



Data Center Solutions

From first strategy to reliable live operation



Design • Deliver • Commission • Operate

One accountable engineering partner Consult • Design • Deliver • Commission • Operate

Company profile • Multidisciplinary capabilities • Detailed service portfolio

Engineering roots since 1998. Oman operations established in 2018. 130+ data center projects delivered • 20+ active data centers supported

A specialist capability brochure for owners, operators, consultants and project teams

2,000+

Successful projects | Group

28

Years of heritage



Inside this brochure

A complete route from company capability to project delivery

04	Experience & capacity	33	Data Center Commissioning
17	Complete lifecycle capability	34	Data Center Tests
19	Consulting & Feasibility	35	Project Management
21	Concept & Detailed Design	36	24/7 AMC & Operations
23	Uptime Design Audit	38	DCIM & BMS
25	RFP, Specifications & BOQ	40	PUE & Capacity Optimization
27	CFD & Thermal Analysis	42	CCTV & Access Control
29	Supply & Procurement	43	AI Data Center Solutions
31	Turnkey Implementation	49	Critical power & environmental services

RTTR Engineering Group

Engineering roots since 1998. Oman operations since 2018.



SERVICES AT A GLANCE

- 01** One accountable engineering partner
- 02** A complete delivery model
- 03** Markets, resources and manufacturing relationships
- 04** Evidence that reaches the operating team

One accountable engineering partner

RTTR combines multidisciplinary engineering with practical delivery from Muscat. Our roots began in electrical-panel engineering and manufacturing in 1998, and our Oman operations began in 2018. We connect consultancy, detailed design, procurement, installation, commissioning and long-term operating support through one coordinated customer interface.

A complete delivery model

Customers can appoint RTTR for a specialist assignment, equipment supply, a coordinated EPC scope, asset repair or ongoing maintenance. Responsibilities, technical interfaces, approvals, programme and acceptance requirements are defined before execution. This supports a documented transition from the initial requirement to a practical, maintainable operating system.

Markets, resources and manufacturing relationships

Our engineering capability supports data centers, industrial plants, oil and gas, utilities, water infrastructure, commercial and institutional facilities, residential systems and marine applications. Wider group production and assembly resources, together with manufacturing and technology partners, support equipment supply and coordinated execution. The team, facilities and specialist support assigned to each job are defined around its actual technical requirement.

Evidence that reaches the operating team

Drawings, equipment schedules, technical approvals, test records, settings, software backups and operating information form a coordinated handover. We connect preventive maintenance, fault diagnosis, repair and contracted 24/7 AMC with the assets, priorities and responsibilities agreed with the customer.



Experience & capacity

Company-supplied figures, clearly scoped

2,000+

Successful projects

28

Years of heritage

6,000+

m² group production space

300+

Group technical resources



Engineering roots

Oman operations

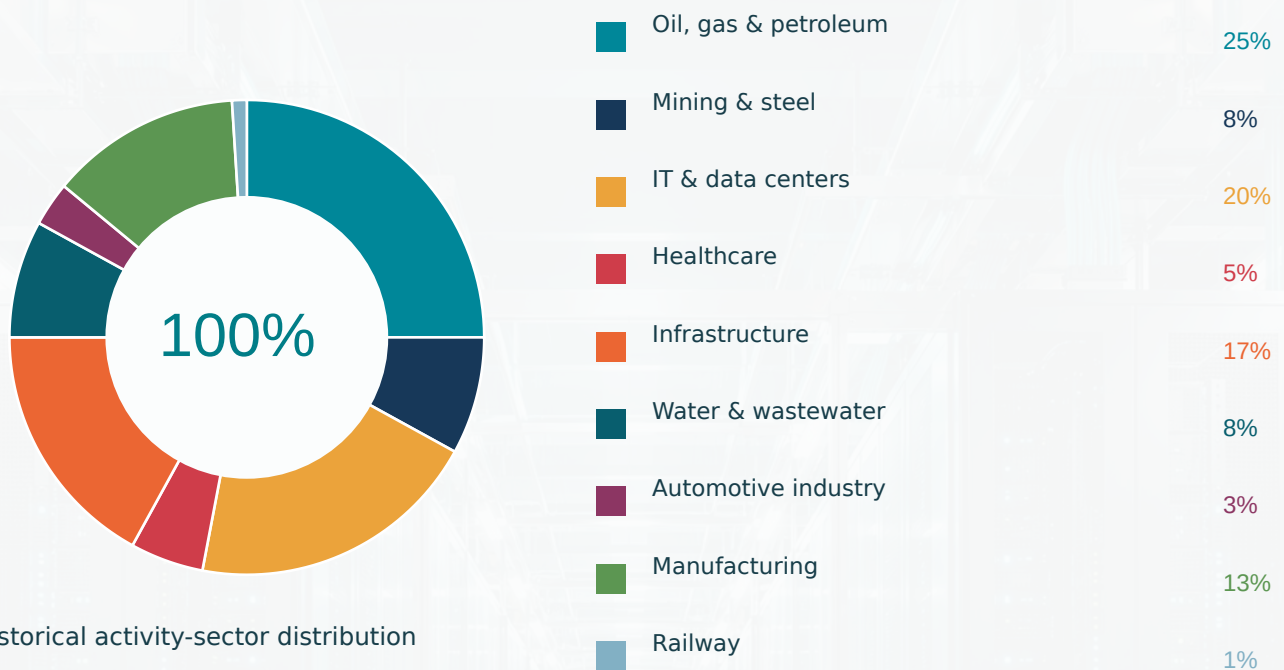
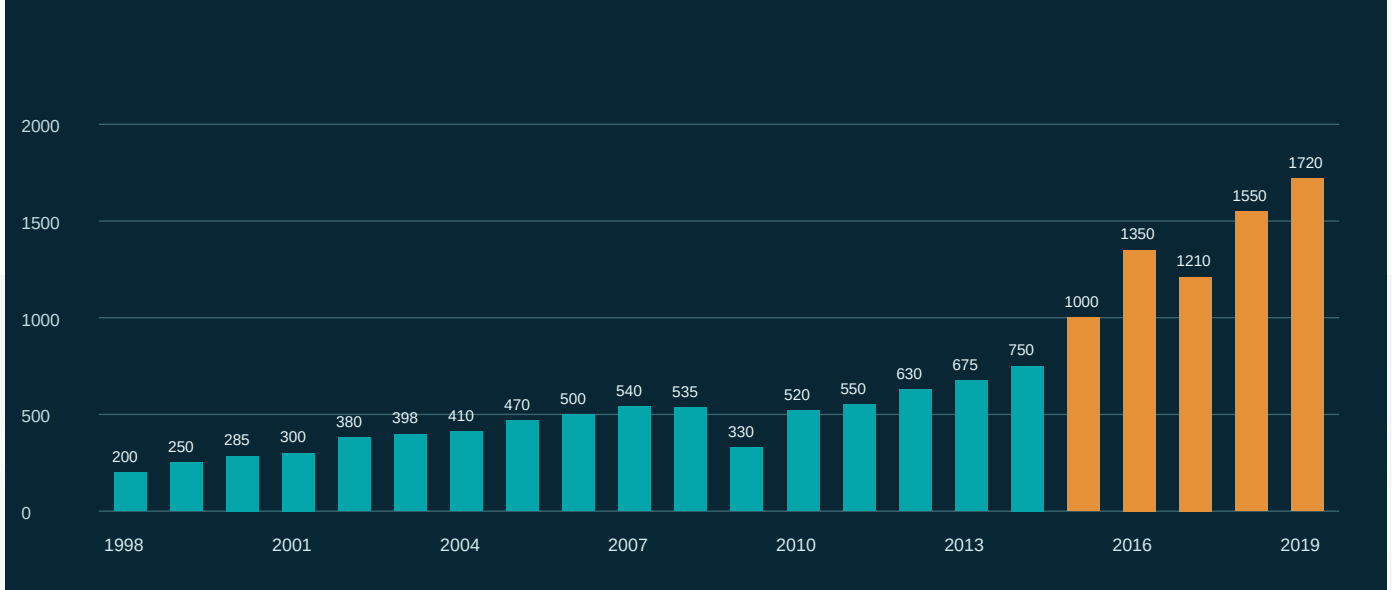
Integrated capability

Figures describe the wider group record and resources, rather than the Oman operation alone. Engineering roots date to 1998; Oman operations began in 2018. The total project figure has been updated using company-supplied information.

Production & sector experience

Historical indicators from the previous company catalogue

Historical electrical-cell production | 1998-2019



Historical activity-sector distribution

Source: supplied previous company catalogue, p.15. Historical data; electrical-cell production is a separate measure from project count.

Vision, mission & certified expertise

Reliability, responsibility and long-term customer value



SERVICES AT A GLANCE

- 01** Certified technical personnel
- 02** Multidisciplinary coordination
- 03** Multiple technology and delivery partners
- 04** Documented testing and handover

Our vision

To be a trusted engineering partner for reliable critical infrastructure, connected facilities and sustainable operation. We aim to connect the technical depth of specialists with the accountability of an integrated delivery partner.

Our mission

Connect sound engineering, appropriate equipment, disciplined site execution and verified performance with practical long-term support. Safety, reliability, efficiency and customer requirements guide engineering decisions from concept to handover.

Certified technical team and supporting partners

Our technical team includes certified engineers and specialists. Personnel and supporting resources are assigned around each discipline, equipment and platform. Multiple technology, manufacturing and technical partners support product access, specialist integration and delivery. Qualifications and relevant supporting records can be submitted as part of project review.

Connected engineering departments

Specialist capability with coordinated project interfaces



SERVICES AT A GLANCE

- 01** Data centers & consultancy
- 02** HD Hyundai Electric & Power / Energy
- 03** ICT, Security & Smart Systems
- 04** Mechanical & Marine
- 05** Technical training

Data centers & consultancy

Feasibility, audits, RFP/RFQ, detailed multidisciplinary design, critical power, cooling, CFD, DCIM/BMS/EMS, turnkey delivery and 24/7 AMC.

HD Hyundai Electric & Power / Energy

Electrical equipment supply and support; LV/MV boards, PLC and control, UPS, batteries, diesel generators, ATS, electrical maintenance, earthing/lightning, solar and cathodic protection.

ICT, Security & Smart Systems

Network topology, copper/fiber, CCTV, access control, CHD by Newabel rack security, smart systems, software integration and custom applications.

Mechanical & Marine

Precision and residential cooling, hydronics, pumps, valves, controls and AMC; marine communication, navigation, e-navigation, automation/engine support and VTS.

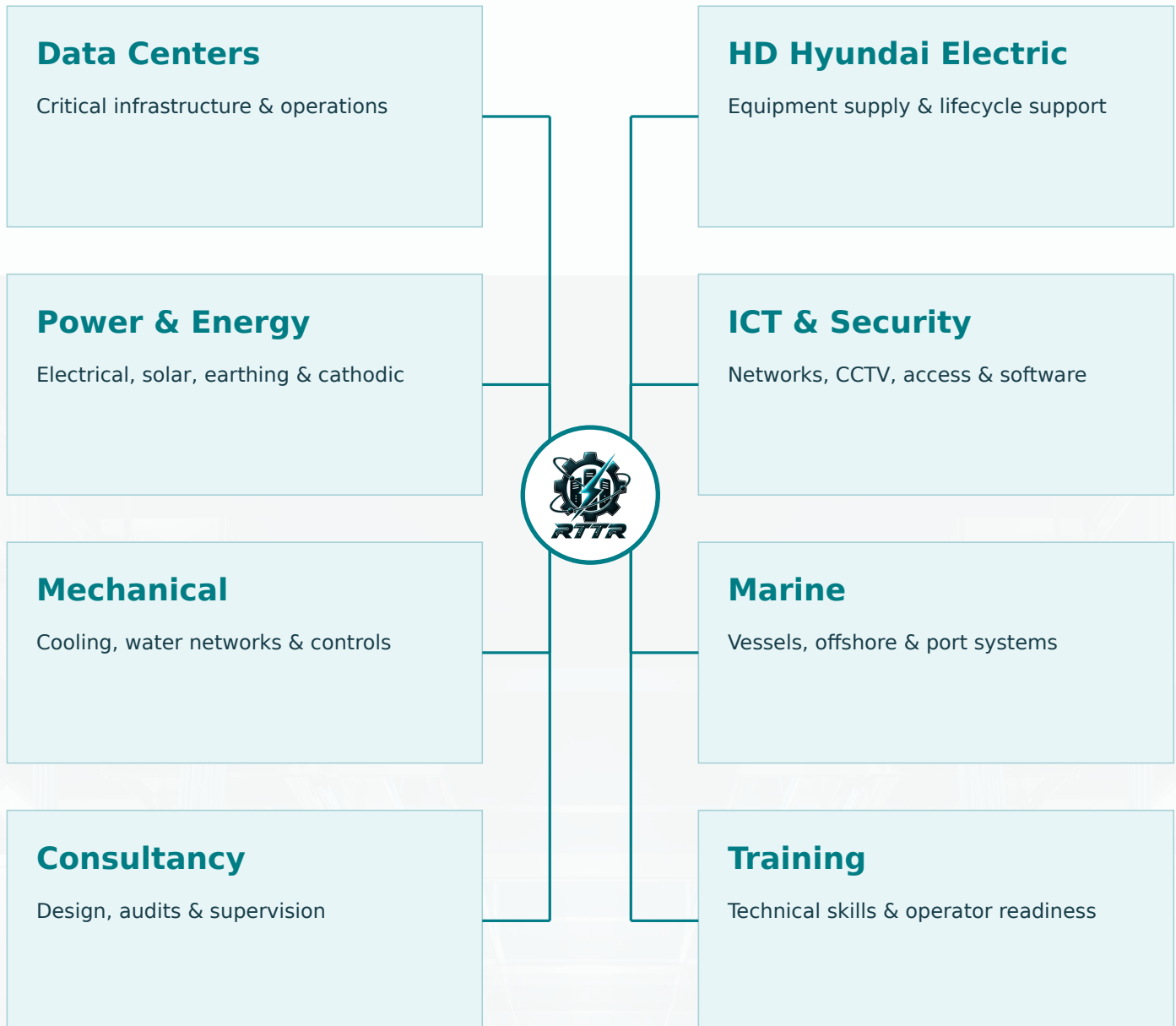
Technical training

Practical client workshops, specialist training and project-specific operator handover support.



The RTTR engineering network

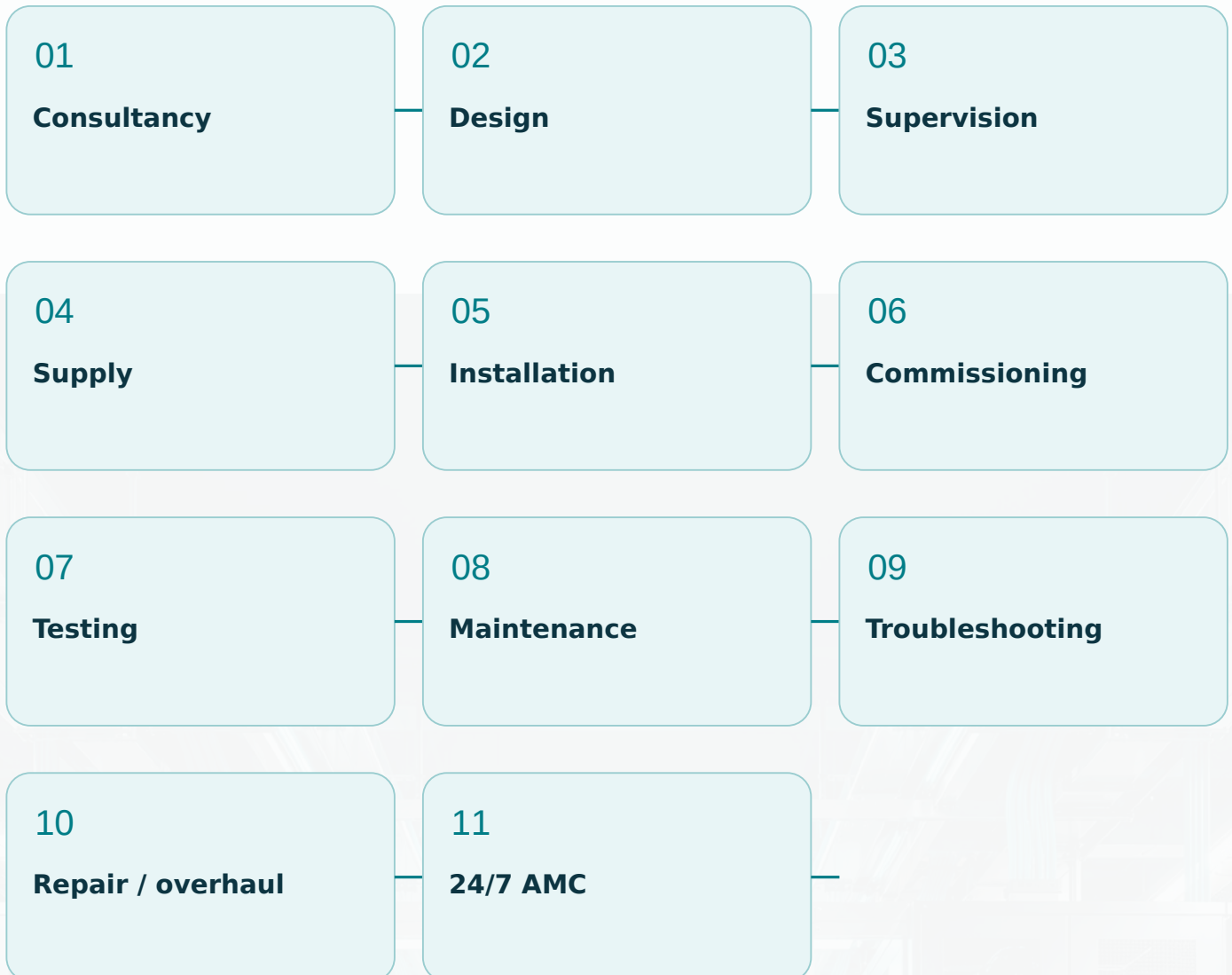
Specialist departments. One coordinated capability.



Specialist disciplines connected through one customer interface. Each proposal defines discipline responsibilities, equipment coverage and delivery records.

A complete lifecycle service

A clear scope from the first enquiry to operating support



From requirement to operation

Define the assets, equipment and acceptance criteria first. Engineering, work packages, testing and handover stay connected through a clear scope. Preventive maintenance, repair and 24/7 AMC are tied to agreed coverage, response arrangements, parts and responsibilities.



Built on engineering

Local accountability in Oman, supported by international technical relationships



SERVICES AT A GLANCE

- 01** Consultancy & design
- 02** Supply & installation
- 03** Commissioning & testing
- 04** Maintenance & support

RTTR Engineering Group traces its engineering roots to 1998, beginning with electrical panel manufacturing and developing into a multidisciplinary organization covering design, manufacturing, procurement, implementation, commissioning and lifecycle support. In 2018 the group established its operations in the Sultanate of Oman, strengthening its regional presence and local delivery capability.

Our focus is infrastructure where availability, safety and technical clarity matter: data centers, power and energy, industrial facilities, healthcare and other demanding operating environments. We connect the initial requirement with coordinated engineering, practical delivery and long-term support.

1998 | Engineering roots A foundation in electrical manufacturing and practical engineering, developed across increasingly complex infrastructure assignments.

2018 | Oman operations Muscat-based capability for client coordination, site response, technical delivery and ongoing lifecycle support.

130+ | Data center projects Group data center experience across design, implementation, commissioning and related engineering assignments.

20+ | Active data centers supported Continuing involvement in critical-facility operation, maintenance, monitoring and technical support.



Vision & mission

Reliability, responsibility and measurable long-term value



SERVICES AT A GLANCE

01 How that direction shapes delivery

OUR VISION To be a trusted regional leader in mission-critical power and data center infrastructure, delivering high-reliability electrical systems and integrated engineering solutions that support the digital and energy transformation of the Middle East.

OUR MISSION To design, manufacture and deliver high-quality electrical systems, data center infrastructure and turnkey engineering solutions with a strong focus on reliability, safety, efficiency, responsibility and customer satisfaction.

How that direction shapes delivery

Engineering before equipment. Requirements, standards, resilience and maintainability define the solution; product selection follows the engineering basis.

Accountable interfaces. Design, procurement, construction and operation remain connected through controlled responsibilities and documented approvals.

Lifecycle value. Investment decisions consider usable capacity, support, energy, spares, operational procedures and future development.

Evidence-based acceptance. Test criteria, signed records, defect closure and operator readiness support a clear handover.

Certified people. Practical delivery.

Professional competence supported by structured engineering controls



SERVICES AT A GLANCE

01 Competence that reaches the operating team

Our technical team includes certified and professionally accredited specialists. RTTR's website identifies professionals holding Uptime Institute credentials for Tier interpretation, design review, operational assessment and certification-readiness work, alongside PMP-certified personnel for project governance.

Uptime Institute professional credentials Individual technical accreditations support the team's understanding of Tier-aligned engineering, critical-facility operations and assessment. Specialists apply that knowledge through design review, site verification, readiness assessment and documented gap closure.

PMP-certified project management PMP-certified professionals apply PMBOK-based controls to scope, programme, cost, quality, risk, procurement, communication and handover, adapted to the practical needs of mission-critical infrastructure.

Multidisciplinary technical delivery Electrical, mechanical, ICT, fire, security and monitoring specialists coordinate their interfaces. Vendor-specific support and specialist partners are engaged according to the equipment, software and project requirement.

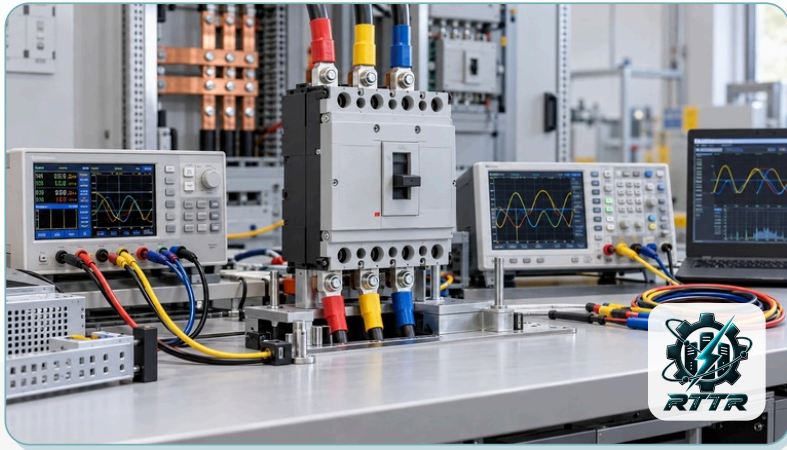
Competence that reaches the operating team

Knowledge transfer is part of successful delivery. We can provide system familiarization, operating and maintenance procedures, practical workshops, troubleshooting guidance and training records. Handover connects certified expertise with the customer's day-to-day ability to run and maintain the facility.

Professional credentials apply to individuals and their relevant scope. Formal Uptime Tier certification is issued by Uptime Institute; RTTR supports preparation, evidence and readiness.

One engineering group

Power, digital infrastructure and protection



SERVICES AT A GLANCE

- 01** Consultancy & design
- 02** Supply & installation
- 03** Commissioning & testing
- 04** Maintenance & support

Customers can engage a specialist discipline independently or combine several departments into a coordinated engineering and delivery scope. Common management, interface control and acceptance planning connect the work.

Data Center Lifecycle Solutions Consultancy, feasibility, design, procurement, turnkey delivery, commissioning, testing, DCIM/BMS, CFD, AI-ready infrastructure and 24/7 support.

Electrical Engineering & Power LV/MV engineering, switchgear and panels, power distribution, protection coordination, system studies, power quality and troubleshooting.

HD Hyundai Electric Authorized representation in Oman for the approved product scope, technical selection, catalogue support, procurement coordination and after-sales assistance.

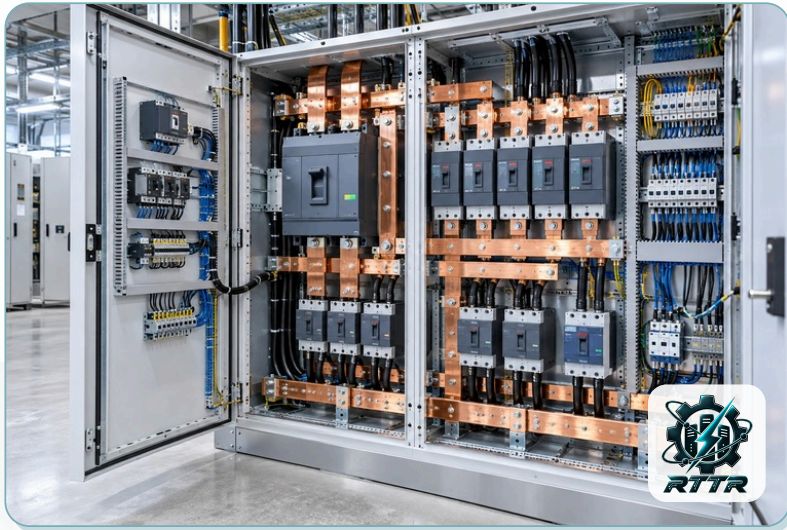
Solar & Renewable Energy Site assessment, PV sizing/design, rooftop/carport and remote systems, equipment supply, installation, commissioning, monitoring and maintenance.

Earthing, Lightning & Cathodic Protection Site/soil surveys, grounding, bonding, lightning and surge protection, sacrificial-anode and impressed-current protection, testing and support.

Networks, Structured Cabling & Fiber Copper/fiber design, routing, installation, termination, splicing, rack works, certification testing and fault diagnosis.

One engineering group

Mechanical, operations and specialist support



SERVICES AT A GLANCE

- 01** Consultancy & design
- 02** Supply & installation
- 03** Commissioning & testing
- 04** Maintenance & support

Customers can engage a specialist discipline independently or combine several departments into a coordinated engineering and delivery scope. Common management, interface control and acceptance planning connect the work.

Security & Smart Systems CCTV, door/rack access, smart automation, BMS/EMS, monitoring, approved system interfaces and lifecycle maintenance.

Custom Applications & Dashboards Data center calculation tools, AMC/workflow systems, budget control, reporting, management dashboards and operational integration.

Mechanical, HVAC & MEP Precision/comfort cooling, chillers, ventilation, cold rooms, plumbing, pumps, plant rooms, MEP coordination and commissioning.

Marine Services Communication, navigation, e-navigation, automation, VTS and machinery support for vessels, offshore assets and ports.

Technical Training Academy Practical data center, electrical, panel, PLC, protection, commissioning and engineering software programmes; tailored corporate workshops.

Commissioning & Lifecycle Support FAT/SAT, energization, integrated testing, handover, preventive/corrective work, emergency troubleshooting and performance improvement.

Local strength. Global access.

Multiple technology and specialist partners support our data center capability



RTTR combines its Oman-based technical capability with relationships across critical power, cooling, digital operations, engineering and security. Our data center ecosystem includes HD Hyundai Electric, Sunbird, Group of GoldLine, Active Processing Technology FZE (APT), Tavan Sarma Group, Tridium Niagara and CHD by Newabel.

HD Hyundai Electric

Sunbird DCIM

Critical power products and local authorized support

Assets, capacity, energy and operational visibility

Group of GoldLine

APT

International specialist collaboration

Data center engineering and digital infrastructure



Local strength. Global access.

Multiple technology and specialist partners support our data center capability | continued

Tavan Sarma Group

Tridium Niagara

Data center cooling solutions

Controls, connectivity and system integration

CHD by Newabel

Smart rack access and security

Technology selection and the partner's role are defined for each project. Logos identify the partner ecosystem; authorization statements apply to the relevant approved scope.



Complete lifecycle capability

Choose a focused specialist service or a connected delivery scope PLAN & DESIGN



SERVICES AT A GLANCE

- 01 cooling
- 02 fire/life safety
- 03 ICT
- 04 security



Complete lifecycle capability

Choose a focused specialist service or a connected delivery scope PLAN & DESIGN | continued

01 Consulting & Feasibility 10 →

02 Concept & Detailed Design 11 →

03 Uptime Design Audit 12 →

04 RFP, Specifications & BOQ 13 →

05 CFD & Thermal Analysis 14 →

BUILD & COMMISSION

06 Supply & Procurement 15 →

07 Turnkey Implementation 16 →

08 Data Center Commissioning 17 →

09 Data Center Tests 18 →

10 Project Management 19 →

OPERATE & OPTIMIZE

11 24/7 AMC & Operations 20 →

12 DCIM & BMS 21 →

13 PUE & Capacity Optimization 22 →

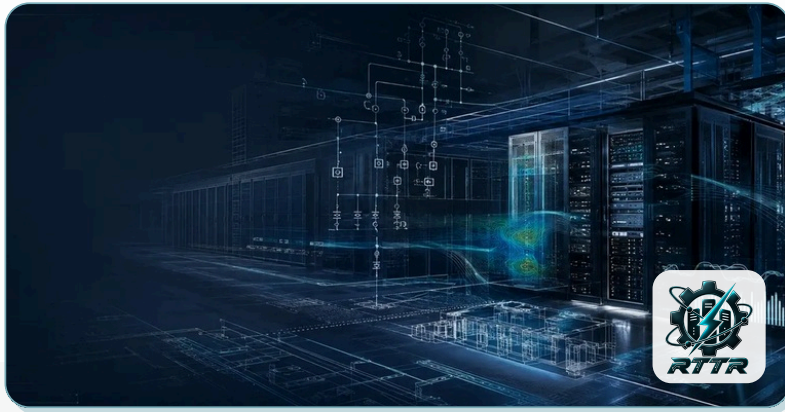
14 CCTV & Access Control 23 →

15 AI Data Center Solutions 24 →

Cross-cutting disciplines: power • cooling •
fire/life safety • ICT • security • controls •
project governance

Consulting & Feasibility

Turn an operational ambition into a defensible investment and engineering brief.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

RTTR provides independent data center consultancy from initial feasibility to operational readiness. We translate business needs into capacity, availability, site, budget and delivery requirements before equipment is selected. This is valuable for a new facility, an expansion, a relocation or an upgrade of an operating site: each requires a clear view of what the infrastructure must achieve and which constraints matter most.

Our review connects projected IT demand with utility availability, cooling potential, space, connectivity, access, environmental conditions and future growth. We compare practical development options, identify technical risks and define phased delivery strategies. As the owner's technical interface, RTTR can coordinate designers, contractors, vendors and commissioning teams while maintaining a traceable record of decisions.

Engineering scope

Define the requirement. Owner's Project Requirements, intended IT load, rack density, service continuity, operating model and growth assumptions.

Assess the site. Utilities, power availability, heat rejection, carrier routes, white space, logistics, maintainability and constraints.

Compare options. Redundancy architecture, development phases, retrofit versus new-build options, budget priorities and lifecycle implications.

Govern delivery. Technical reviews, tender clarifications, submittals, inspections, commissioning oversight and handover readiness.

Typical deliverables

Feasibility and due-diligence report; project brief and OPR; risk and assumptions registers; options appraisal; preliminary budget and programme; responsibility matrix; recommended engineering roadmap.



Consulting & Feasibility

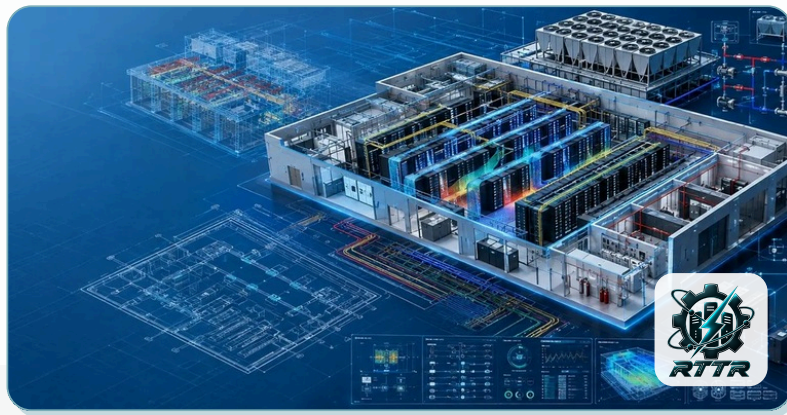
Turn an operational ambition into a defensible investment and engineering brief. | continued

Client value. A shared technical baseline helps the client invest in the right capacity, identify risks early and evaluate proposals against defined requirements.



Concept & Detailed Design

Coordinate the facility before it reaches the construction site.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

We develop data center concepts, Basis of Design and detailed engineering packages that connect architectural planning with electrical, mechanical, fire, ICT, security and control systems. The design follows the business requirement, site constraints and agreed availability objective. Capacity, redundancy and maintainability are considered together so that the selected topology remains practical to construct and operate.

The process moves from system options and space planning to coordinated drawings, calculations, equipment schedules and integration requirements. We examine normal operation, maintenance states and relevant failure scenarios. BIM coordination, plant-room layouts, routing, access and service clearances are used to resolve interfaces before procurement and installation. Design reviews control changes and establish a clear approved baseline.

Engineering scope

Electrical engineering. Utility and MV/LV distribution, transformers, generators, UPS and batteries, A/B paths, STS/PDU/RPP, earthing and protection coordination.

Mechanical engineering. Cooling topology, chillers, precision cooling, pumps, hydraulics, containment, heat rejection, controls and thermal modelling.

Safety and digital systems. Fire detection and suppression, security zoning, cabling, communications, BMS/EPMS/DCIM points and system interfaces.

Coordinated documentation. SLDs, layouts, schematics, calculations, equipment schedules, control sequences, BIM coordination and construction interfaces.



Concept & Detailed Design

Coordinate the facility before it reaches the construction site. | continued

Typical deliverables

Basis of Design; concept and detailed drawings; load and capacity calculations; coordinated equipment schedules; sequences of operation; integration matrices; specifications and design review register.

Client value. A coordinated design gives bidders, vendors and contractors a consistent definition of what must be supplied, installed and verified.





Uptime Design Audit

Assess topology, maintainability and readiness against the agreed availability objective.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

RTTR reviews data center design and operating infrastructure to identify gaps between the intended availability objective and the actual engineering arrangement. Our work follows the complete critical service path, from utility and heat rejection through distribution, controls and the IT environment. Tier intent is derived from business need and is examined through capacity, redundancy, separation and maintainability.

The audit checks both drawings and the operational implications of the design: isolation, bypass arrangements, common dependencies, maintenance activities and credible failure states. For an existing facility, document review is combined with site observations and available test evidence. Each finding records its basis, consequence, priority, responsible interface and recommended closure route. Our team includes professionals holding Uptime Institute credentials to support interpretation and certification-readiness work.

Engineering scope

Review critical paths. Power and cooling topology, component ratings, capacity margins, derating and shared dependencies.

Test maintainability assumptions. Isolation, bypass, access, concurrent maintenance, distribution continuity and single points of failure.

Examine controls and operations. Interlocks, alarm coverage, loss-of-control behaviour, SOP/MOP/EOP, staffing, maintenance and incident arrangements.

Support readiness and closure. Design evidence, remediation priorities, review workshops, closure records and preparation for formal certification engagement.

Typical deliverables

Evidence-based gap analysis; marked-up topology observations; risk-ranked findings register; remediation roadmap; document readiness assessment; issue closure and reassessment records.



Uptime Design Audit

Assess topology, maintainability and readiness against the agreed availability objective. | continued

Client value. The client receives an actionable route to improve readiness. Individual professional credentials do not authorize RTTR to issue Tier certification; formal certification is awarded by Uptime Institute.



RFP, Specifications & BOQ

Make every bidder price the same technical requirement.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

We convert approved requirements and coordinated engineering into a procurement-ready Request for Proposal package. A strong tender defines the full obligation: design development where required, supply, installation, integration, testing, commissioning, training and handover. It also defines how compliance will be assessed and how exceptions must be declared, reducing ambiguity at award and during execution.

RTTR aligns the scope of work, specifications, drawings and quantities with the owner's operational objectives. We identify interfaces, long-lead items, authority requirements, access constraints and outage dependencies. Technical schedules distinguish mandatory performance from acceptable alternatives. Bid evaluation then compares compliance, lifecycle suitability, exclusions, delivery and support rather than price alone.

Engineering scope

Define packages. RFP/RFQ, scope boundaries, responsibility matrix, vendor qualifications, submission requirements and acceptance criteria.

Specify performance. Capacity, redundancy, efficiency, environmental ratings, monitoring protocols, maintainability and required test evidence.

Quantify and coordinate. BOQ, material take-off, equipment lists, drawings, interface obligations, accessories, spare parts and licences.

Evaluate and clarify. Compliance matrices, technical queries, value engineering, exclusions analysis and technical recommendations for award.



RFP, Specifications & BOQ

Make every bidder price the same technical requirement. | continued

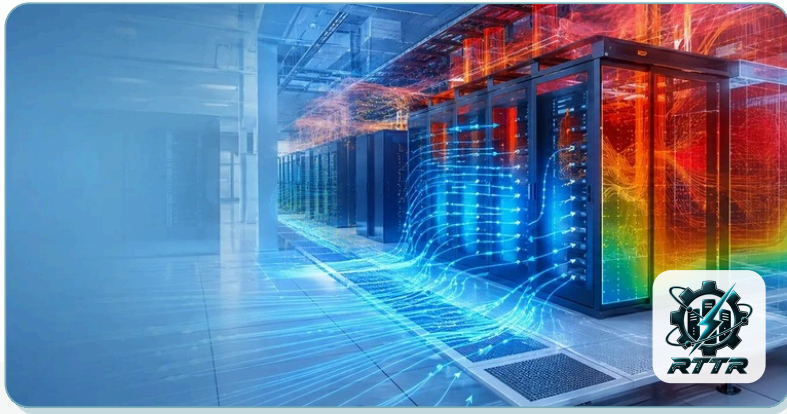
Typical deliverables

Controlled tender package; technical specifications; BOQ/MTO and equipment schedules; bidder response templates; compliance matrix; clarification log; technical evaluation report and contract schedules.

Client value. Comparable bids and explicit acceptance obligations protect scope and reduce later disputes about omitted equipment, integration or commissioning.

CFD & Thermal Analysis

See how cooling actually reaches the IT load.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

Computational Fluid Dynamics reveals airflow, pressure and temperature behaviour that cannot be understood from installed cooling tonnage alone. RTTR models racks, heat loads, raised floors, perforated tiles, cooling units, containment and leakage to determine whether the facility delivers cooling where it is needed. The service supports new designs, high-density upgrades and troubleshooting of operating facilities.

We define the model boundary and assumptions, review available drawings and measurements, then assess normal operation, phased growth and selected failure or maintenance scenarios. Results are interpreted as engineering evidence: rack inlet conditions, recirculation, bypass airflow, pressure distribution and unused thermal capacity. Recommendations are compared with actual facility data wherever available and are reviewed against the agreed operating and resilience requirements.

Engineering scope

Build the model. Rack geometry, IT load, cooling performance, supply/return paths, obstructions, tiles, containment and leakage.

Evaluate scenarios. Normal load, future density, equipment unavailability, maintenance states and relevant resilience arrangements.

Identify thermal risk. Hot spots, rack inlet exposure, uneven airflow, short-circuiting, bypass, pressure imbalance and cooling distribution limits.

Optimize and verify. Tile placement, containment, unit allocation, airflow settings, layout changes and comparison with measured conditions.

Typical deliverables

CFD model assumptions; temperature, velocity and pressure visualizations; rack-level thermal findings; scenario comparisons; prioritized improvement actions; verification requirements and expansion recommendations.



CFD & Thermal Analysis

See how cooling actually reaches the IT load. | continued

Client value. The study helps distinguish installed capacity from usable cooling, lowering thermal risk before construction or operational changes are implemented.



Supply & Procurement

Select equipment that fits the complete operating system.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

Procurement turns engineering documents into installed, testable assets. RTTR evaluates equipment against performance, reliability, maintainability, integration and lifecycle support requirements. We can support technical sourcing and bid review or deliver an agreed supply package, coordinating vendors and interfaces so that individual product decisions remain consistent with the facility architecture.

Our review covers datasheets, drawings, ratings, dimensions, connection points, accessories, protocols, control sequences and documentation. Long-lead equipment is tracked against the construction and commissioning programme. Factory inspection and FAT requirements are agreed before dispatch, while logistics and site readiness are coordinated for safe receipt and installation. Technical substitutions are reviewed through a controlled approval process.

Engineering scope

Source and evaluate. Vendor capability, compliance, product suitability, warranties, service coverage, spares and lifecycle considerations.

Control submittals. Equipment data, SLDs, schematics, space claims, interface schedules, communications and approved alternatives.

Track manufacturing and quality. Expediting, FAT arrangements, inspection points, packaging, shipping, delivery records and incoming inspection.

Prepare for commissioning. Certificates, O&M manuals, settings, licences, test records, training obligations and supply closeout.

Typical deliverables

Equipment compliance matrix; approved submittals; procurement register; manufacturing and delivery tracker; FAT and inspection records; warranty/spares schedules; supply handover dossier.



Supply & Procurement

Select equipment that fits the complete operating system. | continued

Client value. Engineering-led procurement reduces the chance of discovering capacity, communication or installation mismatches only after equipment arrives on site.





Turnkey Implementation

Deliver the equipment and the interfaces that make it work.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

RTTR can convert an approved data center design into a tested, documented and operational facility through an engineering-led turnkey delivery structure. The scope connects procurement, civil and architectural interfaces, electrical power, precision cooling, fire safety, networks, security, controls and DCIM/BMS integration. One coordinated delivery framework helps manage the dependencies between disciplines.

We establish the execution baseline, responsibilities, site programme, quality plan and acceptance requirements before installation. Construction packages are coordinated with equipment lead times, access, permits and operational constraints. Interface checks continue through pre-commissioning, functional verification and integrated testing. Final acceptance is supported by controlled records, trained operators and a complete technical handover.

Engineering scope

Establish the baseline. Approved drawings, specifications, BOQ, authority requirements, scope boundaries, interfaces and acceptance criteria.

Coordinate construction. Site logistics, contractors, MEP installation, racks and containment, cabling, inspections, progress and HSE coordination.

Integrate the facility. Power, cooling, fire, security, networks, controls, communications, alarm routing and cause-and-effect verification.

Complete and hand over. Testing, defect closure, as-builts, O&M manuals, warranties, asset data, training and operational readiness.

Typical deliverables

Execution and coordination plans; quality/inspection records; approved installation documents; integrated commissioning evidence; defect closure register; handover dossier and training records.



Turnkey Implementation

Deliver the equipment and the interfaces that make it work. | continued

Client value. Delivery includes the cross-system connections where failures often emerge. The final contractual scope defines equipment, construction obligations and acceptance boundaries.



Data Center Commissioning

Prove readiness before the facility carries its critical load.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

Commissioning is a planned assurance process that establishes whether equipment, systems and the facility operate as intended. RTTR develops and executes commissioning programmes across power, cooling, fire and life safety, controls, security and digital infrastructure. The programme begins with design intent, prerequisites and acceptance criteria rather than waiting until energization.

We organize the progression from factory and installation checks to functional tests and Integrated Systems Testing. Test depth follows the project stage, topology, manufacturer requirements and client acceptance plan. Load profiles, transitions, alarms and control sequences are captured as evidence. Defects are assigned, corrected and retested before closure; operators participate in demonstrations and readiness reviews.

Engineering scope

Plan safe verification. Commissioning strategy, test matrix, scripts, prerequisites, responsibilities, calibrated instruments and witness points.

Prove equipment and systems. FAT/SAT oversight, pre-commissioning, energization checks, start/stop functions, duty/standby operation and interlocks.

Demonstrate under load. UPS/generator load-bank proving, battery behaviour, cooling response, transfers and selected failure scenarios.

Confirm facility readiness. IST, cause-and-effect, alarm escalation, restoration, defect closure, operator training and acceptance records.

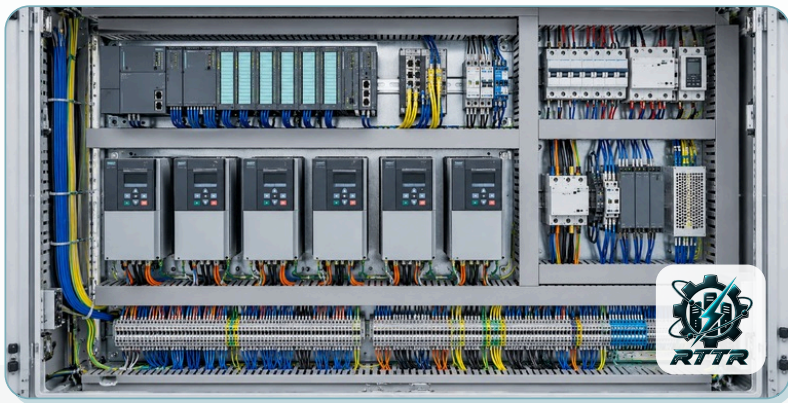
Typical deliverables

Commissioning plan and scripts; signed test sheets; load-bank and trend records; scenario and IST reports; defects/retest register; acceptance summary and operational readiness dossier.

Client value. Documented evidence provides a defensible acceptance baseline and reduces reliance on assumptions about how systems will respond during an incident.

Data Center Tests

Verify capacity, protection and behaviour repeatedly-not only at startup.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

RTTR provides equipment, system and facility testing for new and live data centers. The service can be a discrete assessment, part of commissioning or a periodic assurance programme. Its purpose is to establish repeatable performance under realistic load and operating states, with objective acceptance criteria and clear protection of operational continuity.

We build an asset-based test matrix and agree the conditions, limits, safe work arrangements and restoration plan. Tests may include rack-level heat/load simulation, UPS and generator proving, thermal mapping, airflow, pressure, room integrity, alarm logic, controls, cabling and security. Results are compared with the design baseline and recorded with instrument references, observations, deviations and corrective actions.

Engineering scope

Critical power tests. Electrical inspection, insulation/continuity as appropriate, transfer behaviour, UPS/battery and generator load tests, protection and power-quality checks.

Cooling and life-safety tests. Rack inlet conditions, airflow/pressure, cooling sequences, fire detection, VESDA, suppression interfaces and room integrity.

Digital and security tests. Sensor calibration, point mapping, alarms, communications, time synchronization, CCTV, door/rack access and backup/recovery.

Integrated and periodic assurance. Fault-scenario verification, restoration, retesting, operating baseline and a risk-based recurring test calendar.

Typical deliverables

Approved test procedures; asset and scenario matrix; calibrated-instrument references; measured results and pass/fail records; defect/retest evidence; periodic testing recommendations.

Client value. A structured test programme can expose hidden configuration or integration errors and show whether the operating facility still meets its accepted baseline.

Project Management

Connect engineering decisions with controlled delivery.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

Our project-management service coordinates scope, programme, procurement, construction, cost, quality, risk and commissioning within one controlled framework. RTTR's team includes PMP-certified professionals who apply PMBOK-based governance together with data center engineering judgement. The approach can support owner-side management, delivery coordination or a defined package within a larger development.

At initiation we establish the project mandate, stakeholders, responsibilities and success criteria. Planning then creates the work breakdown, schedule baseline, communication rules, quality controls and document registers. During execution we monitor verified progress, long-lead procurement, interfaces, changes and emerging risks. Reporting focuses on decisions, accountable actions, forecast impact and the path to acceptance.

Engineering scope

Set governance. Project charter, scope/WBS, RACI, communication, baseline schedule, budget framework and reporting requirements.

Control engineering and procurement. Deliverable registers, approvals, RFIs, vendor compliance, manufacturing, FAT, logistics and interface closure.

Manage execution. Site coordination, QA/QC, inspections, NCRs, HSE interfaces, progress verification and resource constraints.

Monitor and close. Risk/change registers, critical path, cost forecasting, recovery actions, commissioning milestones, handover and lessons learned.

Typical deliverables

Project management plan; integrated programme; procurement and document registers; risk/change/action logs; periodic client reports; quality and acceptance trackers; closeout summary.

Client value. The client gains visibility of actual progress, unresolved decisions and the engineering dependencies that can affect cost, timing and operational readiness.

24/7 AMC & Operations

Protect reliability through disciplined daily operation.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

RTTR provides 24/7 Annual Maintenance Contract and operations services for mission-critical data centers, supported by a Muscat-based technical team. We combine monitoring, preventive maintenance, corrective work and incident escalation into an asset-based operating system. Service coverage is structured around the installed equipment, operating risk, required staffing and agreed response arrangements.

We begin with an asset register, condition review and maintenance baseline. Routine rounds and monitoring establish a record of equipment condition, alarms, environment and capacity. Planned work follows approved procedures and access controls, while incidents follow an escalation and restoration process. Recurring faults, spare-parts needs and performance trends are reviewed to prevent repeated disruption and support lifecycle planning.

Engineering scope

Operate and monitor. Shift/rounds records, alarm review, BMS/DCIM/EPMS oversight, temperature/humidity, capacity and operational logs.

Maintain the asset base. Preventive/corrective schedules for power, UPS/batteries, generators, cooling, fire, security, controls and supporting infrastructure.

Manage incidents and changes. Response/escalation matrix, troubleshooting, safe restoration, RCA, permits, maintenance methods and change control.

Improve readiness. SOP/MOP/EOP review, training, spares, vendor coordination, periodic tests, reporting and renewal/upgrade planning.

Typical deliverables

Asset and maintenance registers; approved maintenance calendar; operating logs; service reports; incident/RCA and corrective-action records; KPI reports; lifecycle recommendations.



24/7 AMC & Operations

Protect reliability through disciplined daily operation. | continued

Client value. The AMC is defined by an agreed service scope and SLA, including staffing, response targets, planned maintenance, exclusions and critical spares. 24/7 coverage is designed accordingly.



DCIM & BMS

One operational picture across IT, power, cooling and building systems.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

RTTR delivers integrated Data Center Infrastructure Management and Building Management Systems from engineering and points lists to installation, software configuration, integration, testing, training and support. Our solutions connect assets, energy, capacity, environmental conditions and alarm workflows. The website records more than ten successful DCIM implementations across Oman and international projects.

We work with Sunbird DCIM, Tridium Niagara Framework and Siemens BMS as appropriate to the project. A reliable integration begins with asset naming, network architecture, protocol compatibility, point definitions and accurate field data. We configure dashboards, graphics, trend histories, alarm priorities and escalation rules, then verify actual equipment-to-software behaviour. Operational handover includes backups, permissions, training and information-quality governance.

Engineering scope

Engineer the architecture. Monitoring requirements, network/protocol design, metering, sensor coverage, point lists and asset hierarchy.

Integrate and configure. Power meters, UPS, generators, PDUs, cooling, environmental sensors, controllers, graphics, dashboards and approved interfaces.

Validate information. Point-to-point tests, calibration, room/rack mapping, scaling/units, time alignment, alarm priorities and event notifications.

Enable ongoing use. Asset/capacity workflows, user roles, reporting, backups, updates, training, data governance and lifecycle support.

Typical deliverables

Integration architecture; asset/points database; graphics and dashboards; alarm/escalation matrix; test and mapping records; user training; backup and support documentation.



DCIM & BMS

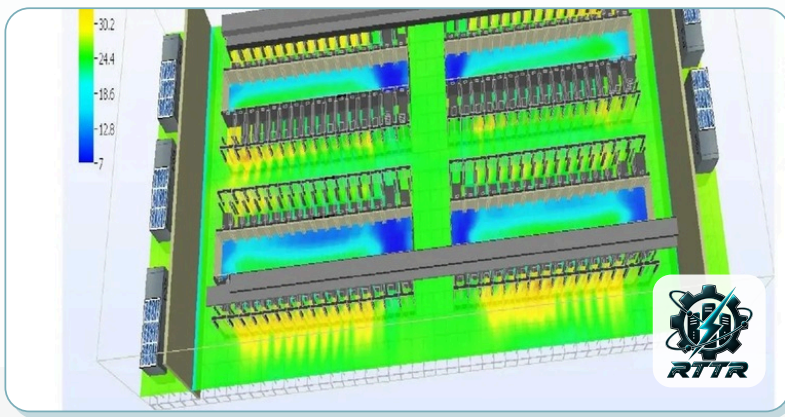
One operational picture across IT, power, cooling and building systems. | continued

Client value. Trusted data helps operations identify problems and manage capacity. A polished dashboard is useful only when its underlying measurements, locations and alarm behaviours are verified.



PUE & Capacity Optimization

Release usable capacity without weakening resilience.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

RTTR evaluates power, cooling, space and IT demand together to establish an evidence-based performance baseline and improvement roadmap. Power Usage Effectiveness is considered in the context of metering boundaries, reporting period, load conditions and operating constraints. The service is suitable for efficiency reviews, expansion planning and facilities with apparent capacity shortages.

We validate meters, data quality and time alignment before analysing trends. Power balances, UPS loading, cooling operation, airflow and infrastructure utilization are reviewed alongside redundancy and maintenance requirements. CFD and capacity modelling support what-if scenarios, including increased rack density and equipment unavailability. Recommendations are ranked by benefit, cost, implementation complexity and operational risk, then verified against measured performance.

Engineering scope

Define and measure. Facility boundary, IT load, energy inputs, climate/operating context, metering hierarchy and reporting objectives.

Find inefficiencies. Distribution losses, UPS loading, phase balance, power factor, cooling setpoints, bypass/recirculation and control sequences.

Model headroom. Power, cooling, racks, floor space, network, reserved/stranded capacity, growth and failover constraints.

Prioritize and verify. Improvement actions, risks, investment, implementation sequence, KPI reporting and measurement/verification approach.

Typical deliverables

Validated PUE baseline; energy/capacity assessment; thermal and electrical findings; capacity model; prioritized optimization roadmap; KPI dashboard requirements and M&V plan.



PUE & Capacity Optimization

Release usable capacity without weakening resilience. | continued

Client value. The objective is improved facility performance under comparable conditions. Savings and target PUE depend on measured baseline, load, climate and implementation rather than a generic promise.



CCTV & Access Control

Protect the perimeter, the room and every rack.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

We design, supply, install, configure, integrate and maintain data center security systems across perimeter surveillance, technical rooms, cages and rack doors. The architecture combines camera coverage, access authorization, recording, event evidence and controlled emergency behaviour. Security is coordinated with power continuity, fire/life safety and operational workflows.

The process starts with a survey of zones, doors, racks, blind spots, lighting, network, retention and user requirements. We then define cameras, controllers, locks, VMS/NVR infrastructure, storage, licences and resilience. Role-based permissions, time schedules, visitor processes and audit trails are configured with approved escalation rules. Tests demonstrate identity, coverage, recording, event retrieval and recovery.

Engineering scope

CCTV and video. Camera/VMS selection, coverage, image quality, storage/retention, analytics, maps, recording health and evidence export.

Door and zone access. RFID/biometric readers, controllers, locks, contacts, exit devices, interlocks, permissions and emergency release.

Rack-level security. CHD by Newabel smart locks, cabinet-door status, centralized permissions, audit trails and supported authentication modes.

Integrate and maintain. Time synchronization, security/fire interfaces, BMS/DCIM events, backup, firmware governance and periodic functional checks.

Typical deliverables

Security layout and architecture; equipment/licence schedules; permissions matrix; retention and event rules; integration and test records; training and maintenance plan.

Client value. Layered, auditable security reduces uncontrolled access while preserving safe egress and practical operations. Authentication features and redundancy follow the selected equipment and approved policy.

AI Data Center Solutions

Engineer for high density-and make operational data useful.



SERVICES AT A GLANCE

- 01 Engineering scope
- 02 Typical deliverables

RTTR addresses two connected needs: infrastructure ready for demanding AI workloads and intelligent tools that improve facility operation. We assess new developments, expansions and upgrades by connecting compute requirements with actual power, cooling, connectivity, maintainability and growth limits. High-density design is treated as a coordinated engineering problem rather than a rack-only equipment purchase.

Our infrastructure work reviews rack densities, UPS and distribution capacity, hydraulic interfaces, cooling topology and redundancy. Air cooling, rear-door heat exchangers and liquid-cooling integration are evaluated against the chosen IT equipment and site conditions. On the operational side, DCIM/BMS, meters and sensors can feed structured analytics for abnormal behaviour, maintenance planning and energy review. Engineers validate data, interpret findings and retain control of operational decisions.

Engineering scope

Assess AI readiness. Workload requirements, density, facility constraints, phasing, available data and growth priorities.

Design supporting infrastructure. Electrical capacity, distribution, UPS, protection, cooling/liquid-cooling interfaces, containment, network and CFD.

Integrate intelligent operations. Data mapping, information-quality checks, trend analytics, anomaly detection, alarm context and condition-based maintenance support.

Verify and support. Implementation coordination, test scenarios, acceptance records, operational dashboards, maintenance and expansion planning.

Typical deliverables

AI readiness and capacity assessment; infrastructure design basis; cooling/interface requirements; analytics integration scope; testing/commissioning plan; operational and growth roadmap.



AI Data Center Solutions

Engineer for high density-and make operational data useful. | continued

Client value. A phased approach connects workload demand with infrastructure limits. Predictive insights depend on suitable data and validation; recommendations remain subject to engineering review.





Critical power engineering

From incoming utility to the rack power path



SERVICES AT A GLANCE

01 Power technology with local engineering support

Data center power architecture must support the intended IT load, future growth and agreed resilience model. RTTR coordinates utility and MV/LV interfaces, transformation, standby generation, UPS, batteries and final distribution. Equipment ratings are reviewed alongside ambient conditions, protection settings, redundancy and maintenance states.

Distribution and protection. SLDs, A/B paths, switchgear, busways, cables, breakers, STS, PDU/RPP, short-circuit and discrimination studies, earthing and bonding.

Generation and UPS. Capacity and operating modes, generator/UPS coordination, autonomy requirements, transfers, bypass arrangements and restoration sequences.

Metering and interfaces. Power monitoring, alarm definitions, communications, energy hierarchy, status mapping and integration with EPMS/BMS/DCIM.

Verification and lifecycle. FAT/SAT, electrical checks, agreed load tests, documentation, settings traceability, spare parts and preventive maintenance.

Power technology with local engineering support

RTTR is an authorized representative of HD Hyundai Electric in Oman for its approved scope. Product selection is coordinated with the project's engineering basis, documentation and local support requirements. Broader critical-power packages may include additional manufacturers and specialist partners as appropriate.

Product imagery is a manufacturer/product reference. Final equipment families, ratings and supply scope are defined by the approved project schedule.

Cooling & thermal resilience

Coordinate plant capacity, airflow and high-density interfaces



SERVICES AT A GLANCE

01 Model first. Verify in the facility.

Cooling capability is determined by the full path from heat generation to heat rejection. RTTR engineers the interaction of rack loads, precision cooling, chilled-water systems, pumps, valves, containment, controls and outdoor conditions. We review usable capacity, redundancy, maintainability and phased growth rather than relying only on equipment nameplate ratings.

Plant and distribution. Chillers, CRAH/CRAC, precision cooling, pumps, hydraulic circuits, valves, piping, heat rejection and duty/standby arrangements.

Data hall airflow. Cold/hot aisle containment, raised floor and tile distribution, rack inlet conditions, bypass, recirculation and physical obstructions.

High-density adaptation. Rear-door heat exchangers, liquid-cooling interfaces, CDU/hydraulic coordination and integration with IT vendor requirements, where applicable.

Controls and commissioning. Sequences of operation, sensor accuracy, alarms, failure states, load/thermal demonstration and integrated trend evidence.

Model first. Verify in the facility.

CFD scenarios and measured thermal/airflow data support design validation, hotspot diagnosis and upgrades. Optimizations are reviewed for their effect on resilience and operational risk. Tavan Sarma Group and other selected specialists support cooling packages according to project needs.

Safety, ICT & integration

Close the interfaces between physical equipment and operational information

An operating data center depends on more than power and cooling. RTTR coordinates fire detection/suppression, carrier and structured-cabling infrastructure, security, monitoring and controls with the facility's physical architecture. Integration is verified against defined points, events and operational scenarios.

Fire and life safety. Detection/ASD-VESDA, suppression interfaces, cause-and-effect, alarm notification, room integrity, release permissives and coordination with authority requirements.

ICT and connectivity. Copper/fiber routing, racks, communications paths, termination, certification testing, network interfaces and time synchronization.

Controls and alarm logic. BMS, EPMS and DCIM point definitions, room/rack mapping, scaling, sequences, trend data, priorities, notifications and escalation.

Security and evidence. CCTV/VMS, door/rack access, role-based permissions, recording, audit trails, emergency behaviour and approved system interfaces.

One verified integration baseline

Our handover can include network and points architecture, configuration backups, test records, asset data, permissions, alarm/cause-and-effect matrices and operator training. Device-specific capabilities and licence requirements are confirmed before implementation.

Software imagery is a product-interface reference from the RTTR website; it does not represent a promised project result or configured customer system.

SERVICES AT A GLANCE

01 One verified integration baseline

01 Design

02 Supply

03 Commissioning

04 Support

From mandate to handover

Each stage has an engineering purpose, controlled outputs and acceptance evidence

01 | Assess and define Confirm the business requirement, capacity, site constraints, availability objective, risk, budget and delivery strategy. Establish OPR and scope boundaries.

02 | Engineer and coordinate Develop concept/BOD and detailed packages. Coordinate electrical, mechanical, fire, ICT, security and controls; resolve interfaces and approve the design baseline.

03 | Tender and procure Prepare RFP/specifications/BOQ, evaluate compliance, control vendor submittals, long-lead equipment, manufacturing, FAT and site delivery.

04 | Implement and govern Coordinate installation, inspections, quality, document revisions, programme, cost, risks and changes against approved baselines.

05 | Test and commission Verify prerequisites, equipment and systems, load/fault behaviour and integrated operation. Capture evidence, correct defects and retest.

06 | Hand over and support Close as-builts, manuals, assets, warranties and training. Confirm operating readiness and establish maintenance, monitoring and optimization arrangements.

At every stage: clear responsibilities • controlled approvals
• traceable decisions • practical risk management

SERVICES AT A GLANCE

01 controlled approvals

02 traceable decisions

03 practical risk management

01 Design

02 Supply

03 Commissioning

04 Support

Critical power & environmental services

Ten explicit service scopes



CAPABILITY INDEX

Critical power & environmental services

01 **UPS installation, commissioning & repair**

02 **UPS monitoring installation, integration & repair**

03 **UPS batteries, cabinets & battery stands**

04 **UPS battery monitoring systems**

05 **Diesel generator installation, repair & servicing**

06 **Fuel systems & filtration packages**

07 **ATS panel design, fabrication & lifecycle service**

08 **EMS design, supply, installation & monitoring**

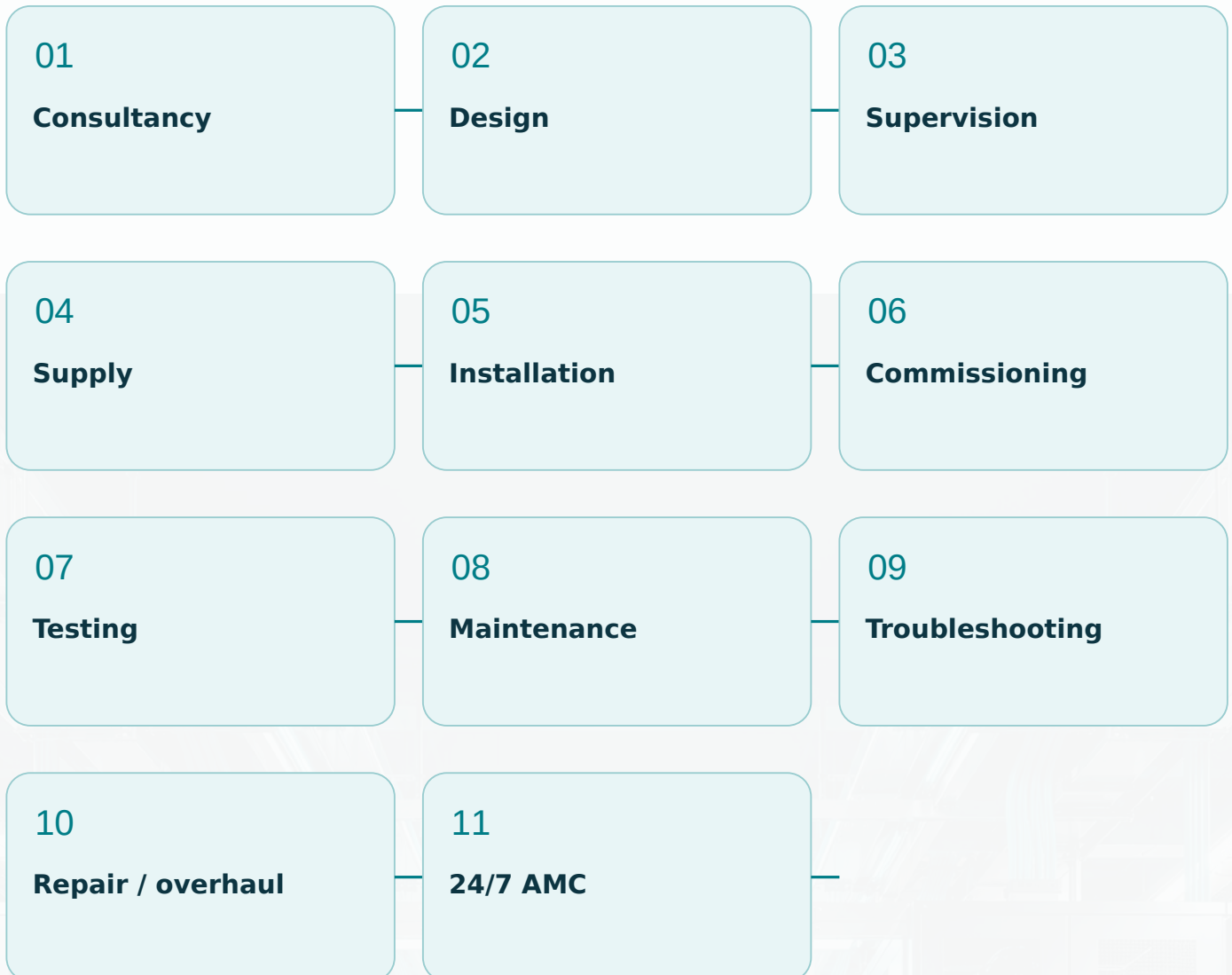
09 **Water leak detection systems**

10 **Rodent & insect deterrent systems**



A complete service scope

Critical systems



From requirement to operation

Define the assets, equipment and acceptance criteria first. Engineering, work packages, testing and handover stay connected through a clear scope. Preventive maintenance, repair and 24/7 AMC are tied to agreed coverage, response arrangements, parts and responsibilities.

UPS installation, commissioning & repair

We install, commission, troubleshoot, repair and service UPS systems for data centers, industrial facilities and buildings. The work covers standalone and modular arrangements, electrical interfaces, operating modes and coordinated maintenance planning.

Scope & delivery

Assess & design: Survey loads, available supply, autonomy objectives, equipment condition, bypass routes, protection and access. Define installation or repair requirements for the selected UPS.

Install & commission: Coordinate input/output connections, earthing, battery interfaces and model-specific settings. Verify rectifier, inverter, static/manual bypass and operating transitions using an approved test plan.

Diagnose & repair: Review event logs, alarms, power modules, fans, capacitors and control interfaces. Identify faults, replace approved parts and verify operation after corrective work.

Test & support: Perform agreed functional and load-bank tests, record results and provide O&M, preventive maintenance, troubleshooting and contracted 24/7 support.

Project outputs

UPS assessment; installation and settings records; test reports; corrective-action log; preventive-maintenance plan

SERVICES AT A GLANCE

- 01 Installation & commissioning
- 02 Fault diagnosis & repair
- 03 Bypass and load testing
- 04 Preventive maintenance & 24/7 AMC

01 Design

02 Supply

03 Commissioning

04 Support

UPS monitoring installation, integration & repair

We install, commission and repair UPS monitoring hardware, communication interfaces and software configurations. Operators receive a verified view of status, alarms and available measurements through the agreed monitoring platform.

Scope & delivery

Define points: Identify supported UPS data, monitoring cards, communication methods, alarm priorities, network requirements and software/licence needs.

Install & configure: Fit compatible interfaces and gateways, configure network access and supported SNMP or Modbus communications, and build the approved point database.

Integrate & repair: Connect to DCIM, BMS or EMS as agreed. Correct addressing, point mapping, units, firmware/configuration issues and communication faults.

Prove the alarms: Verify readings against the UPS display, simulate agreed alarm conditions, check timestamps, notification routing and communication-loss alarms, then hand over backups and records.

Project outputs

Point list; interface matrix; configured monitoring; alarm test records; software/configuration backups

SERVICES AT A GLANCE

- 01** Monitoring cards & gateways
- 02** DCIM / BMS / EMS interfaces
- 03** Alarm mapping & dashboards
- 04** Communication repair & verification

01 Design

02 Supply

03 Commissioning

04 Support

UPS batteries, cabinets & battery stands

We supply, install and commission UPS batteries and suitable battery stands or cabinets. Battery selection and replacement are coordinated with the UPS, duty, required autonomy, charger settings and site conditions.

Scope & delivery

Engineer the arrangement: Confirm chemistry and compatibility, string voltage, capacity, autonomy target, footprint, access, ventilation and structural support requirements.

Supply & assemble: Provide batteries, stands/cabinets, connectors, DC protection and required accessories. Coordinate layouts and maintain access for inspection and replacement.

Install or replace: Carry out an agreed isolation and replacement sequence, verify polarity and connections, apply manufacturer torque/settings and label strings and blocks.

Commission & maintain: Record baseline voltage, temperature and condition checks; perform agreed autonomy or discharge tests and provide inspection schedules and replacement records.

Project outputs

Battery schedule and layout; installation records; baseline measurements; commissioning report; maintenance/replacement plan

SERVICES AT A GLANCE

- 01** Battery selection & supply
- 02** Battery stands & cabinets
- 03** Installation & safe replacement
- 04** Commissioning & condition checks

01 Design

02 Supply

03 Commissioning

04 Support

UPS battery monitoring systems

We supply, install and commission battery monitoring systems for supported UPS battery arrangements. String and block-level condition data, trends and alarms help the operator identify developing issues and plan maintenance.

Scope & delivery

Select & design: Survey battery strings and chemistry, choose compatible sensors/controllers and define measurement points, cabling, network and alarm requirements.

Install & commission: Fit monitoring modules and sensors, assign correct battery/string identities and verify voltage, temperature, current and resistance/impedance data where the selected system supports them.

Configure & integrate: Set approved thresholds, trends and notification workflows, and integrate available information with EMS, DCIM or BMS through supported interfaces.

Validate & support: Compare sample readings with test instruments, test alarm and communication-loss events, record baselines and provide periodic calibration/verification and fault support.

Project outputs

Monitoring architecture; sensor and point schedule; baseline records; alarm matrix; interface tests; operator handover

SERVICES AT A GLANCE

- 01** Supply & install monitoring
- 02** Block / string measurements
- 03** Thresholds, trends & alerts
- 04** Platform integration & verification

01 Design

02 Supply

03 Commissioning

04 Support

Diesel generator installation, repair & servicing



SERVICES AT A GLANCE

- 01 Installation & commissioning
- 02 Periodic servicing
- 03 Engine / electrical diagnosis
- 04 Load tests & maintenance support

We install, commission, service, troubleshoot and repair diesel generators for critical and industrial facilities. Mechanical, electrical and control interfaces are coordinated with the site operating arrangement.

Scope & delivery

Survey & plan: Review duty, equipment condition, loads, starting arrangement, fuel, cooling, exhaust, access and electrical/ATS interfaces. Establish the installation or repair scope.

Install & integrate: Coordinate positioning, connections, starting batteries, earthing, controller settings, fuel interfaces and start/stop signals with the installed transfer system.

Service & repair: Perform planned inspections, oil/filter/coolant and starting-system services as appropriate. Diagnose engine, alternator, control, sensor and protection faults and carry out agreed repairs.

Commission & verify: Test starts, protective alarms, voltage/frequency stability and load performance under an approved plan; verify ATS interaction and deliver service/test records and AMC support.

Project outputs

Site survey; installation/interface records; service log; load and functional test reports; maintenance programme

Fuel systems & filtration packages

We design, supply, install and commission diesel fuel systems and filtration packages. Tank arrangements, fuel transfer, filtration, controls and monitoring are engineered as one coordinated generator-support system.

Scope & delivery

Design the fuel route: Assess storage and day-tank needs, transfer duty, recirculation, filtration requirements, piping routes, access and monitoring interfaces.

Supply the package: Select tanks, pumps, filters, water separation and polishing packages where specified, valves, level sensors, controllers and compatible accessories.

Install & commission: Install supports and piping, connect equipment and controls, and verify leak-tightness, flow, level operation, alarms and transfer sequences under approved procedures.

Service & troubleshoot: Inspect and replace filters, diagnose pump/control and transfer faults, service selected components and provide maintenance schedules and handover documents.

Project outputs

Fuel-system drawings; equipment schedules; control sequence; installation/test records; O&M and maintenance plan

SERVICES AT A GLANCE

- 01** Fuel-system design & supply
- 02** Filtration / polishing packages
- 03** Tanks, pumps, piping & controls
- 04** Installation, testing & support

01 Design

02 Supply

03 Commissioning

04 Support

ATS panel design, fabrication & lifecycle service

We design, supply, fabricate, install and commission automatic transfer switch panels, and provide their servicing, troubleshooting and repair. The panel design is coordinated with sources, loads, protection, generator controls and the required transfer philosophy.

Scope & delivery

Engineer & manufacture: Define source ratings, load duty, selected poles/neutral arrangement, short-circuit withstand, enclosure, busbars, protection and interlocking. Prepare drawings and manufacture the agreed panel.

Install & configure: Coordinate incoming/outgoing connections, earthing, source sensing, controller settings, timing and generator start/stop circuits.

Test the transfer sequence: Verify interlocks, source-loss and restoration, generator start, retransfer and manual/bypass functions where provided. Transition modes are explicitly specified for the selected equipment.

Maintain & repair: Inspect switching devices, connections, controls and alarms; troubleshoot transfer failures, service or replace parts and retest after corrective work.

Project outputs

SLD and wiring drawings; panel/FAT records; approved settings and sequence; SAT report; service and repair records

SERVICES AT A GLANCE

- 01** Design, supply & fabrication
- 02** Installation & commissioning
- 03** Interlocks & transfer controls
- 04** Servicing, repair & 24/7 AMC

01 Design

02 Supply

03 Commissioning

04 Support

EMS design, supply, installation & monitoring



SERVICES AT A GLANCE

- 01** Design, supply & installation
- 02** Monitoring platform commissioning
- 03** Temperature / humidity & contacts
- 04** Dashboards, alarms & integration

We deliver Environmental Monitoring Systems (EMS) and their monitoring platforms for critical rooms and facilities. Sensors, controllers, gateways, alarms and dashboards are coordinated with the actual operational requirement. Electrical energy monitoring/EPMS interfaces can also be integrated when included in the brief.

Scope & delivery

Define the architecture: Survey rooms and risks, choose environmental points and supported digital contacts, establish sensor locations, network topology, controller capacity and monitoring requirements.

Supply & install: Provide compatible sensors, controllers, gateways, cabling and software/licences as scoped, and install labelled devices with correct room and asset assignments.

Configure the monitoring: Build dashboards, alarm priorities, thresholds, trends, user permissions and notification routing. Integrate EMS with BMS/DCIM and electrical energy data where specified.

Test & hand over: Check readings and room mapping, simulate alarm events and loss of communications, verify logs and notifications, and deliver as-builts, configuration backups, training and maintenance support.

Project outputs

EMS architecture; room/sensor and point lists; alarm matrix; dashboard configuration; test report; backups and training

Water leak detection systems

We design, supply, install and commission water leak detection systems, and provide their servicing and repair. Detection routes, zones and alarms are designed around the actual water sources and the assets requiring protection.

Scope & delivery

Survey & zone: Identify pipework, precision cooling, plant rooms, raised floors and other exposure points; select sensing-cable or spot-detector arrangements and zone/location requirements.

Supply & install: Install compatible sensing cables, detectors, controllers and interfaces with suitable fixing, protected routes, labelling and accessible test points.

Commission & integrate: Configure zones and alarms, verify location mapping, interface with EMS/BMS/DCIM where supported and test each detection route under an approved method.

Service & repair: Diagnose cable/controller/communication faults, replace defective components, clean or reset sensors appropriately and retest the repaired zones.

Project outputs

Detection-zone layout; equipment/point list; installation and alarm test records; as-builts; maintenance plan

SERVICES AT A GLANCE

- 01** Design & equipment supply
- 02** Sensing cable / spot detectors
- 03** Alarm integration & commissioning
- 04** Repair, servicing & verification

01 Design

02 Supply

03 Commissioning

04 Support

Rodent & insect deterrent systems

We design, supply, install and commission specified rodent and insect deterrent systems for technical facilities. The selected solution is reviewed for target species, coverage, operating conditions and compatibility with the protected environment.

Scope & delivery

Survey & specify: Review entry routes, cable trenches, voids and plant areas; define target pests, coverage and the selected equipment technology with manufacturer guidance.

Supply the system: Choose suitable controllers, emitters or other specified deterrent devices, power supplies, supports and accessories for the actual installation environment.

Install & commission: Position and connect devices according to the approved plan, verify power and controller operation, check device coverage/settings and document commissioning.

Inspect & maintain: Provide periodic inspection, device checks, corrective repair and adjustments. Deterrent systems complement housekeeping and entry-point sealing; performance depends on site and equipment conditions.

Project outputs

Coverage/layout plan; equipment list; commissioning records; operating instructions; inspection schedule

SERVICES AT A GLANCE

- 01** Site survey & system design
- 02** Suitable deterrent equipment
- 03** Installation & commissioning
- 04** Inspection & system maintenance

01 Design

02 Supply

03 Commissioning

04 Support



A scope shaped around your facility

New developments, expansions, operating sites and specialist assessments

RTTR can act as an independent consultant, an owner-side technical interface, a specialist engineering provider, a supply/integration partner or an agreed turnkey delivery team. We define the engagement according to project stage, installed infrastructure, operational constraints and the client's required level of responsibility.

Consultancy and owner-side support Feasibility, design review, tender assistance, supervision, quality/document controls and commissioning oversight, with defined authority and reporting.

Design, supply and implementation Coordinated engineering and procurement through installation, system integration, commissioning and technical handover.

Specialist assessments CFD, readiness audits, electrical/thermal tests, DCIM data validation, energy/capacity reviews and targeted improvement plans.

Operations and ongoing support AMC, operational monitoring, preventive/corrective maintenance, incident support, periodic assurance and training under an agreed SLA.

What we need to start

Share the project location and stage, approximate IT load/rack count, target density, availability requirements, current drawings/equipment, development timetable and the service you need. For operating facilities, include access, outage restrictions, available monitoring data and the immediate concern.

The technical and commercial offer then defines deliverables, responsibilities, milestones, acceptance criteria, assumptions, exclusions, service coverage and required client inputs.

SERVICES AT A GLANCE

01 What we need to start

01 Design

02 Supply

03 Commissioning

04 Support

Let's engineer your next step

RTTR Engineering Group • Sultanate of Oman, Muscat



SERVICES AT A GLANCE

- 01 Revision 01
- 02 06 October 2026

Whether you are planning a new data center, expanding capacity or improving a live facility, start with a clear requirement and an engineering discussion. Our team can review your objective and recommend a practical route from assessment to delivery and ongoing support.

Discuss your project Email: info@rttrco.com
Website: rttrco.com Direct engineering contact:
info@rttrco.com

Useful links

Explore Data Center Services → Submit a Project Enquiry → Visit RTTR Engineering Group →

About this capability brochure

Prepared from RTTR's current company and service information, with partner names and supplied logos. Company figures describe the group's stated experience. Generated engineering visuals are conceptual illustrations; they are not photographs of completed RTTR projects. Product imagery and interface previews identify their subject separately.

This is a service capability document, not a priced project quotation. Detailed scope, technical targets, staffing, response times, warranties, programme and commercial terms are confirmed in the project-specific offer.

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