IVF & Fertility Centre

Patient, procedure, embryology, andrology and cryogenic workflows designed as a controlled reproductive-medicine centre.

Preliminary engineering range; excludes land, finance cost, taxes and import duty. Final scope and price are confirmed at the feasibility gate.

- Indicative CAPEX: USD 1.5–5.5M
- Delivery: 8–14 months from design basis to operational readiness, licensing dependent.
- Capacity: Tier 1: 500–1,200 cycles/year; Tier 2: 2,000–4,000 cycles/year; clinical protocol, staffing and operating days dependent.

Process flow

Preliminary basis for zoning, equipment and validation.

- Patient consultation, diagnostics and cycle planning
- Oocyte retrieval and controlled transfer
- Semen preparation and andrology testing
- Embryology culture, ICSI and time-controlled observation
- Vitrification and cryogenic storage
- Traceability, witnessing and outcome-quality review

Facility & clean environment

450–1,500 m² gross; 120–400 m² high-control embryology, procedure and cryogenic areas.

Embryology requires exceptionally stable temperature, VOC, particulate and pressure control; it is commonly engineered to ISO 7/8-equivalent cleanliness without treating the clinical centre as a pharmaceutical cleanroom.

- Highly stable HVAC, low-VOC finishes, clean gases, conditioned backup power, vibration control, cryogenic ventilation/alarm, purified water and secure data systems.

Equipment architecture

Vendor-neutral equipment classes; final URS is issued at feasibility.

- IVF workstations, incubators and microscopes
- Micromanipulation and laser systems where selected
- Andrology analysers and controlled centrifugation
- Cryotanks, alarm and oxygen-depletion monitoring
- Electronic witnessing and environmental monitoring

Capacity & programme

Tier 1: 500–1,200 cycles/year; Tier 2: 2,000–4,000 cycles/year; clinical protocol, staffing and operating days dependent.

8–14 months from design basis to operational readiness, licensing dependent.

- Capacity assumes stated shifts, qualified inputs, maintenance and validated yield.

Quality & regulatory route

National fertility-clinic and tissue/cell handling licence, cryogenic safety and laboratory quality requirements. Typical readiness: 8–14 months.

- Approval decisions remain with the competent independent authority.

Critical risks & staffing

Indicative 15–45 FTE including reproductive physicians, embryologists, nurses, andrology, quality and cryogenic support; equipment, witnessing and laboratory training over 6–12 weeks.

- Temperature, pH or VOC excursion
- Gamete/embryo identification error
- Incubator recovery instability
- Cryogenic alarm or inventory failure
- Vibration and air-quality impact on culture

Feasibility gate

Operating economics are issued as a sensitivity model using local labour, utilities, materials, yield, utilisation and financing assumptions; they are not a guaranteed return.

Provide country, site, portfolio, capacity, budget, financing and target date.

- IVF centre references disclosed after client permission; technical capability is supported through specialist equipment and workflow integration