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Uttar Pradesh Information Technology

Igniting Innovation & Empowering Growth April 2024

UP – State with Robust and Resilient Economy

The economic momentum of UP is well-poised to continue on a higher trajectory

\$301 Bn¹ ~5% 56% **Demographic Dividend Economy size in 2022-23 Share in Exports** ~8% of India's GDP; 3rd 5th largest exporter Working population (18-60 years) largest economy Wholesome Infrastructure 2nd largest network of roads (> 400,000 kms) Largest railway network (> 16,000 kms) Highest number of international airports (4 Operational @ Lucknow, Varanasi, Kushinagar, Ayodhya and 1 Under Construction @ Noida) 1st to have multi modal waterways terminal on river ganga (5 freight villages planned) Eastern Dedicated Freight Corridor (~57%) & Western Dedicated Freight Corridor (~10%)

Large Consumer Base

~17% of India's population

~3.8x

Increase in Capital Outlay

FY18 to FY23

Key Enablers

- 1st Rank: Good Governance Index 2021
- 2nd Rank: Export Preparedness Index* 2021
- Achiever State: Doing Business ranking across Indian states
- Achiever State: Logistics ranking across Indian states 2023

Investor Facilitation Systems

- Nivesh Sarathi: Dedicated onestop portal managing each stage of investor lifecycle (from intent to investment grounding)
- Nivesh Mitra: Single window investor facilitation to provide NOCs/Clearances/Licenses
- Online Incentive Management System (OIMS): For processing, sanctioning and disbursement of incentives,

Source: UP DES, World Bank, IBEF; GSDP in current prices 2011-12 series, DGCIS

²⁴⁰ Mn

¹Exchange rate assumed as \$1 = ₹75

^{*}Among landlocked states

Information Technology

Uttar Pradesh is committed to achieve 10x growth in IT/ITeS sector—focus on growing niche areas like AI, Machine Learning, Robotics, Gaming, etc.

Sector Overview



Highest share in India's IT exports growing at CAGR of ~8%



>40 IT Parks



10+

Centers of Excellence (planned/existing) in the field of AI, Drones and MedTech, etc.



USD 765 Mn+

Investments under prior IT policy

Advantage UP

- World class educational institutions (2 IITs, 1 NIT, 1 IIIT and 1 IIM)
- **Industry relevant skilling** initiatives with 267 training partners
- Abundance of skilled labour at 10-20% lower cost
- Office space at **15-30% lower rental rates** than other IT hubs
- Recognized as a 'leader' in start-up space- 10000+ registered
- Planned creation of 16 IT Parks and 4 IT Cities
- India's largest international airport under-construction in Jewar
- 650 MW of Data Center capacity through 6 hyperscalers parks of more than 50 MW and 1 DC Unit

Key Investment Opportunities

- Infrastructure development of IT Cities / IT Parks / IT-BPM units
- Setting up of Technology Business Incubators
- Enhancement of security network
- Focus on e-Governance E-health, e-education & e-ticketing
- Setting up of Center of Excellence (COE's) for emerging technologies
- Setting up of Information Technology Investment Regions (ITIRs)
- Setting up of standalone/in-house R&D centers and Design centers

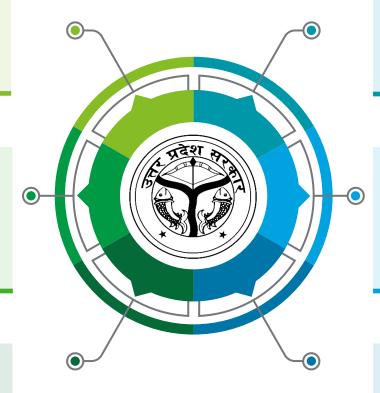
Information Technology

Uttar Pradesh is implementing several key interventions to promote and enhance IT Sector in the state

Uttar Pradesh IT Policy: "UP IT Policy" launched for providing incentives to IT companies, promoting skill development, encouraging innovation and research in the IT sector.

IT Parks and Technology Hubs: Establishment of IT parks and technology hubs like the Lucknow IT City, Greater Noida IT Park to provide state-of-the-art facilities and connectivity for IT companies.

Digital Skill Development: The state has initiated programs to provide training in emerging technologies, coding, digital literacy, and entrepreneurship aiming to enhance employability and to bridge the skill gap in the IT industry.



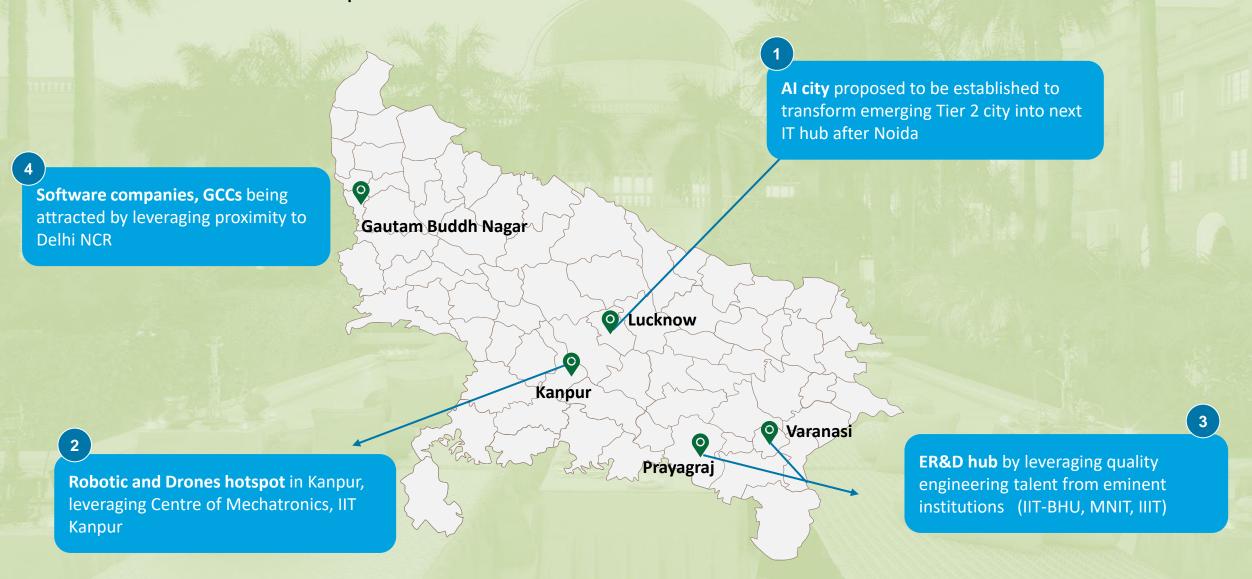
E-Governance and Digital Services:

Implementation of various e-governance initiatives including the development of online portals and mobile applications such as e-procurement, online land records, e-ticketing, and digital payment systems.

Digital Connectivity: Collaboration with telecom operators like BharatNet to enhance network coverage and infrastructure to improve digital connectivity across the state.

Promotion of Emerging Technologies: Organizing of conferences, workshops, and training programs on emerging technologies such as AI, blockchain, IoT, and cybersecurity to create awareness and build expertise.

Uttar Pradesh has been proactively encouraging private participation in the growth of IT and ITeS sector to boost economic development



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Potential for fast-track growth of IT/ITeS infrastructure in the State

The IT/ITeS sector in Uttar Pradesh is thriving and witnessing significant growth

Current Scenario

- Booming IT/ITeS sector with a 22% annual growth in STPI exports to ~Rs. 31,300 crores
- 5 operational STPI Parks in Noida, Meerut, Lucknow, Kanpur, Prayagraj
- 2nd highest startup registrations in India in 2022
- 4th highest number of NIRF ranked engineering colleges in the country, producing high quality IT Talent
- Established E-SETU centers in 13 districts of the state for providing technical training and skill development in rural areas

Future Development Plans

- Gautam Buddha Nagar is on its way to become a global emerging technology and data centre hub. The well-established IT ecosystem comprising large companies, existing centers of excellence is being leveraged to further grow the IT/ITeS sector in Uttar Pradesh. The high-quality talent pool and lower rentals are strong value propositions for large IT/ITeS investors.
- *Lucknow is being developed as an Al City to promote the city as a new age technology
 hub and the next IT hub of UP after Noida. The proposed state capital region will lead
 to mobility of skilled workforce and the presence of eminent technology institutions
 that will provide quality talent which is imperative for the Al ecosystem.
- *Kanpur will become a Drones and Robotics hotspot leveraging the Centre for Mechatronics in IIT-Kanpur. A state-of-the-art drone and robotics park shall be built to provide value add services to companies which will include shared research labs and requisite infrastructure.
- Prayagraj and Varanasi are to be developed as an ER&D hubs. The lower rental rates
 will result in cost advantage to potential investors and the proposed creation of
 advanced infrastructure will create a cluster effect which will drive collaboration among
 the ER&D units in these cities.
- Upcoming STPI parks in Agra, Bareilly, Gorakhpur & Varanasi.

Source: Indian Tourism Statistics 2022, Ministry of Tourism

^{*}Lucknow & Kanpur identified as Emerging Technology Hubs of India as per Deloitte-NASSCOM Report on Tier 2-Tier 3 cities, 2023

Support from Government: Key Policy Objectives

Uttar Pradesh IT Policy 2022



Promote human development and infrastructure of IT Cities. Parks, BPM units



Develop and promote attractive business ecosystem in the State



Nourish entrepreneurship and innovation by providing impetus to Startups, Incubators, Centers of Excellence



Digital empowerment creation of citizen centric services, whereby welfare is generated across all sections of the society

Policy Highlights



Interest Subsidy @7% p.a. up to a maximum of INR 1 Cr p.a.



Stamp Duty @100% exemption of stamp duty



Land Subsidy @25% reimbursement on the cost of land up to a maximum of INR 50 Cr.



Operating Subsidy @ 10% up to INR 20 Cr. p.a.



Grant on EPF @ 100% reimbursement of EPF up to a maximum of INR 1 Cr. p.a. for women/SC/ST/Transgender/Divyangjan employees

Special Incentives

Reimbursement on certifications upto INR 25 Lakh

- INR 20,000 per employee in units located in UP
- Patent filing cost: 100% reimbursement upto INR 5Lakh & INR 10Lakh for domestic & international patent
- 10% capital subsidy up to a maximum of INR 50 Cr.
- Work from Home: EPF reimbursement and other employment linked benefits
- 100% reimbursement of EPF for expansion case up to INR 1 Cr.

Source: Uttar Pradesh IT policy 2022



FDI, Fortune Global 500 & Fortune India 500 Companies Investment Promotion Policy, 2023

Eligibility Criteria:

- ✓ Projects with Foreign Direct Investment (FDI) Capital Investment of above ₹100 crores.
- ✓ Projects with Capital Investment of more than ₹100 crores by companies included in the list of Fortune Global-500 and Fortune India-500, subject to Negative list.

UP FDI and Fortune 500 Policy 2023 – Fiscal Incentives

Major benefits

Capital subsidy

- 25% of *ECI (excluding land cost) in Gautam Buddha Nagar and Ghaziabad regions
- 30% of ECI (excluding land cost) in Paschimanchal and Madhyanchal regions
- 35% of ECI (excluding land cost) in Bundelkhand and Purvanchal regions

Capital Subsidy will be provided in 7 equal annual instalments with annual capping of INR 100 crores

SGST reimbursement/ refund

- **Option A Net SGST reimbursement on sales:**
 - 100% of net SGST paid for 10 years
 - Annual capping: Upto 10% of ECI, Overall capping: Upto 100% of ECI (excluding land cost and capital subsidy)
- Option B Input SGST refund on capital goods: 100% SGST refund in 5 annual instalment (Applicable only in case of inverted duty structure)

Note: Option to choose any one out of A and B is available

Land subsidy

- Upto 75% in Paschimanchal and Madhyanchal region
- Upto 80% in Bundelkhand and Purvanchal region

Other fiscal benefits

- Stamp Duty & Registration Fees: From 50% to 100% exemption/ reimbursement
- Electricity Duty: 100% exemption from for 5 years
- Skill development subsidy: Upto INR 5,000 p.m. per person for 5 years (max. 500 persons)

- **Green Industry Incentives:** 50% capital subsidy on the cost of **Effluent Treatment Plant capped** at INR 2.5 crores
- Industrial Housing Incentives: Reimbursement upto 10% of the cost of development of workers' housing or dormitory for 7 years overall capped at INR 10 crores
- R&D incentives: Reimbursement upto 25% of the cost of standalone R&D centre capped at INR 10 crores (with minimum capital investment of INR 20 crores)
- Centers of Excellence (CoE): Grant upto 50% of the project cost capped at INR 10 crores per project Note: Option to choose any one out of above is available
- Logistics Subsidy: Reimbursement upto 50% of the transportation cost on import capped at INR 12 crores per unit (in case of shifting of existing plant from international or domestic locations to UP)
- Patent cost: Reimbursement upto 75% of the cost capped at INR 10 lakh (for domestic) and INR 20 lakh (for international)

Key Investment Opportunities

Artificial Intelligence (AI) City Deve	lopment				
About the Project	The Department of IT and Electronics has earmarked a prime land to develop an AI City in Lucknow. The AI city wi comprise leading AI companies, startups, AI focused Centre of Excellence and incubator. To support such an ecosystem, Data Centres may also be established.				
Location	Near the Airport				
Connectivity	Connected to 4 countries and all major Indian cities by air				
	 Excellent road network comprising 5 National Highways that connect to Delhi, Varanasi, Kanpur, Gorakhpur, Jhansi 				
Transaction structure	Public-Private Partnership				
Value proposition for the Investor	State-of-the-Art AI focused City, fostering an AI centric ecosystem				
	As per the India Skill Survey, Lucknow is one of the top cities for available computer talent				
	Lower office rentals enhances attractiveness to IT and ITeS units				
	 Attractive policy incentives for IT parks, IT and ITeS companies setting up their operations in Uttar Pradesh, CoEs, R&D Centres 				

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Transforming Lucknow into an Al City



Vision

 Government of Uttar Pradesh seeks to develop a state-of-the-art AI City in Lucknow, with participation from diverse and relevant stakeholders

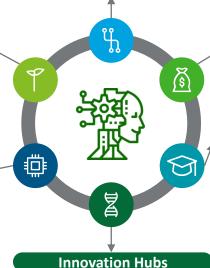


Pillars of AI Ecosystem

- A comprehensive strategy will be adopted to support technology startups, establish deep-tech divisions of large technology companies and promote industry-academia partnerships
- PE, VC investors will play a pivotal role in driving these initiatives forward
- Collaborate with a world-class developer to develop the AI City

Governance

- A 'Board of Directors' to drive the vision of the AI City
- Representation from prominent industry and academia



Private Investments

- Compute infrastructure investments (which include GPUs, Hyperscalers and Data Platforms)
- Engage PE/VC investors to set up an AI fund to boost AI projects
- Provide market access,
 scaling up guidance

Academia

- Collaborate with prominent institutions to formulate Al courses
- Focus on upskilling existing talent with AI skills

Startup Ecosystem

- Incubators and accelerators to support AI startups
- Create opportunities by digitalising public services

Leading Tech Companies

- Targeted outreach to anchor investors
- Offer high-end tech. services from Lucknow
- Establish dedicated AI/ML R&D labs with eminent institutions
- Set up **COEs** in emerging technologies

Key Investment Opportunities

IT Parks						
About the Project	An IT Park is constructed with minimum floor area of approximately 15,000 square meters. It may or may not include public utility offices/ facilities in the said premises. The area allotted for IT activities should be 75% of the allocable area.					
	An IT Park contains most of the technological infrastructure similar to an IT city like optic fiber connectivity, Broad band connectivity, Wi-Fi access, Video conferencing facilities etc. IT Park is a subset of an IT City with entire area dedicated majorly on I activities.					
Location	Across the state- Agra, Bareilly, Gorakhpur & Varanasi, etc.					
Centres of Excellenc	e (CoEs)					
About the Project	Centres of Excellence are being developed across the state in emerging technologies. The state currently has three CoEs located Lucknow (Medtech), Noida (AI) and Kanpur (Drones). The IT and ITeS Policy, 2022 aims to further establish three CoEs in collaboration with reputed academic institutions and/or industry associations/industry or any other Govt./ Private entity.					
Location	Across the state					
Value Proposition	 Regulatory focus to develop CoEs for emerging technologies along with attractive policy incentives: Upto 50% of the tot project cost (subject to a maximum of Rs.10 crores) will be borne by the Government of UP 					
	• 5 operational STPI Parks in Noida, Meerut, Lucknow, Kanpur, Prayagraj ; 4 more upcoming STPIs					
	UP had the 2 nd highest startup registrations in India in 2022					
	 Intent to develop CoEs in emerging technologies by collaboration of academia and leading tech players 					
	• UP has the 4th highest number of NIRF ranked engineering colleges in the country, which could be leveraged for collaboration					

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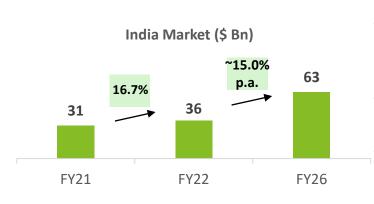
Engineering Research & Development Hubs



Prayagraj and Varanasi are planned to be developed as Engineering Research & Development (ER&D) hubs.

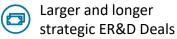
The lower rental rates will result in cost advantage to potential investors and the proposed creation of ER&D Parks will create a cluster effect which will develop an ER&D ecosystem in these cities

ER&D Market Overview



- India's share in global ER&D outsourcing market is >30% and with consistent double-digit growth, is expected to reach 50% within a decade
- 900+ ER&D GCCs in India with Tier 2 and Tier 3 cities also gaining traction
- Software, Healthcare & Automotive sectors account for ~50% of global ER&D spend

Key Trends:





Evolving digital engineering use cases across verticals



Migration of engineering activities to cloud

Key Highlights of Prayagraj and Varanasi



Three engineering colleges in NIRF Top 100 rankings



Successful **STPI Park in Prayagraj**, Upcoming
STPI Park in Varanasi





650+ DPIIT Startups (~6% of state's startups)



Presence of tech incubators
(3 in Varanasi, 1 in Prayagraj)



connectivity

Domestic, international
airport



MOU between
I-DAPT HUB F, IIT
(BHU), Varanasi for
joint R&D in
cybersecurity

Drone and Robotics Hub of India



Kanpur, formerly known as the 'Manchester of India', has been identified as an emerging technology hub by NASSCOM. Located in Central Uttar Pradesh, it is envisioned to become a **Drones and Robotics hotspot** leveraging the Centre for Mechatronics in IIT-Kanpur











Drone CoE at IIT-K (Unique 1 km runway, flight testing lab, wind tunnel facility) Defence Hub on UPDIC* (Home to HAL, Small Arms Factory, Field Gun Factory and Parachute factory) Leading drone players-EndureAir, Lohia Aerospace (Hotspot for military, agridrones, etc.)

~200 Tech startups(4 incubators
supporting 34 startups)

#1 in North India under Data Maturity Assessment Framework (Kanpur Smart City)

Infrastructure		Talent	(Si)	Social Amenities	
Real estate availability, affordability	High (Operational STPI, Technopark)	# of colleges	300+ (IIT Kanpur, Kanpur Inst. of Technology)	Eminent schools	DPS St. Mary's
Internet Connectivity	Wide Coverage, High Speed (~2x of speed in Ahmedabad, Jaipur, Indore)	# of annual graduates	~50,000 (20% STEM)	Reputed hospitals	Apollo FORTUNE
Intra-city connectivity	High (Metro, Upcoming Ring Road)	# of employees in tech cos.	~7,000	4 & 5 star hotels	LANDMARK ROYAL ORCHID
		A 11 1 11 11 11 11 11 11 11 11 11 11 11		Malls	Z SQUARE One of India's largest
Inter-city connectivity	High (Direct flights - Mumbai, Delhi, Bangalore; Golden Quadrilateral Highway)	Availability of gig workers	High (~13% growth in hiring in 2022)	International cricket stadium, Amusement Park	Blueworld Ports

Source: Deloitte-NASSCOM report titled 'Emerging technology hubs of India' *UPDIC- Uttar Pradesh Defence Industrial Corridor

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