CT&DT – SPSU - “TEAM ANONYMOUS” - TASK#02

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| S.NO | APPLICATION DOMAIN | COMPLEX PROBLEM IDENTIFIED | JUSTIFICATION |
| 1.  2.  3. | ROAD CONSTRUCTION  IT SECTOR  Water Purification Centers | Geotechnical issues.  Cost management and Budget overruns.  Traffic Management and Public Disruption.  Cybersecurity Threats.  Data Privacy and Compliance .  Skills Shortage  Waste Management.  Infrastructure and Maintenance.  Cost of Advanced Technologies. | Understanding and addressing soil and ground conditions are crucial for ensuring structural stability and preventing costly failures.  Effective cost management is vital to stay within budget and avoid financial strain.  Minimizing disruption to traffic and local communities is important for maintaining public support and ensuring smooth daily operations.  As cyber threats evolve, protecting sensitive data and systems from breaches,ransomware and other attacks is critical to maintain trust.  Compliance with data protection laws is essential to avoid legal penalties and protect user privacy.  The IT sector frequently faces a shortage of skilled professionals in areas like cybersecurity, data science and software development.  Water purification generates waste byproducts that need proper handling and disposal.  Aging or inadequate infrastructure can lead to inefficiencies and failures in water purification systems.  Advanced purification technologies, such as reverse osmosis or advanced oxidation processes, can be expensive. |

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