT
1:21 PM – 1:25 PM (5 Mins)	Concluding remarks: Secretary, DPIIT
1:26 PM – 1:30 PM	Vote of Thanks: Joint Director, DPIIT

1/36693/2023 In the workshop, participants explored the best practices adopted by different States/UTs across the country as well as listening to the experiences of leading private industrial park developers. The panel discussion provided participants with insights on innovative financing solutions for creating smart, resilient, and eco-industrial parks. Aligned with the agenda of the workshop, this section presents key insights from various presentations/ interactions/ discussions.

The workshop was opened by remarks from DPIIT, ADB and Invest India that provided the background to the IPRS, IPRS 2.0 and the National Workshop with its coverage and objective. The speeches and discussions provided all the stakeholders a platform to exchange ideas and strategies for the development of India's industrial landscape.

Mr. Balamurugan D (Joint Secretary, DPIIT) welcomed all the participants to the National Workshop and provided an overview of the IPRS exercise and the overall journey since its conception. He highlighted the objective of IPRS and the benefits for various stakeholders involved in the initiative. He highlighted the efforts of various state governments and ministries which provided inputs for the formulation of IPRS 2.0. He gave a brief insight on the coverage of the assessment where 449 industrial parks and SEZs participated and the insights that were derived from the tenant feedback mechanism. He also discussed the way forward for IPRS framework and the need for widening the participation and support of various stakeholders. The key aspects of way forward include bringing in aspects of sustainability, cost of doing business, urban-industry linkage, gender participation among others. The address also covered the effort of DPIIT with support of ADB, Invest India and PwC for organizing 25 individual workshops with States/ UTs/ Department of Commerce in both physical and virtual modes.



Mr. Rajesh Kumar Singh (Secretary, DPIIT) in his keynote address shared the Hon'ble Prime Minister's vision for transforming India to a developed country in the next 25 years. This transition hinges on three key levers viz., physical infrastructure, digital infrastructure, and boosting startup and innovation within the country. For the physical infrastructure, the Government intends to spend about \$1.5 trillion over the next 5 years in building new roads and airports, upgradation of railway networks and industrial infrastructure. Further, he emphasised on the



Shri Rajesh Kumar Singh, Secretary, DPIIT

need to increase the share of manufacturing in India's GDP to increase employment, with industrial parks playing an essential role in attracting manufacturing investments as well as catering to large scale employment needs of the country. He remarked how IPRS complements the other manufacturing programmes driven by DPIIT like the Production Linked Incentive Scheme. He also highlighted the efforts of the participating states, union territories, IPRS steering committee, and the collaborating teams for their dedication and tireless efforts in making the IPRS exercise and the workshop a resounding success.

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Mr. Rajeev Singh Thakur (Additional Secretary, DPIIT) provided a deeper view on how States/UTs were instrumental for successful organization of the individual workshops on IPRS. In the address he highlighted the efforts undertaken by various states between the launch of IPRS 2.0 and this National Workshop, these efforts were identified through the series of workshops and presented some of the best practices that can be emulated across other parks and states of the country. The best practices were across the various dimensions of basic infrastructure, sustainability interventions, connectivity and transport infrastructure, environmental management, women workforce participation, improved cost of doing business etc. He stressed the design of the IPRS to ensure collaboration among states and UTs for creation of competitive and resilient industrial ecosystem in the country and to create a platform for adoption of the best practices across the country. He further emphasized the need of measuring the success/ impact of initiative like IPRS in terms of jobs created, Foreign Direct Investment (FDI) investment supported, economic contribution etc. He concluded his speech by reiterating that IPRS is a dynamic process and will continue in the future.



“IPRS is a collaborative effort to ensure adoption of best practices across the country” –**Mr. Rajeev Singh Thakur, Additional Secretary, DPIIT**

Mr. Takeo Konishi (Country Director, ADB, India Resident Mission) highlighted the efforts of ADB in enhancing India's industrial competitiveness through various programs with both the Central Government and various State Governments. He mentioned how ADB had been involved as a key partner from developing the IPRS under India Industrial Land Bank and support the first annual edition i.e. IPRS 2.0. The workshops organized over the past eight months under IPRS 2.0 focused on providing granular insights at the park level and planning measures for improving the infrastructure. He reiterated ADB's commitment to supporting the growth of the industrial ecosystem in India in the long term. He mentioned about the ADB's various policy and program-based financing programs that are contributing to strengthening the industrial corridors and industrial infrastructure across the country and realize the economic objectives by enabling sustainable and resilient industrialization. The ongoing program with National Industrial Corridor Development Corporation (NICDC) is one such example that demonstrates cooperative federalism and commitment for industrial growth. He added that ADB was willing to design a program for addressing the areas of improvement identified in the study. In his conclusion, he thanked all the stakeholders for their collaborative efforts during the study and subsequent workshops.



“ADB remains committed to supporting the enhancement of India's industrial growth” –**Mr. Takeo Konishi, Country Director, ADB**

Ms. Priya Rawat (COO, Invest India) in her address shared the efforts of Invest India in supporting the industrial development in the country. She highlighted the India Industrial Land Bank Database (IILB), a Global Information System (GIS) enabled portal which provides details of 3900+ parks across 35 states and UTs spanning 5 lakh hectares. Invest India has also



I/36693/2023 developed a non-GIS toolkit to drive adoption across states, especially in the North-East. Invest India has been involved in the IPRS programme from the onset and under this phase helped conduct 25 workshops with States/UTs through a mix of physical and virtual meetings. She spoke on Invest India's activities in facilitating the ease of doing business in the country by providing handholding support to both domestic and foreign investors. She further emphasised on other efforts undertaken like onboarding 25 states onto the national single window portal, helping states to develop their own investment promotion agencies, having dedicated desks to facilitate investments in specific sectors/regions.

Findings of IPRS 2.0 (State and UT workshops) and paving the next steps

Figure 2: Dissemination of findings from IPRS 2.0 workshop series

Mr. Mohammad Athar (Partner, PwC) presented the findings of the series of workshops conducted over the past eight months with the cooperation of State Governments/ UT Governments and various Central Departments. In the presentation, he highlighted how field visits were instrumental in the sharing of best practices and understanding the various interventions undertaken by different states. In these workshops,



stakeholders from the States/UTs provided suggestions on improving IPRS by including measures to assess the cost of doing business, enabling integration with Gati Shakti and similar programmes, handholding for improving access to financing, and inclusion of a large set of stakeholders across the industrial landscape. He also underscored the need for financing to enable the various interventions required as well as the various modes available for SIDCs and private developers. He also presented a perspective around various dimensions of the IPRS framework that were identified as strength areas (water supply, internal roads, utility corridors within the

parks, last mile road connectivity) and parameters that required further strengthening (these included availability of plug and play facilities, ready built factories, industrial housing, common facilitation centre, skill development centre, green spaces in the parks, Zero Liquid Discharge (ZLD) adoption etc. to name a few). In conclusion, he briefed the participants on the next phase of IPRS which should be aimed to improve its framework by including additional qualitative and quantitative dimensions.

3.1. Sharing best practices and understanding impact of IPRS through state led presentations.

Seven states were invited by the DPIIT to present their best practices across different themes. The states were invited for the presentations based on various initiatives and interventions undertaken as learnt during the workshop series. The presentations were delivered across themes of Ease of Doing Business, developing sustainable infrastructure for industrial parks and industry 4.0 infrastructure, resilient and world class infrastructure, plug and play infrastructure, land reform for industrial development, institutional reforms and business support services. These presentations had detailed case studies which showcased the challenges faced during planning and post-implementation and provided participants an opportunity of cross-learning and to understand various strategies and interventions for replication for creation of enhanced and competitive industrial ecosystem.

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Figure 3: Government of Tamil Nadu presentation

The Government of Tamil Nadu, represented by Ms. Pooja Kulkarni and Mr. Nishant Krishna, showcased its comprehensive approach to industrial development. They highlighted the role of SIPCOT in supporting diverse industries and driving innovation through Industry 4.0 adoption and sustainability measures. Challenges related to recycled water usage were discussed, emphasizing the importance of Tertiary Treated Reverse Osmosis (TTRO) plants in ensuring affordable and consistent water supply to industries. The state's commitment to infrastructure

development was evident through initiatives like the "Tamil Nadu Industrial Housing Private Limited," aiming to create industrial housing and skill development centers. Notably, the state's collaboration with Coimbatore Innovation and Business Incubator resulted in Industrial Innovation Centers, fostering startups and MSMEs with co-working spaces, labs, and classrooms.

The state also shared their feedback on advantages of IPRS and how it adopted the framework for designing the industrial growth strategy for the state.

- i. Tamil Nadu, integrated its GIS land bank with IILB for transparent exchange of information thereby enabling the development of vision for industrial land bank.
- ii. The state has focused on creation of internal infrastructure identified under IPRS in form of:
 - a. Housing infrastructure by way creation of Tamil Nadu Industrial Housing Private Limited and developing housing projects of more than 3300 beds over next 3-4 years.
 - b. Entered in a MoU with NTTF for provision of skill development centers in industrial parks.
 - c. Undertook policy development for provision of Plug and Play infrastructure in industrial parks of 500 – 1000 acres on PPP mode.



Figure 4: Government of Madhya Pradesh presentation

Dr. Navneet Mohan Kothari, representing Madhya Pradesh, emphasized the state's commitment to building resilient and world-class infrastructure. Their systematic approach to industrial park development was highlighted, focusing on essential common facilities such as substations, commercial centers, housing, training, and waste treatment. Notably, the state showcased two parks, Vikram Udyogpuri Limited and Smart Industrial Park, where upfront investments ensured ready infrastructure for industries, boosting early production.

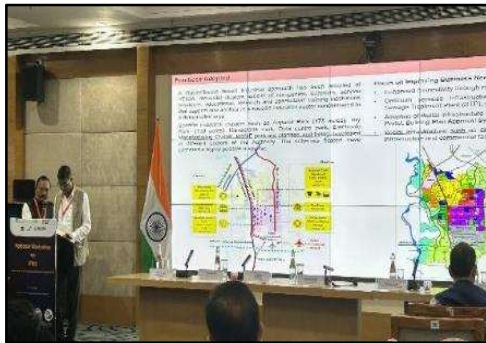
The state's emphasis on ICT-enabled safety, connectivity to clusters, and smart road infrastructure enhances investor confidence. These features serve as replicable models for other development corporations, solidifying Madhya Pradesh's industrial ecosystem.

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The state shared its perspective on the impact created by IPRS on industrialization in the state and also provided with feedback for IPRS in its subsequent edition.

- i. The state experienced occupancy level in its industrial parks increase up to 85% due to provision of internal infrastructure and its upgradations resulting in improved investment and employment
- ii. The state has also proposed an investment of INR 380 crore for creation of industrial infrastructure in the state
- iii. The tenant feedback under IPRS enabled in improvement of the industrial parks of the state
- iv. The state is adopting development of parks in alignment with the parameters of IPRS in its new developments

Figure 5: Government of Uttar Pradesh presentation



The Government of Uttar Pradesh Represented by Mr. Satish Pal and Mr. Kapil Singh, showcased its cluster-based development approach, evident in the YEIDA industrial clusters that encompass manufacturers, suppliers, institutions, and more. The state's emphasis on enhancing business conditions was evident through social infrastructure development like skill centers and commercial spaces, along with sewage treatment plants and digital approval processes for streamlined business operations. Noteworthy practices included upcoming

Medical Devices Parks with advanced facilities and Noida's urban environment initiatives. The state's plan to utilize the IPRS study to enhance infrastructure across parks and its emphasis on planned development were highlighted as suggestions for other states and UTs.

The state also provided some relevant points as a part of the feedback for IPRS going forward (excerpts).

- The IPRS study can involve participation of industrial investors, associations and other key bodies.
- IPRS can assist in capturing market sentiment towards various industrial sectors helping in setting up of appropriate projects in context of the region.
- Inclusion of detailed case studies of high performing projects implementing innovative techniques of project implementation

State feedback on IPRS and its support for development of industrial ecosystem in the state showcases the suitability of a framework approach for industrial development

- i. The best practices under IPRS across infrastructure, facilities, policies, support services, environment, etc. have helped the state in replicating the same aligned with investors' demand.
- ii. Various services and facilities proposed in the upcoming parks and sectors are envisaged to directly benefit the industrial allottees in bringing down costs. The initiative has been very well received and lauded by industries and other associations. Multiple allotment schemes have been launched which has garnered a positive response.
- iii. The IILB assists in understanding regional context and requirements. The ratings received by various parks help in assessing the market needs and insights which can be useful. It helps in planning of industrial parks which are more suitable and tailored for specific industrial themes.
- iv. The benchmarking study for various facilities and incentives provided by top performing parks shall be used while determining the best possible facilities which are to be provided. Additionally, the financing options as mentioned for international and national industrial parks can also be studied to work out innovative funding options.

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Figure 7: Government of Maharashtra presentation

The Government of Maharashtra represented by Mr. Vinod Jadhav, shed light on land reform's role in industrial progress, exemplified by the Aurangabad Industrial City project. Emphasizing the impact of IPRS, MIDC's efforts in establishing treatment facilities were highlighted, including concessions to private agencies. The state proposed refining IPRS

by adding connectivity measures to EXIM centers and state-level business support services, while addressing feasibility concerns. AURIC's common facilitation center showcased best practices, featuring leased spaces, power supply, skilling, banking, and more. The state's experience in tackling challenges like land acquisition and interdepartmental coordination illustrated successful solutions, underlining meticulous planning and collaboration for project success.

Maharashtra also presented the impact for the state created through utilization of the IPRS framework. It was observed that the IPRS framework is being leverage by MIDC to bring in sustainability interventions in terms of waste water and hazardous waste management infrastructure.

Figure 8: Government of Tripura presentation



The Government of Tripura represented by Ms. Vishawashre B spotlighted priority sectors and sector-specific interventions while highlighting industrial park common facilities and sectoral policies. The state's focus on integrated, green, and sustainable infrastructure for investment attraction was showcased through industrial estate development. Notably, the state's case study demonstrated successful common facility development in parks like the Bamboo Park and Food Park. Seeking ADB financing for comprehensive infrastructure enhancements

reflected the state's commitment to ecosystem development. The state's suggestions for IPRS encompassed sustainability, collaboration, capacity building, marketing, and continuous evaluation, underscoring a holistic approach to industrial growth.

Figure 9: Government of Odisha presentation

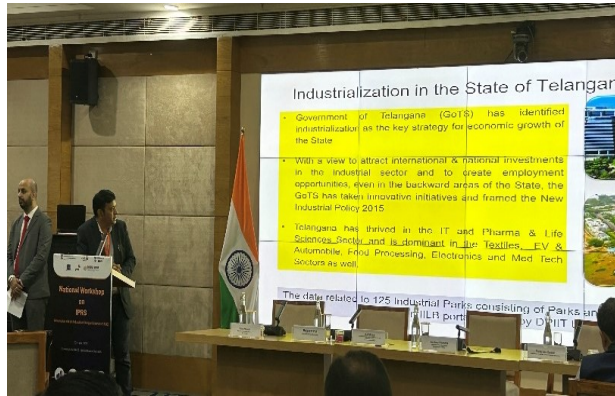


The Government of Odisha, represented by Mr. Bhupendra Singh Poonia, highlighted its advancements in ready-built industrial infrastructure, specifically emphasizing sector-specific industrial parks with plug-and-play facilities. These parks cater to diverse needs, ranging from production spaces to R&D centers, storage units, and support infrastructure. The Sea Food Park stands out as a benchmark example, providing comprehensive plug-and-play infrastructure, worker hostels, skill development centers, and more. Other sector-specific

parks, such as the ESDM Park, Plastic Park, and Aluminium Park, showcase best practices like flatted factories, support infrastructure, and raw material linkages. The state's feedback for the IPRS program includes calls for enhanced external connectivity, prioritizing logistics, segregating green field and brown field clusters, and considering setup and operational costs.

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Figure 10: Government of Telangana presentation



The Government of Telangana Represented by Mr. V Madhusudan, highlighted its effective civic services management in Industrial Parks, bolstered by TSIIC's local authority status. This autonomy fosters local self-governance and expedites decision-making. TSIIC's Industrial Area Local Authorities (IALA) offer online services for building permissions, tax payments, and water connections, along with deemed approvals for streamlined business processes. The state's success in facilitating ease of doing business through the TS-iPASS Act showcased noteworthy achievements

like minimized application enclosures, timely approvals, and no-inspections for pre-establishment requirements. Telangana's commitment to supporting startups and MSMEs is evident in its prototyping facility, developed in collaboration with T-Works, providing a range of cutting-edge resources for innovation and development.

1.1. Panel Discussion: Creating smart resilient and eco-industrial parks with innovative financial solution.

Creation of eco-industrial parks



The panel discussion centered on eco-industrial parks and their significance in attracting investments, generating employment, and fostering economic value. India's diverse industrialization patterns were acknowledged, necessitating a local context-driven approach. International benchmarks provided insights into sustainable practices, utility infrastructure, and business sustainability. Challenges, including collaboration between State and Central Government, financing, and sector-specific infrastructure, were discussed. Private sector involvement was highlighted, emphasizing early integration of industrial units in park design. The evolving role of park developers, integration with urban and institutional layers, and strong inter-agency

coordination were underscored. The need for sustainability, fast approvals without compromising safety, and ecosystem-level integration emerged as key considerations. The discussion yielded an action agenda to guide stakeholders in developing eco-industrial parks.

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Sr.	Name and Designation	Organization
1	Session Moderator: Mr. Dushyant Thakore, Deputy Director General	World Association of Investment Promotion Agencies (WAIPA)
4	Mr. Sandeep Poundrik, Additional Chief Secretary	Department of Industries, Government of Bihar
2	Mr. Rene Van Berkel, India Representative	United Nations Industrial Development Organization (UNIDO)
3	Mr. Rana Hasan, Regional Economic Advisor, South Asia Regional Division	Asian Development Bank
5	Mr. Kartikeya Misra, Director	Department of Financial Services, Ministry of Finance, Government of India
6	Mr. Rajaram Pai, Chief Business Officer	Mahindra Lifespaces Limited (Mahindra World City)

Table 1: Takeaways for stakeholders for developing eco-industrial parks

Stakeholder	Insights
Industrial Park developers	<ul style="list-style-type: none"> Establishing sustainable operations (utilising RE, water recycling) through integrated development and resource management plan. Tenants have different requirements, and it is imperative to understand their requirements while designing industrial parks. Thus, sector selection and allotment play an important role in designing the parks and further allocating the land. Setting up of appropriate processes and controls as well as developing the right culture are essential to ensure sustainable operations. This essentially translates to creation of SOPs, reference charters and manuals, operational guidelines for various facilities and services aligned with standards including data collection and management. Client feedback loops to ensure that concerns can be identified and resolved in a swift manner. Continuous improvement process is essential to the development of eco-industrial parks. Given that manufacturing and industrialization are constantly evolving the parks need to be resilient and responsive to the industry requirements. Ensure quality and consistency of industrial infrastructure especially plug and play as well as common facilities.
States/UTs	<ul style="list-style-type: none"> Promoting investment promotion activities to improve the perception of potential tenants. Plug and play infrastructure is beneficial for states with low levels of industrialisation. This serves as an attractive tool for investors especially MSMEs who can't afford higher investments in infrastructure. Government of India schemes should be utilised where possible for setting up infrastructure. New and emerging trends in technology, innovation, sustainability should be promoted. This can be done by leveraging knowledge and collaborative support of other agencies (state departments/ think tanks/ research institutions etc.). While states endeavour to streamline and reduce the time for approvals, the panel noted that the approval mechanism should not be at the cost of environment or safety. While eco-industrial park development is a responsibility of the SIDC, there needs to be equal emphasis on collaboration and support on tenants. Thus tenants of the

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Stakeholder	Insights
	park (in case of brownfield) should be onboarded.
DPIIT / Central Government / Financing Institutions and agencies	<ul style="list-style-type: none"> Measures for increasing innovation including R&D, usage of green technologies in industrial clusters should be explored. Cohesive approach required for developing systems which can lead to sustainable development. Feedback loops are a key part of these systems. Sustainability driven projects at park level / cluster level can be evaluated for funding and financing based on the findings of IPRS assessment

Innovative financial solutions



The panel discussion highlighted innovative financial solutions for industrial parks, focusing on assessing the cost-effectiveness of sustainability interventions. Understanding the balance between costs and benefits is crucial for designing remunerative investment packages that can attract financing. Identifying cost imbalances in park services and addressing them through appropriate interventions was emphasized, alongside treating industrial parks as infrastructure projects to access financing avenues. The potential of green financing and programs like IFCAP for climate change mitigation were discussed. The panel noted the importance of

showcasing industrial parks as attractive entities to foreign financial institutions through innovation, effective management, and professional operations.

Table 2: Key takeaways for stakeholders on innovative financial solutions

Stakeholder	Insights
Industrial Park developers	<ul style="list-style-type: none"> Attract interest from FFIs through appropriate measures – professionally run organisation (for e.g., provide FFI with a board seat), innovation and sustainable operations in the parks. Identifying remunerative vs. non-remunerative projects for designing commercially viable projects packages. This will enable accessibility to various financing instruments. From revenue perspective, industrial parks are typically front ended projects with cashflow getting generated from upfront land leases. Developers need to generate recurring revenue streams (e.g. annual lease model based plug and play infrastructure) to enhance the attractiveness of the asset for seeking financing support for various capital projects. Private players in the industrial infrastructure space should explore more opportunities as operators considering the ability to achieve efficiency and quality.
States/UTs	<ul style="list-style-type: none"> Explore possibilities of borrowing from green financing funds with the necessary help from GoI for developing eco-industrial parks. Creation of budget provision for investment in sustainability infrastructure across

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	<p>parks and zones.</p> <ul style="list-style-type: none"> • Provide policy support for access to such fund by private sector i.e. both industrial park developers and industries in industrial parks. • Institutional structure for contribution to the investment requirement by various state agencies for ecosystem level development thus reducing the burden on development corporation.
DPIIT and Central Government	<ul style="list-style-type: none"> • Examine ranking industrial parks across the country to enable them priority financing from financial institutions. • Undertake analysis of cost of doing business for investors within domestic industrial parks and global industrial parks to identify essential intervention areas and design appropriate measures for mitigation.



Experience of private industrial park developers

During the workshop, private developers Sri City and CapitaLand India shared their valuable insights on industrial park development.

Sri City showcased its transformation into prominent business hub housing over 210 global companies, with a remarkable \$4 billion manufacturing output. Notably, the park contributed significantly to India's air conditioner manufacturing sector and provided social infrastructure for 50,000 residents. The park's workforce of 60,000 featured substantial 52% women employees.



CapitaLand's contribution to Indian industrial parks involved a substantial \$4 billion investment. The One Hub Chennai industrial park, a sprawling 1,250-acre integrated township, stood out as a significant development just 50 kilometers from Chennai. CapitaLand's operational approach included comprehensive support for tenants, assisting them in

obtaining necessary approvals and clearances.

The workshop concluded with a vote of thanks to all the contributors and participants of the event with a clear way forward for various stakeholders.



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Field visits facilitated by various SIDCs also enabled the success of the run up to the workshop and has immensely contributed to the success of the IPRS program while paving a way forward.



Stone mart and Industrial park visit at Sitapur Industrial area, Jaipur, Rajasthan



Discussions held with North East states at NEC, Shillong, Meghalaya



Industrial park Visit in Mandideep Industrial area, Raipur, MP



Industrial park Visit in Hi-Tech defense & Aerospace Park Industrial Area, Bengaluru Rural District



Industrial Park visit at Mallavali industrial area, Vijayawada, AP



Discussions held with state officials at SIPCOT office, Chennai, TN



Industrial park Visit in Dera Bassi, Punjab



Industrial park Visit in Noida SEZ, Uttar Pradesh

The IPRS 2.0 study and National Workshop discussions indicate that addressing identified gaps in industrial development requires a blend of physical infrastructure development and policy-based reforms. Development corporations can drive policy interventions with government backing, while funding and financing support is crucial for infrastructure projects. Such interventions typically involve upfront capital investment for crucial aspects like roads, power, water supply, and wastewater management. However, these investments come with financial risks such as return on investment, recovery, budget provision, and interest liability.

Taking forward the agenda of financing industrial infrastructure growth under IPRS

Industrial Development Corporations (IDCs) nationwide rely on conventional revenue sources like land lease rentals, maintenance charges, and pay-per-use fees for infrastructure projects, each with its own challenges. IDCs have ventured into PPP-based investments to overcome financial limitations, aided by supportive policies.

Given IPRS 2.0 outcomes, a structured investment and financing approach for IDCs and similar agencies in industrial infrastructure development is crucial. Utilizing Government of India's 'Scheme for Special Assistance to the States for Capital Investment' is recommended, offering 50-year interest-free loans for infrastructure. Platforms like NaBFID and NIIF also provide avenues for enhancing industrial park infrastructure, particularly climate-resilient assets.

NIIF, with funds like NIIF Master Fund, Fund of Funds, and Strategic Opportunities Fund, and NaBFID, through instruments like Term Loans, Bonds, and Guarantees, offer specialized products for industrial park development. Multilateral financing institutions offer innovative tools like policy-based lending (PBL) and result-based lending (RBL), as seen with ADB's initiatives. IFC's Green Bond Financing Program targets environmental goals, while IF-CAP finances projects tackling climate change effects in Asia-Pacific.

States and development agencies can explore these funding sources, potentially seeking DPIIT's guidance to navigate financing tools effectively.

In summary, states and other development agencies may explore fundings and financing support under various sources. The states may also seek DPIIT's handholding support to gain further understanding of various tools of financing.

Government promoted programs and schemes	Multilateral Financing Institutions	Investment Platforms, DFI and SPVs	Venture Funds
<ul style="list-style-type: none"> Linking the reforms to the tied component of interest free debt for 50 years Various central and state promoted schemes to develop industrial infrastructure (IIUS, TIES, MITRA etc.) 	<ul style="list-style-type: none"> Long term financing program instrument promoted by Multilateral Financing Institutions Policy based financing program (non-tied up) (e.g. ADB's PBL) Result based Lending of the ADB or PforR of the World Bank 	<ul style="list-style-type: none"> Investment platforms like NIIF with models like fund of funds, equity based investment alternatives Development Financing Institution like NaBFID (with tools like term loans, bonds, guarantees, LoCs) and Govt. SPVs (e.g. IIFCL) 	<ul style="list-style-type: none"> Industrial infrastructure has lately witnessed a surge in investment by venture funds Typically operated through acquisition of assets and equity backing Venture funds also provide debt instruments for investments

1/36693/2023 Taking forward IPRS initiative to drive the agenda of 'Advancing India's Industrial Competitiveness (AIC)'

IPRS 2.0 generated diverse recommendations from the DPIIT Steering Committee, comprising experts, think tanks, industry associations, and former officials. Noteworthy recommendations included broader stakeholder involvement, cost of doing business comparisons, sustainability focus, quantitative parameters like exports, gender participation, FDI, and developing support programs.

The National Workshop in July 2023 marked the culmination of IPRS 2.0, setting stage for IPRS 3.0. DPIIT will initiate necessary action such as reconvening the Steering Committee, including current and international members for global insights. IPRS 3.0 will refine the framework, encompassing parameters, stakeholders, program design, and rollout strategy. It aims to advance the assessment of qualitative and quantitative aspects of industrial growth.

Recommendation of various states for IPRS 3.0

- i. Reducing the number of parameters from existing 45 to suitable number to improve multicollinearity
- ii. Categorize parameters as 'Necessary' and 'Desirable' with appropriate weightage
- iii. Categorize parks as 'Matured' / 'Nascent' based on saturation/ years of operation
- iv. Providing flexibility in certain parameters to accommodate facilities in proximity (e.g. housing facilities can be within 15-20 km radius of the park)
- v. Recommendation / outcome of the IPRS study to be classified for various users to enable determination of clear course of action
- vi. Focus on external connectivity to Industrial Parks as well as Custom/ Freight Stations/ Terminal
- vii. Provide more weightage for external infrastructure (logistics facilities, external connectivity and multimodal transport networks).
- viii. Segregate greenfield vs brownfield clusters for rating.
- ix. IPRS can consider parameter of cost of setting up industrial park/operations and cost of internal utilities.
- x. IPRS study can involve participation of industrial investors, associations and other key bodies
- xi. The report can assist in capturing market sentiment towards various industrial sectors helping in setting up of appropriate projects
- xii. Assess impact of industrial ecosystem beyond industrial parks; physical impact at regional level and social impact in the society including gender inclusion
- xiii. Emphasis on sustainability and green practices:
- xiv. Collaboration with industry stakeholders : Engage these stakeholders in the formulation of assessment criteria and seek their feedback to ensure the system's relevance and effectiveness
- xv. Capacity building and training - Offer workshops on emerging trends and best practices in industrial park management
- xvi. Continuous monitoring and evaluation -Establish a system for regular monitoring and evaluation of industrial parks based on their ratings and Conduct periodic assessments

To initiate IPRS 3.0, DPIIT mayreconstitute the Steering Committee under the chairpersonship of Secretary, DPIIT. This committee can include the existing members while simultaneously bringing in international expertise to provide global insights and guidance. To kickstart the IPRS 3.0, this committee may initiate discussion on design of the IPRS framework and its coverage in terms of parameters of inquiry, stakeholder coverage, program design for enhancing the quality of inquiry and insights, rollout plan, deliberation of various operational nuances etc. It is envisaged that IPRS 3.0 will advance its inquiry across various qualitative and quantitative aspects of industrial growth. Figure showcases the proposed additions to the IPRS framework.

I/36693/2023 Figure 10: Possible additions to the IPRS framework

