

Research Issues 3

Task 9

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Scope

Analyze a previous study related to OT cybersecurity

Apply specific theories and theoretical frameworks

Critically evaluate how well the study explains OT cybersecurity phenomena

Identify strengths, limitations, and research gaps

Chosen previous study

Imran et al. – Human-Centered Cybersecurity Risk Management for IT/OT-Converged Projects

Focus: Cybersecurity risk management in **IT/OT-converged oil & gas projects**

Approach: Qualitative (expert interviews + thematic analysis)

Output: **STS-CROP framework** (Socio-Technical Systems–Cyber Risk & Operations Perspective)

Limited focus on:

Human behavior

Organizational processes

Operational constraints (safety, availability)

Key Limitations

Qualitative, sector-specific (oil & gas) → limited generalizability
No quantitative validation of risk reduction or maturity improvement
Institutional pressures under-explored
Operational effectiveness of controls not empirically measured

Relevance to Research Topic (OT Cybersecurity)

Supports need for **governance-driven OT cybersecurity**

Provides a strong theoretical foundation (STS)

Highlights gaps my research can address:

- Maturity measurement

- Regulatory context

- Operational validation in critical infrastructure