



Resilient Systems

Decentralised Security for Smart Cities and Critical Infrastructure

RANKING ALIGNMENT

NIRF Alignment Note

NIRF and Leadership Teams

Prepared for institutional planning, program evaluation, and strategic conversations with ATRISI.

NIRF Alignment – Resilient Systems

Decentralised Security & Infrastructure Intelligence

NIRF Parameter Mapping Table

NIRF Parameter	Focus Area	Program Contribution	Evidence / Impact
TLR (Teaching, Learning & Resources)	Faculty capability, applied learning	Systems thinking, infrastructure security, resilience design	Faculty participation, system design artifacts, improved teaching capability
RP (Research & Professional Practice)	Research output, innovation	Infrastructure intelligence, cyber-physical systems, predictive risk modeling	Research problem statements, resilience models, applied research frameworks
GO (Graduation Outcomes)	Student readiness, employability	Indirect impact via industry-relevant infrastructure and security thinking	Improved curriculum relevance, exposure to real-world infrastructure problems
OI (Outreach & Inclusivity)	Cross-domain participation	Multi-disciplinary participation (IT, civil, electrical, management, urban planning)	Cross-department engagement, broader institutional participation
PR (Perception)	Institutional reputation	Adoption of forward-looking resilience and smart infrastructure programs	Positioning as innovation-driven, infrastructure-aware institution

Strategic Explanation

How This Program Impacts NIRF

TLR (Teaching, Learning & Resources)

- Enhances faculty capability in:
 - Cyber + OT systems

- Infrastructure intelligence
- Applied resilience design
- Moves teaching from:
 - Theory-based → **system design-oriented learning**

👉 Impact:

Faculty deliver **industry-relevant and future-ready education**

RP (Research & Professional Practice)

- Enables research in emerging domains:
 - Smart cities
 - Critical infrastructure
 - Cyber-physical systems
- Encourages:
 - Problem-driven research
 - Applied innovation

Example directions:

- Vegetation risk intelligence
- Predictive infrastructure failure models

👉 Impact:

Improves **quality, relevance, and applicability of research**

GO (Graduation Outcomes)

- Indirect but strong impact through:
 - Faculty capability upgrade
 - Curriculum modernization
- Students gain exposure to:
 - Real-world infrastructure challenges
 - Cross-domain problem solving

👉 Impact:

Better **employability and industry alignment**

OI (Outreach & Inclusivity)

- Program is inherently multi-disciplinary:

- Computer Science
- Electrical
- Civil
- Urban Planning
- Management
- Enables participation beyond technical domains

👉 Impact:

Broad-based institutional engagement

PR (Perception)

- Positions institution as:
 - Future-ready
 - Infrastructure-aware
 - Innovation-driven
- Signals adoption of:
 - Smart systems thinking
 - AI + resilience integration

👉 Impact:

Strengthens **institutional perception and differentiation**

“This program contributes to institutional ranking parameters by enhancing faculty capability, enabling applied research in emerging infrastructure domains, and positioning the institution as forward-looking and innovation-driven.”
