

HCS India Consultants Private Limited

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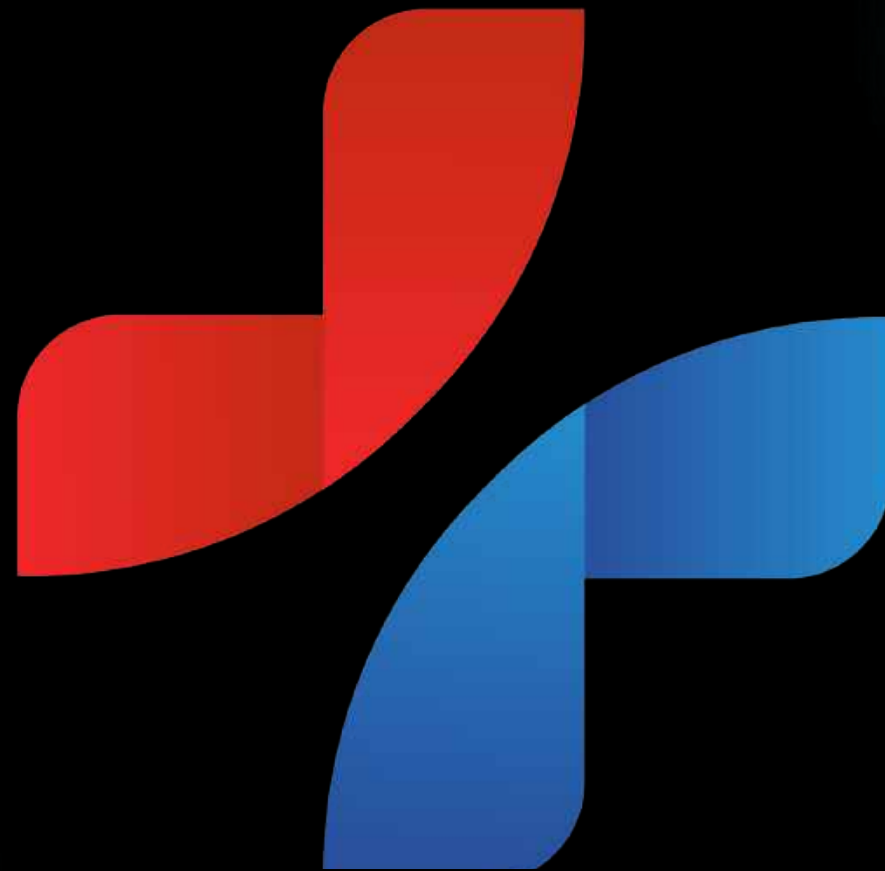
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- ❖ HCS India Consultants Pvt. Ltd. positions itself in a very important niche area in the Healthcare Industry
- ❖ There is a big gap in the knowledge and expertise between those who want to invest in Healthcare ventures and those who design, build and commission them
- ❖ This wide gap leads on to the implementation of institutions with lower clinical efficiency in terms of ease of operations and safety of patients & staff
- ❖ Non-implementation of proper clinical principles and guidelines, right from the stage of facility planning results in suboptimal infrastructure and care delivery systems

- ❖ This gap can be filled only by a team of experts with experience in various avenues of healthcare planning and delivery of care
- ❖ This expertise extends into multiple dimensions
- ❖ HCS India fills this gap by providing 360-degree expertise in developing healthcare institutions for optimal clinical and administrative operations
- ❖ Team HCS is adept in establishment of healthcare institutions from conceptualisation to commissioning, for a seamless integration of operational management within the health system
- ❖ 'CtoC&M' expertise is the unique value proposition that HCS India Consultants Pvt. Ltd. offers



Conceptualisation
to
Commissioning
&
Management
(CtoC&M)

HCS India takes up projects, offering comprehensive services, in all streams of medicine

- ❖ Feasibility studies
- ❖ Green field hospital projects
- ❖ Brown field hospital projects – Upgradation of the existing facilities
- ❖ Operational management of new and existing hospitals

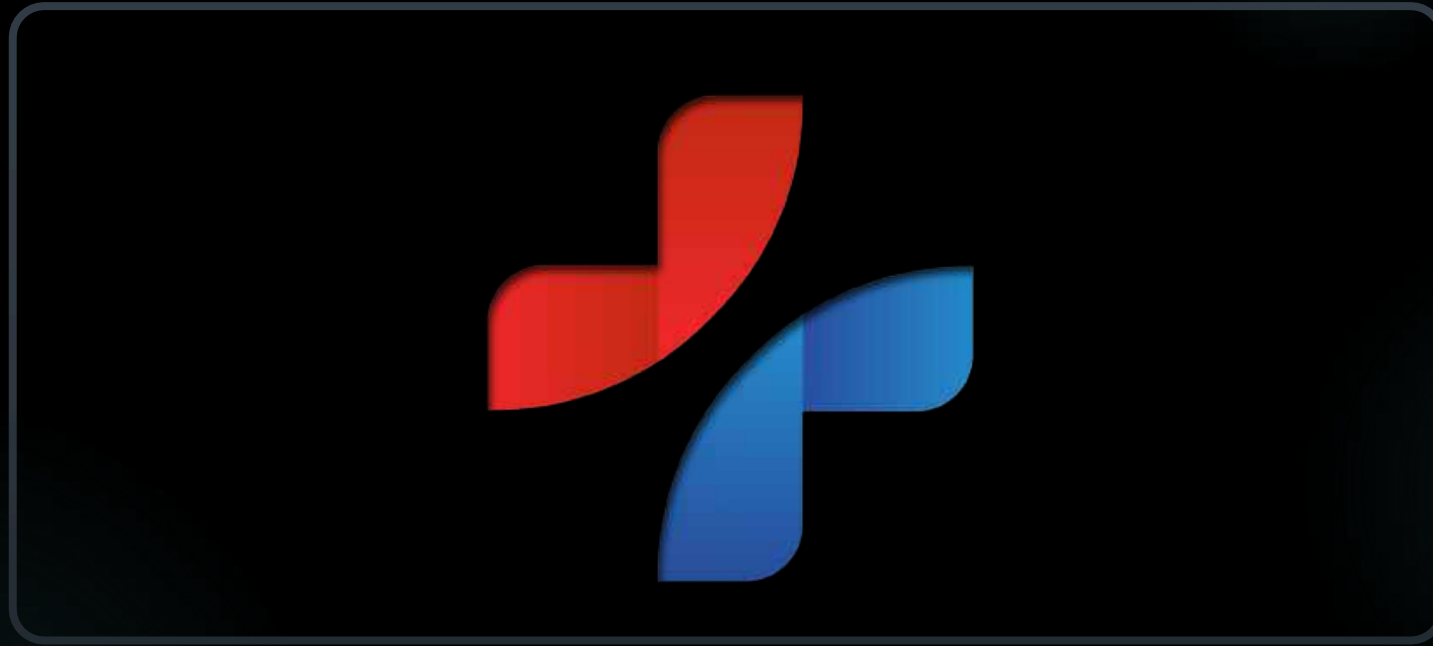


Comprehensive expertise under one roof

6

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Healthcare Consulting Services

- ❖ Concept Designing
- ❖ Space Planning and Architectural Designs
- ❖ Medical Equipment Planning & Implementation
- ❖ Technological adaptation into healthcare
- ❖ Manpower planning, Recruitment & Training
- ❖ Commissioning of Hospital Systems
- ❖ Public Relations & Branding
- ❖ Accreditations
- ❖ Healthcare safety
- ❖ Operational Management of Hospitals



In the HealthCare arena, HCS India takes its place as a
TSP
(Total Solution Provider)



Team HCS

HCS India

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Board of Directors

HCS India

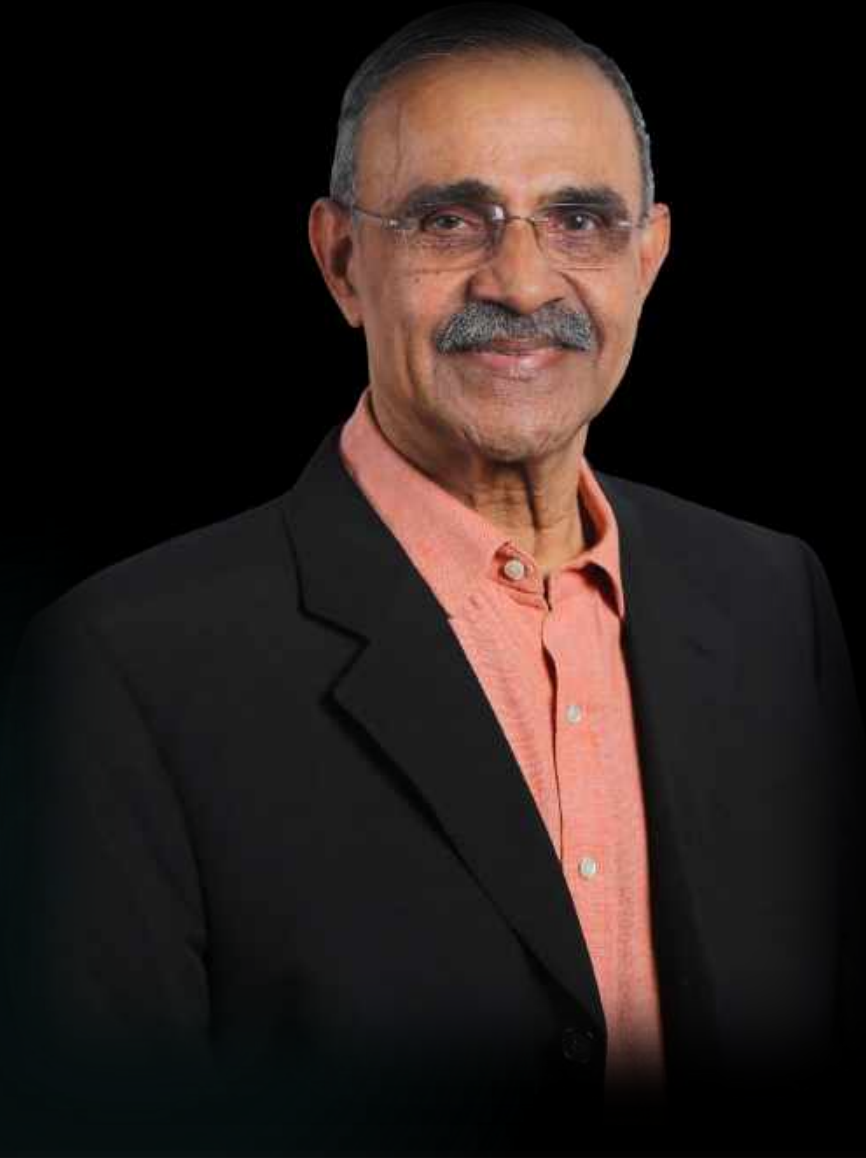
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10



Wg Cdr P K Narendran (Retd)
Chairman



Wg Cdr Narendran (Retd) is an Electrical Engineer with PG in Avionics, enriched with more than two decades of Techno-Managerial expertise in Indian Air Force

He has a decade of diverse experience as Healthcare Consultant and Projects Head in significant Hospital Projects in India and abroad

One of the hospitals built under his Project Leadership is the Prestigious Medcare Hospital, Dubai, between 2004 and 2007

He Believes:

“In the race for Excellence, there is no Finishing Line”



Projects completed under Wg Cdr Narendran's supervision

- ❖ Al Rafa Hospital for Maternity & Surgery (Complete Project management: 2003 – 2004)
- ❖ Medcare Hospital, Dubai (Project head - Management from Design to commissioning: 2004 – 2006)
- ❖ Aster group Pharmacies in Dubai (Design planning and Construction supervision)
- ❖ Magrabi Eyecare centre, Dubai Healthcare City (Design review and supervision: 2006)



Projects completed under Wg Cdr Narendran's supervision

- ❖ The Atlantis, Palm Jumeirah Dubai (Poly Clinic Design for more than 7000 construction employees)
- ❖ Kokoori Institute of Fertility and Laparoscopy Kozhikode, Kerala, India (Design and Construction Consultancy)
- ❖ Malabar Cancer Centre, Thalassery, Kerala, India (Radiology Dept. and Laboratory Design consultancy, along with ULCCS: 2015-16)
- ❖ Coop. Hospital Vadakara, Kerala, India (Gap Analysis and Consultancy for procurement of NABH accreditation)



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14



Dr P Mohanakrishnan
Managing Director



Dr P Mohanakrishnan started his career as an ENT Surgeon after completing his MBBS and PG in Otolaryngology. He also attained an MBA in Healthcare Services and has expanded his interests into Healthcare Administration.

Having held various leadership roles across major hospitals in Kerala and GCC, he is a well-known healthcare professional in South India and carries a great

expertise in:

- Establishing hospitals
- Commissioning hospitals
- Project planning
- Strategic planning
- Quality improvement
- Hospital management.



Projects completed by Dr PMK

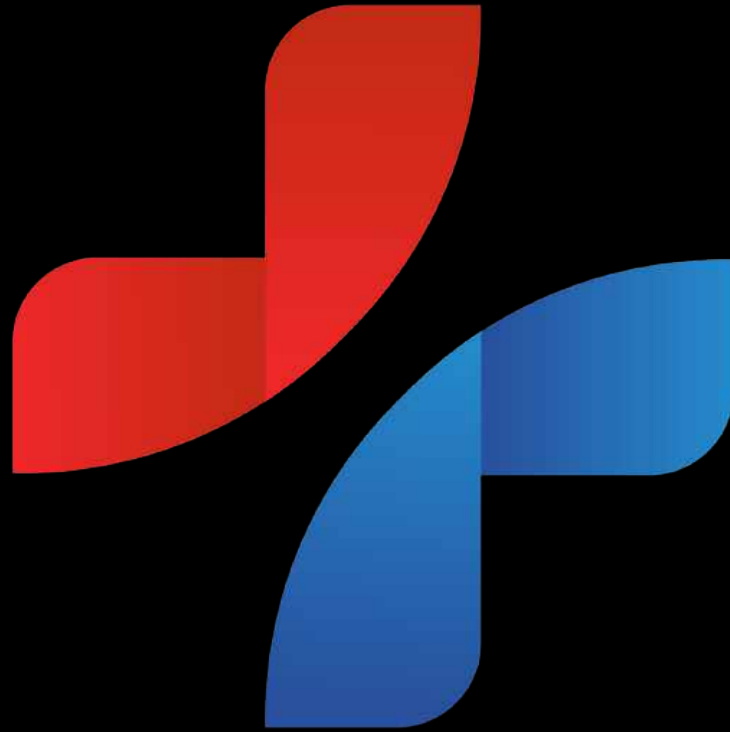
- ❖ Institute of ENT and Head & Neck Surgery, Kozhikode (Concept to Commissioning & as Managing Partner)
- ❖ Aster MIMS Hospital, Kozhikode (Commissioning & as Hospital Director)
- ❖ Aster Hospital for Maternity & Surgery, Dubai (Commissioning & as Medical Director)
- ❖ Medcare Hospital, Dubai (Concept to Commissioning)
- ❖ Aster Hospital, Muscat, Oman (Conceptualization, design and project execution as Hospital Consultant)
- ❖ Aster Hospital, Sohar, Oman (Conceptualization, design and project execution as Hospital Consultant)

Projects completed by Dr PMK

- ❖ Aster MIMS Hospital, Kottakkal (Design Consultant & CEO)
- ❖ Magrabi Eyecare centre, Dubai Healthcare City (Design review and supervision: 2006)
- ❖ The Atlantis, Palm Jumeirah Dubai (Poly Clinic Design for more than 7000 construction employees: 2006 – 2007)
- ❖ Kokoori Institute of Fertility and Laparoscopy Kozhikode, Kerala, India (Design and Construction Consultancy: 2015)

Projects completed by Dr PMK

- ❖ Malabar Cancer Centre, Thalassery, Kerala, India (Radiology Dept. and Laboratory Design consultancy, along with ULCCS: 2015-16)
- ❖ Coop. Hospital Vadakara, Kerala, India (Gap Analysis and Consultancy for procurement of NABH accreditation: 2016)
- ❖ Priam Family Healthcare India Private Limited (Concept to Commissioning & as Director & CEO)
- ❖ Avitis Institute of Medical Sciences, Nenmara, Palakkad (Conceptualization, Project Management and Commissioning & as CEO)



Along with Wg Cdr Narendran, Dr PMK established a
Healthcare Consultancy firm in Dubai Healthcare City
called

Eurohealth Systems FZ LLC

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Mr Ajai Shankar
Executive Director – Projects



Ajai Shankar, an astute Healthcare facility operations expert with more than two decades of experience as the COO at various prominent hospitals, has

authoritative knowledge in:

Profit and Loss (P&L) management

Strategic Planning

Lean Management

Total Quality Improvement (TQI)

Information Technology

Service Excellence in Hospital Operations.

He is the recipient of the National Energy conservation Award from Govt of India.



Ajai's projects

- ❖ Manipal Hospitals, Bangalore, Karnataka (Operational Management as Sr Manager: 2001 – 2003. Managed the complete financial turnaround of Manipal Heart Foundation and build a topline of 100 Cr per Annum from just 22 Cr in 1 year)
- ❖ Biochemie Hospital systems, Bangalore, Karnataka (Head – Operations. Managed the strategization for financial turnaround, cost optimization, Operational efficiency, SOP creation and accreditation for some of the major hospitals across Middle East: 2003 – 06)
- ❖ Kovai Medical Center, Coimbatore, Tamil Nadu (VP Operations. Achieved 25% topline growth YOY and increased EBITDA from 17% to 24%. Set up the KMCH Specialty Hospital in Erode: 2006 – 08)

Ajai's projects

- ❖ Global Hospitals, Chennai, Tamil Nadu (VP – Operations - Set up two 50 bed sister Hospitals in Vijayanagar and Ramnagara: 2008 – 2009)
- ❖ Fortis Hospitals, Bangalore, Karnataka (Facility Director - Instrumental in increasing the EBITDA to 32%, an industry record. Achieved accreditation for 3 cycles of JCI, NABH and NABL: 2009 – 2016)
- ❖ Apollo Hospitals, Bangalore, Karnataka (COO - Achieved reaccreditation from JCI and became the 1st Hospital outside USA to get it with the 5th edition of standards. War-On-Waste (WOW) initiative won the Chairman's Award: 2016 – 2017)

Ajai's projects

- ❖ Kauvery Hospitals, Chennai, Tamil Nadu (Group Vice President - Achieved NABH accreditation for 3 Hospitals. Created standardized operational processes across 10 Hospitals in the group: 2017 – 2018)
- ❖ Avitis Institute of Medical Sciences, Nenmara, Palakkad, Kerala (COO - Set up the billing systems, Operational systems, Supply chain systems and purchase processes for the new 200 bed hospital. Set up 2 clinics and 2 sister Hospitals: 2018 – 2019)

Ajai's projects

- ❖ HCG Hospitals, Bangalore, Karnataka (COO - Karnataka cluster - Managed the P&L for 5 Hospitals of the group: 2019 – 2020)
- ❖ Stepmed Consultancy Services, Bangalore, Karnataka (Managing Director - Manage the financial turnaround, cost optimization & IT infrastructure, for various tertiary and secondary care Hospitals in South India: 2020)
- ❖ Capgemini, Bangalore, Karnataka (Subject Matter Expert and Consultant for Cloud healthcare division: 2020 – 21)



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26



Dr Sathyajith Ramvihar
Director – Medical Affairs



Dr Sathyajith, an eminent Clinical Microbiologist has completed his MBBS and MD in Clinical Microbiology.

His competence in Infection Control made him a passionate Infection Control Physician, a role which is of paramount importance in all hospitals.

He is also adept in establishing Clinical Laboratories in hospitals and has served as the Head of the Department of Clinical Laboratory Medicine.

He has experience in establishing and coordinating all clinical departments in a start-up hospital.



Sathya has worked in these projects

- ❖ Aritis Institute of Medical Sciences, Nenmara, Palakkad, Kerala, India (Greenfield conceptualization and project execution of Laboratory Medicine department as Consultant and Head of the Department)
- ❖ Aritis Institute of Medical Sciences, Nenmara, Palakkad, Kerala, India (Infection Control processes – Implementation Consultant)
- ❖ Dr Scan Diagnostics, Kozhikode (NABL Accreditation Consultant – 2020)

Sathya has worked in these projects

- ❖ Malabar Medical College, Kozhikode, Kerala (Laboratory Consultant & NABL Accreditation Consultant – 2020)
- ❖ Seventh Day Adventists' Hospital, Ottapalam, Kerala, India (Laboratory Consultant & NABL Accreditation Consultant – 2021)
- ❖ KIMS Al Shifa Hospital, Perinthalmanna, Kerala, India (Laboratory Medicine & Infection Control Consultant - 2021)
- ❖ Trinity Diagnostics, Palakkad, Kerala, India (Greenfield conceptualization and project execution Consultant – 2021)



Ms Afrida
Director – Healthcare Quality



Afnida has vast experience and knowledge in the field of Healthcare Quality over more than 15 years.

Adept in:

Healthcare Quality implementation

Project Commissioning

Operational Management of Hospitals

She possesses phenomenal knowledge and expertise in all the processes connected with NABH accreditation for hospitals and clinics.

She was an important member of the team which was instrumental in getting the first NABH accreditation in India in the multi-specialty hospital segment.



Afnida was involved in these projects

- ❖ Aster MIMS Hospital, Kozhikode, Kerala (Deputy Manager, Quality Assurance Department Instrumental in getting NABH accreditation in 2006 as the first multispecialty hospital in India to be accredited by NABH)
- ❖ Kokoori Institute of Fertility and Laparoscopy, Kozhikode, Kerala (Consultant in Healthcare quality)
- ❖ Priam Family Healthcare, Kozhikode, Kerala (Consultant in Healthcare quality)
- ❖ Starcare Hospital, Kozhikode, Kerala (Consultant in Healthcare quality)
- ❖ Parco Hospital, Vadakara, Kerala (Consultant in Healthcare Quality and Operations as Deputy General Manager)



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33



Ms Jincy Geo

Director – Healthcare Human Capital



Having attained significant experience in the field of Human Resources Management, especially within Healthcare Industry, **Jincy** has remarkable expertise in the entire processes of Recruitment, Staff Training & Welfare Management and the proper **implementation of HR policies.**



Jincy was instrumental in the successful completion of the following hospital projects

- ❖ Meitra Hospital, Kozhikode, Kerala, India (Greenfield project – Implementation of the entire HR systems: 2015 – 17)
- ❖ Aritis Institute of Medical Sciences, Nenmara, Palakkad, Kerala, India (Project – Implementation of the entire HR systems: 2017 – 19)
- ❖ Indiana hospital, Mangalore, Karnataka, India (Monitoring of the entire HR systems as HR Head: 2019 – 20)
- ❖ KIMS Al Shifa Hospital, Perinthalmanna, Kerala, India (Monitoring of the entire HR systems as HR Head: 2020–2021)



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36



Mr. Sajeesh Gopalan
Director
Healthcare Marketing, Branding & PR



Sajeesh holds nearly 17 years of experience in the field of Public Relations.

Having completed his Post Graduation in Public Relations from Asian School of Journalism, he holds a strong command on all facets of PR.

He is the Founder Director and CEO of the globally renowned PR agency - PR9 Communications, which **has several major hospitals along with other prestigious organizations under diverse industries in the clientele list.**



Sajeesh has handled the following Healthcare clients

- ❖ RAK Hospital, Ras Al Khaimah, UAE (Brand Launch & PR Consultant: 2009)
- ❖ Canadian Specialty Hospital, Dubai, UAE (Branding & PR Consultancy: 2009–2010)
- ❖ Badr Al Sama Healthcare Group, Sultanate of Oman (Branding & PR Consultancy: 2011)
- ❖ Yemen International Hospital, Yemen (Crisis Management PR Consultant: 2011 – 12)
- ❖ Columbia Asia Hospital, Bangalore, Karnataka, India (Branding & PR Consultancy: 2015 ongoing)



Sajeesh has handled the following Healthcare clients

- ❖ Aritis Institute of Medical Sciences, Nenmara, Palakkad, Kerala, India (Brand Launch & PR Consultant: 2017 ongoing)
- ❖ Cimar Hospital & Fertility Centre, Kochi, Kerala, India (Branding & PR Consultancy: 2018 – 19)
- ❖ Meitra Hospital, Kozhikode, Kerala, India (Branding & PR Consultancy: 2020 – 21)
- ❖ Craft Hospital and Research Centre, Kodungallur, Kerala, India and in Maldives (Branding & PR Consultancy: 2021 ongoing)
- ❖ Able Cure Healthcare, Changaramkulam, Kerala, India (Branding & PR Consultancy: 2021 ongoing)



CA Ashwin Simon
Director– Healthcare Finance



Ashwin is a qualified Chartered Accountant with over 13 years of experience in the field of Accounting, Audit and Taxation.

Having completed post qualification courses such as ISA, Certified Concurrent Auditor, and Certificate Course in GST; he is also a Fellow Member of the Institute of Chartered Accountants of India.

His areas of expertise ranges from Financial and Tax Advisory, Systems Audit, Internal Audits, Concurrent Audits, Financial consultancy in the fields of Healthcare, Trading & Manufacturing industry, Administrative & support service and Education.

Ashwin has directly led these projects

- ❖ DDRC SRL Diagnostics Pvt. Ltd.(Finance Consultant - Actively participated in the expansion of the group from the number 60 to 140 labs in a span of 2 years. In charge of the internal audit of around 200 laboratories based on checklists and identifying the income leakages and equipment efficiency: Ongoing)
- ❖ SME (Subject Matter Expert) in setting up the accounting environment for Hospitals and in preparing Investment Proposal for Hospitals

Ashwin has directly led these projects

- ❖ PVS Hospital, Kozhikode, Kerala (Investment Project report for PVS Memorial and PVS hospital Pvt. Ltd.)
- ❖ North Malabar Cancer Care Hospital (NMCC), Kanhangad, Kasaragod, Kerala (Lead the feasibility study and Investment Project report preparation for NMCC, Kanhangad)
- ❖ Mitraa Care Hospital, Pathiripala, Palakkad, Kerala (Lead the feasibility study and Investment Project report preparation for Mitraa Care Hospital, Pathiripala)



Our Associates

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Manoj Thandassery Dharman
Consultant– Healthcare Infrastructure
(Planning & Execution)



Qualified Biomedical Engineer with 30 years of experience in Healthcare Infrastructure – started his career in BOC India and went on to work in hospital projects in Dubai and Middle East under various companies until he founded **Modcon Dubai in 2006**. Having worked in healthcare projects his experience and skills are in the medical engineering and healthcare planning and construction.

Medical Engineering, healthcare planning, project implementation are his core competencies while he has solid exposure in all the areas of Hospital construction be it civil works, electromechanical works, fitouts and interiors.

Was the first to introduce and implement the Modular Construction PPVC methodology in the Prefab Buildings and has successfully completed healthcare projects in the UAE, Oman, Africa and India.

Few of the flagship projects Manoj has implemented are

- ❖ Royal Bright Point Hospital Abu Dhabi,
- ❖ Burjeel Hospital Abu Dhabi,
- ❖ NMC speciality Hospital DIP,
- ❖ Avitis Super Specialty Hospital, Nenmara, Palakkad
- ❖ Koosamma Shambu Shetty Memorial Hospital, Udupi
- ❖ CMC Vellore, Paul Bran Don Block



Devanand Kolothodi
Consultant – Medical College Projects



A Healthcare management professional with more than two decades of experience in P&L role, Project Management, Higher Education Administration, People Development, Operations, Retailing and Business Development.

He has good insights of Tier I, II & III healthcare market and understands the intricacies of running a successful healthcare practice in emerging and rural markets. Out of the last 24 years as a professional, he has spent 12yr+ with one of the biggest and most professionally managed Healthcare Organisations present in India and Middle East.

He was awarded the Best CEO of the year 2020 by Indian Chamber of Commerce for the initiatives taken towards business sustenance during the COVID19 crisis.



Devanand's projects

- ❖ **Aster DM Healthcare, Andhra Pradesh & Telangana Cluster** – As the Regional CEO, managed operations of 5 hospitals with 900 operational beds in both urban and rural settings.
- ❖ **Aster Prime Hospital, Hyderabad Aster DM Healthcare** – As CEO he headed Administration and P&L of 204 bedded tertiary care hospital. His responsibilities included maintaining financial health and stability, ensuring patient safety, promoting quality of healthcare, strategic planning, ensuring compliance, promoting patient satisfaction, people management, succession planning, ensuring proper execution of project and deliverables, managing the business development activities and meeting specific revenue targets as per management expectations.



Devanand's projects

❖ Dr. Moopen's Academy, Wayanad, Kerala DM WIMS Hospital & Aster Wayanad Speciality Hospital, Aster DM Healthcare – As Chief Administrative Officer he was responsible for the Administration of entire Dr. Moopen's Academy campus spread across 50 Acres with 2,000 Employees and over 1500 students. The responsibilities included P&L of DM WIMS Medical College Hospital with 800 beds, Aster Wayanad Speciality Hospital with 200 beds, two neighborhood health centers, Projects, and management of three colleges including the DM WIMS Medical College, DM WIMS Nursing College and DM WIMS College of Pharmacy.



Devanand's projects

❖ DM Wayanad Institute of Medical Sciences, Wayanad, Kerala
Aster DM Healthcare - As Special Officer, Project Administrator & Senior Project Administrator he managed Liaison & Coordination with various Government Agencies for approvals, Consultants for Designs, setting up the project team thereby spearheading the project construction phase to achieve the commissioning of Hospital by 2012 and commencement of Medical College by 2013. He also set up the core departments like Finance, HR, Operations, Purchase and General Administration. I was instrumental in handling all the liaison works related to Medical Council, KUHS and various other statutory bodies.



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53



Vinod Nair
Consultant— Biomedical Engineering
(Planning & Execution)

Vinod Nair is an Electronics and Communication Engineer specialized in Bio Medical Engineering with more than 30 years of operational experience in the Medical Instrumentation Technology sector.

An experienced Biomedical Engineer with a track of working with the healthcare industry in various hospital Projects, Bio Medical Consultancy, Medical Equipment Maintenance & Medical Equipment Training.

Vinod Nair has got immense experience collaborating with Multinational companies, mainly in the Radiology sector.

He is actively involved in many projects, looking after the Medical Instrumentation areas of our company.



Vinod was involved in the following projects

- ❖ IMDC Hospital, Addu Atoll, Maldives
- ❖ GG Hospital, Chennai
- ❖ Krishna Maternity & Paediatric Hospital, Tirunelveli
- ❖ MGM Medical College, Mumbai
- ❖ Meenakshi Mission Hospital, Madurai
- ❖ KR hospital, Coimbatore



Projects being undertaken by HCS India

- ▶ Shihab Thangal Hospital, Tirur, Malappuram District – Commissioning of the 200-bed multispecialty hospital
- ▶ North Malabar Cancer Centre, Kanhangad, Kasaragod District – Turnkey consultation
- ▶ Benzy Polyclinic and Diagnostic centre, Ponnani, Malappuram District – Turnkey consultation and construction
- ▶ Super Specialty Hospital project, Ponnani, Malappuram District – Feasibility study and preparation of investors' proposal
- ▶ Multispecialty hospital, Parassinikadavu, Kannur District - Feasibility study and preparation of investors' proposal
- ▶ Multispecialty hospital project, Perumbavoor, Ernakulam District - Feasibility study and preparation of investors' proposal



Our scope of work in
Greenfield Hospital projects



Greenfield projects are handled in three stages

- ❖ Planning stage
- ❖ Design and Engineering stage
- ❖ Hospital Commissioning stage



Planning stage

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Planning stage

- ❖ Feasibility study & SWOT analysis
- ❖ Conceptualization of the clinical structure of the hospital
- ❖ Lead & coordinate a detailed evaluation and finalization of the concept of level of functioning of each clinical department to be incorporated in the Hospital design
- ❖ Preparation of the business plan based on the clinical concept and vision of the owner(s)



Planning stage

Concept Detailing and design advice to Architect

Advice the Architect on:

Design for optimized space management

Departments' proximity for

Operational efficiency

Customer convenience

Emergency & safety requirements, as per NBC, Indian IS 10509 and 12433 and NABH Guidelines



Planning stage

Lead & coordinate with the owner

Advise the architect for micro planning of each clinical department to analyze and finalise the space requirements based on the infrastructural requirements like:

Appropriate furniture

Electrical network

Medical gas system

Medical equipment etc.



Design and Engineering stage

- ❖ Facility Programming & Hospital Planning
- ❖ Architectural Design (AD)
 - ❖ Architectural – Conceptual Design services
 - ❖ Architectural – Schematic Design Service
 - ❖ Architectural – Design Development services
 - ❖ Architectural – Contract Document services
 - ❖ Architectural – Construction Drawings services



Design and Engineering stage

Facility Programming & Hospital Planning

- ❖ Preparation of the design brief, which will provide a written expression of the facilities as reflected in the client's business plan including future expansion, if any
- ❖ Translate those requirements into functions, activities, space distribution programs, functional relationships and all other information necessary for design of the project
- ❖ Criteria and data collection that will assist to develop, identify and size the activities, space and service requirements for the project



Design and Engineering stage

Hospital Planning services

- ❖ Preparation of internal layout plans to meet functional parameters as required based on detailed spatial and functional brief
- ❖ Demarcation/zoning of areas for various functions, requirements and utilities
- ❖ Spatial and locational recommendations
- ❖ Planning of various departments & specialties considering adjacencies, workflows and service requirements
- ❖ Study, evaluation and incorporation of relevant codes & guidelines such as those developed by NABH and other best practices
- ❖ Maximizing functional & operational efficiencies considering typical hospital circulation patterns such as in patient & outpatient flows, visitor, staff & services movement etc.



Design and Engineering stage

Architectural Conceptual Design services

- ❖ Site study and analysis of feasibilities based on local bye laws
- ❖ Generation of design concept for the entire project including considerations for future expansion, if any
- ❖ Preparation of conceptual site layout including broad separation of hardscape and landscape areas, driveways and parking, as required, based on detailed survey plans provided
- ❖ Conceptual Architectural design of the entire structure with



Design and Engineering stage

Architectural – Schematic Design Services

- ❖ Architectural design documentation services
- ❖ Developing final plans, architectural design and perspective views



Design and Engineering stage

Architectural – Design Development services

- ❖ Finalization of the architectural design by developing detailed final plans, sections and sketches, perspective views
- ❖ Architectural material selections
- ❖ Energy conservation measures
- ❖ Criteria for lighting, electrical and communications systems
- ❖ Incorporating hospital equipment related services requirements
- ❖ A budgetary cost for the project will also be established



Design and Engineering stage

Architectural – Contract Document services

- ❖ Architectural design documentation services during the contract document stage
- ❖ Preparation of Tender drawings, specifications & BOQ



Design and Engineering stage

Architectural – Construction Drawings services

- ❖ Architectural design documentation services during the project execution stage
- ❖ Preparation of detailed working drawings
- ❖ This stage includes preparation of drawings necessary for the execution of work



Design and Engineering stage

Interior Design (ID)

- ❖ ID – Conceptual Design services
- ❖ ID – Schematic Design services
- ❖ ID – Design Development services
- ❖ ID – Contract Document services



Design and Engineering stage

Interior Design (ID)

- ▶ Elevation drawings
- ▶ Door schedules
- ▶ Window Schedules
- ▶ Interior finishes and 3d perspectives for common waiting areas and lobbies, typical for IP rooms, Consult rooms.
- ▶ Elevation and facade detailed drawings



Design and Engineering stage

Interior Design (ID)

ID – Conceptual Design services

- ❖ Preparation of interior conceptual design and layout plans as required based on approved hospital plan
- ❖ Defining of Interior concepts, development of aesthetic and brand approaches, by way of projecting images of similar spaces, to arrive at the design language and vocabulary
- ❖ This could include visual image projections at a conceptual level



Design and Engineering stage

Interior Design (ID)

ID – Schematic Design services

- ❖ This includes design and development of Aesthetic and Branded approaches
- ❖ This will include the design of the lobbies, waiting areas, other key areas such as nurse stations, typical patient rooms, lift lobbies and consultation rooms
- ❖ The development of a finish palette, preliminary material selection as well as a presentation to establish the overall design concept and style of the premises



Design and Engineering stage

Interior Design (ID)

ID – Design Development services

Detailing of types of partitions, reflected ceiling plans, elevations, selection of material finishes, furniture and furnishing specifications



Design and Engineering stage

Structural Design

- ❖ Structural - Conceptual Design
- ❖ Structural - Schematic Design
- ❖ Structural - Design Development
- ❖ Structural - Construction Documents



Design and Engineering stage

Structural Design

Structural - Schematic Design

- ❖ Developing the conceptual structural designs into schematic alternates
- ❖ Incorporation of geotechnical report into structural analysis
- ❖ Preliminary structural analysis and design calculations
- ❖ Preparation of schematic design drawings and preliminary structural quantities



Design and Engineering stage

Structural Design

Structural - Design Development

- ❖ Coordination and collaboration with Architectural and MEP designs to facilitate Design Development and finalise parameters of major structural system components
- ❖ Advanced structural analysis and design calculations to assist design development
- ❖ Preparation of design development drawings and structural quantities for BOQ



Design and Engineering stage

Structural Design

Structural - Construction Documents

- ❖ Preparation of final structural analysis and design calculations to confirm and finalize design
- ❖ Prepare Construction drawings and technical specifications



Design and Engineering stage MEP Design Services

The services shall be designed based on required norms such as ASHRAE/NFPA/NABH/JCI

- ❖ Electrical systems
- ❖ Air-conditioning systems (High side & Low Side)
- ❖ Public Health Engineering systems like Water supply & Drainage
- ❖ Fire Protection system
- ❖ ELV (Extra Low Voltage) Systems



Design and Engineering stage

MEP Design Services

Electrical systems

- ❖ External Electrical works including any Under-ground cable network, Transformers, HT & LT Switchgear, DG sets
- ❖ Internal Electrical Works such as Lighting, Power Wiring, UPS Wiring, Emergency Lighting, Lighting controls for Common Areas
- ❖ Power supply to Medical equipment
- ❖ External /Landscape/ Facade Lighting



Design and Engineering stage

MEP Design Services

Air-conditioning systems

(High side & Low Side)

- ❖ Central Air Conditioning with Chillers, Pumps, Air Handling Units, Exhaust/Fresh Air Ventilation
- ❖ Mechanical Ventilation for Basements
- ❖ Internal Air conditioning Ducting and Diffusers/VAVs/HVAC Controls
- ❖ Mechanical Pressurization systems for Safe egress if required.
- ❖ Smoke management systems, if required



Design and Engineering stage

MEP Design Services

Public Health Engineering systems like Water supply & Drainage

- ❖ Internal & External Water supply systems
- ❖ Internal & External Sewage systems
- ❖ Water Treatment Plant and Sewage Treatment Plants
- ❖ Storm water drainage & harvesting systems
- ❖ Solar Hot water systems & RO Water systems as required
- ❖ Rainwater harvesting systems



Design and Engineering stage

MEP Design Services

Fire Protection system

- ❖ Water based Fire Fighting system including Fire Pumps and Yard hydrants
- ❖ Sprinkler system
- ❖ Fire detection and fire alarm system
- ❖ Fire Extinguishers
- ❖ Exit Signages in all common areas
- ❖ Compartmentation, Fire doors and Passive Fire Protection systems



Design and Engineering stage

MEP Design Services

ELV (Extra Low Voltage) Systems

- ❖ Voice & Data Systems (Only passive components)
- ❖ Nurse call systems
- ❖ Access Control systems with Biometric readers, Boom barriers
- ❖ Security surveillance like CCTV
- ❖ Public Address System
- ❖ Gas Flooding systems for Server rooms



Design and Engineering stage

MEP Design Services

- ❖ Integrated Building Management system
- ❖ Medical Gases System
- ❖ MEP - Conceptual Design
- ❖ MEP - Schematic Designs
- ❖ MEP - Design Development
 - ❖ Electrical
 - ❖ HVAC
 - ❖ Plumbing & Fire fighting
 - ❖ ELV



Design and Engineering stage

MEP Design Services

MEP - Conceptual Design

- ❖ Advice on Power supply conditions, Location of Metering Point
- ❖ Regulations on Water supply etc.
- ❖ Rules and Regulations on Fire Fighting etc.,
- ❖ Advice on Relevant Standards with respect to Fire Fighting and other services
- ❖ Rough indication of Water/Power/AC requirements



Design and Engineering stage

MEP Design Services

MEP - Conceptual Design

- ❖ Evaluating the Preliminary Designs with respect to spaces allocated for services
- ❖ Evaluating the Provisions made for Fire Fighting with respect to Local norms
- ❖ Preliminary design report identifying estimated air conditioning load, power requirement & water requirement along with basic design concepts
- ❖ Requirement of Spaces/Rooms for services in the form of Sketches



Design and Engineering stage

MEP Design Services

MEP - Schematic Designs

- ❖ Comprehensive HVAC, electrical load calculations and computation of total water requirement.
- ❖ Preparation of preliminary drawings identifying the external services; size and location of plant rooms, substation; low-voltage system control room; water tanks, pump room, fire- fighting pump room, water treatment plant and sewage treatment plant



Design and Engineering stage

MEP Design Services

MEP - Design Development

- ❖ Preparation of design drawings based on working plans of Architect, and landscape layouts furnished by Landscape Consultant
- ❖ Preparation of coordinated services layout drawings based on HVAC, Electrical, Low Voltage, Fire Fighting and Plumbing design drawings



Design and Engineering stage

MEP Design Services

MEP - Design Development - Electrical

- ❖ Substation layout
- ❖ HT & LT single line diagram & panel room layout
- ❖ Electrical distribution system comprising of panels, distribution boards, bus-ducts, cables & cable trays layout
- ❖ Lighting with circuit details and convenience power outlets
- ❖ DG room layout along with panel details, earthing & lightning protection system



Design and Engineering stage

MEP Design Services

MEP - Design Development - HVAC

- ❖ AC Units
- ❖ Air distribution system comprising of ducting grills & diffusers based on reflected ceiling plans
- ❖ Chilled water piping and mechanical ventilation system layout



Design and Engineering stage

MEP Design Services

MEP - Design Development - Plumbing & Fire fighting

- ❖ Water tanks & pump room layout
- ❖ Cold water distribution
- ❖ Sewage & storm water disposal piping
- ❖ Fire-fighting pump room layouts
- ❖ Sprinkler system layout for entire Complex (as per NBC)
- ❖ Wastewater disposal
- ❖ Sewage/effluent treatment system
- ❖ Water treatment system



Design and Engineering stage

MEP Design Services

MEP - Design Development - ELV

- ❖ Layout & Schematics for
 - ❖ Access Control
 - ❖ Smoke Detection
 - ❖ Security Systems
 - ❖ Voice/Data Transmission Systems



Design and Engineering stage

MEP Design Services

MEP - Contract Documents

With the concurrence and approval of the Management, preparation of tender documents including specifications and detailed schedule of quantities based on design drawings



Design and Engineering stage

Medical Engineering

- ▶ Piped Medical Gas
- ▶ Nurse Call systems
- ▶ Modular Operating Rooms
- ▶ Pneumatic Tube Systems
- ▶ Isolated Power Supply Systems
- ▶ Radiation Shielding



Project execution initiation

Vet and approve the complete scope of the Architect's work with the concurrence of the client



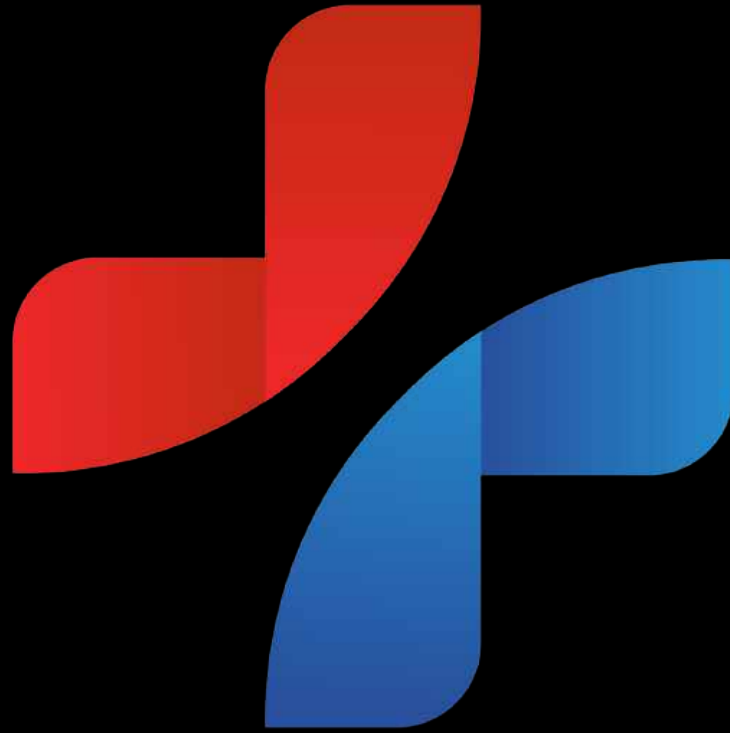
Project Management

- ❖ Review of the current work schedule to assess the realistic timeline of work completion for budget & resource control
- ❖ Preparation of 'Project Charter' including costs, tasks, deliverables, and work schedules
- ❖ In case of existing gaps, identifying right vendors and creating the overall work breakdown structure



Project Management

- ❖ Monitoring work execution by each contracted vendor till completion, weekly contractors' meeting to monitor progress and resolution of issues if any
- ❖ Identification of potential problems in a timely manner and initiation of corrective measures during the project timeline as per the Engineering diagram



Hospital Commissioning stage

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Hospital Commissioning stage

- ❖ Operations Department
- ❖ Human Resources Management
- ❖ ITC (Information Technology and Communications)
- ❖ Marketing, Branding & PR
- ❖ Medical Administration
- ❖ Infection control
- ❖ Nursing
- ❖ Finance
- ❖ Pharmacy

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Hospital Commissioning Stage

Operations Department



Hospital Commissioning Stage

Operations Department

- ❖ Preparation of SOPs for all operational systems
- ❖ Tariff fixation of all services and entry into the HIS
- ❖ Billing system and related communications
- ❖ Entire Customer care plan implementation
 - ❖ Front office management
 - ❖ Feedback management
- ❖ Setting up OP processes
- ❖ Setting up IP Processes



Hospital Commissioning Stage

Operations Department

- ❖ Setting up House Keeping systems and operational SOPs
- ❖ Setting up Security systems and operational SOPs
- ❖ Setting up F & B services
 - ❖ Kitchen commissioning and establishing operational policies
 - ❖ Therapeutic kitchen establishment
 - ❖ F & B supply and maintenance systems
 - ❖ Patient food management
 - ❖ Public canteen management



Hospital Commissioning Stage

Operations Department

- ❖ Establishment of internal and external transport systems and protocols
- ❖ Establishing General Duty Assistants team and setting up trolley and wheelchair protocols
- ❖ Waste management protocols
- ❖ Biomedical waste management
- ❖ STP management systems implementation
- ❖ WTP management systems



Hospital Commissioning Stage

Operations Department

- ❖ Establishing agreements with outsourcing agencies
- ❖ Establishment of Supply Chain Management systems
 - ❖ Purchase department and committees
 - ❖ General Stores and inventory control
 - ❖ Pharmacy purchasing systems
 - ❖ OT stores

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Hospital Commissioning Stage

Human Resources Department

Hospital Commissioning Stage

Human Resources Department

- ❖ Implementation of the organizational chart with clear chain of command reporting structure and defined roles and responsibilities.
- ❖ Preparation of manpower recruitment schedules in association with management.
- ❖ Preparation of job description for all categories of employees

Hospital Commissioning Stage

Human Resources Department

- ❖ Recruitment
 - ❖ Doctors
 - ❖ Nursing staff
 - ❖ Technicians
 - ❖ General staff
- ❖ Comprehensive management of the recruitment process for all staff including
 - ❖ Advertisement of vacancies
 - ❖ Short listing prospective candidates
 - ❖ Organising the interview process with panel of relevant experts
 - ❖ Preparation of employees' handbook

Hospital Commissioning Stage

Human Resources Department

- ❖ Training
 - ❖ Staff induction training
 - ❖ Ongoing on-the-job training
 - ❖ Soft skills training

Hospital Commissioning Stage

Human Resources Department

- ❖ Statutory affairs
- ❖ Staff welfare systems implementation
- ❖ Establishment of HR policies in accordance with NABH Standards
- ❖ Establishment of Credentialing and Privileging processes
- ❖ HRMS implementation
- ❖ Payroll management

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Hospital Commissioning Stage

ITC (Information Technology and
Communications) Department



Hospital Commissioning Stage

ITC (Information Technology and Communications) Department

- ❖ IT hardware commissioning
- ❖ Selection of the software
- ❖ Implementation of the HIS (Hospital Information System) and EMR (Electronic Medical Records)
- ❖ Internal communication systems
- ❖ Establishment of Call Centre
- ❖ IP Phone systems and IPBX
- ❖ CCTV systems
- ❖ Public address system
- ❖ Various display systems
- ❖ Videoconferencing systems

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Hospital Commissioning Stage

Branding, Marketing & PR

Hospital Commissioning Stage

Branding, Marketing & PR

- ❖ Draft vision, mission & core values documents
- ❖ Establishment of Critical Success Factors, Branding policies and Implementation
- ❖ Establish Brand differentiation and Positioning statements



Hospital Commissioning Stage

Branding, Marketing & PR

- ❖ Designing of
 - ❖ Logo & Tag line
 - ❖ Corporate Brochure
 - ❖ Corporate Video
 - ❖ Name cards, letter heads and stationery
 - ❖ Building signages (External & Internal)
 - ❖ Staff Uniforms
 - ❖ Department Brochures
 - ❖ Customer collaterals

Hospital Commissioning Stage

Branding, Marketing & PR

- ❖ Media presence through PR activities
- ❖ Social media presence
 - ❖ Development of social media video (short length video for social messaging platforms like WhatsApp, You Tube etc.)
 - ❖ Establishment of Face book & Google+ Pages
- ❖ Design of marketing e-mailers

Hospital Commissioning Stage

Branding, Marketing & PR

- ❖ Plan for inauguration and onward branding
- ❖ Developing good marketing team
- ❖ Development of marketing tools
- ❖ Designs for traditional marketing routes like
 - ❖ Hoardings
 - ❖ Banners
 - ❖ Newspaper ads
 - ❖ Radio Lines
 - ❖ Brochures
 - ❖ Cine Slides



Hospital Commissioning Stage

Branding, Marketing & PR

- ❖ Website
 - ❖ New age design
 - ❖ Mobile ready
 - ❖ Rich interactive features
 - ❖ Enabled with site search
 - ❖ SEO (Search Engine optimized)
 - ❖ Developed in most secured code



Hospital Commissioning Stage

Branding, Marketing & PR

- ❖ Referral marketing
- ❖ Internal marketing
- ❖ Marketing programmes for the clinical departments
- ❖ Insurance and TPA tie up and tariff mapping
- ❖ Corporate marketing

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Hospital Commissioning Stage

Medical Administration



Hospital Commissioning Stage

Medical Administration

- ❖ Establishment of clinical protocols
- ❖ Establishment of doctor performance schedule
- ❖ Commissioning of
 - ❖ Emergency Medicine Department
 - ❖ Critical Care Medicine departments
 - ❖ Multidisciplinary ICU
 - ❖ Surgical ICU
 - ❖ Neonatal ICU



Hospital Commissioning Stage

Medical Administration

- ❖ Commissioning of
 - ❖ Labour suites
 - ❖ Operation Theatres
 - ❖ Establishment of OT Committee
 - ❖ All clinical departments
 - ❖ All paraclinical departments
 - ❖ In-patient facilities
 - ❖ Radiology facilities



Hospital Commissioning Stage

Medical Administration

- ❖ Infection control
 - ❖ Establishment of infection control department
 - ❖ Implementation of IC systems

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Hospital Commissioning Stage

Nursing

Hospital Commissioning Stage

Nursing

- ❖ Establishing the nursing department protocols in line with NABH standards
- ❖ Recruitment and training
- ❖ Establishing high quality patient-oriented care practices
- ❖ Ensuring that nurses are highly efficient and motivated in their work
- ❖ Nursing duty allocation policies
- ❖ Nursing education policies

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Hospital Commissioning Stage

Finance

Hospital Commissioning Stage

Finance

- ❖ Preparation of Revenue and Expenditure budgets
- ❖ Tariff preparation and implementation
- ❖ Preparation of Business plan with 5 years cash flow and Working capital projection
- ❖ Development of Internal audit systems
- ❖ Management of and establishment of Accountability systems of cash collection
- ❖ Establishment of Accounts department
- ❖ Banking affairs



Hospital Commissioning Stage

Finance

- ❖ Setting up of Insurance Department
- ❖ Other Insurance related services
 - ❖ Property Insurance of Hospitals
 - ❖ Arranging Group Mediclaim & Personal accident policies for hospital staff
 - ❖ Arranging Professional indemnity/Errors & Omission policy for Doctors and other para-medical staff
 - ❖ Setting up Help-desk, Kiosk, Banners and providing details of popular insurance policies for promotion
 - ❖ Arrange Institutional tie-up mutually benefitting the hospital and the Institutions

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Hospital Commissioning Stage

Pharmacy



Hospital Commissioning Stage

Pharmacy

- ❖ Establishment and licensing of OP Pharmacy and IP Pharmacy
- ❖ Preparation of drug formulary of the hospital
- ❖ Pharmacy inventory control
- ❖ Establishment of Pharmacy and Therapeutic Committee



Hospital Commissioning stage

- ❖ Clinical Laboratory establishment
- ❖ Setting up of Blood bank/Blood storage facility
- ❖ Establishment of CSSD (Central Sterile Supply Department)
- ❖ Radiology Department Commissioning
- ❖ Quality Assurance Department
- ❖ Establishment of Support departments
- ❖ Biomedical Engineering Department
- ❖ General Administration

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Hospital Commissioning Stage

Clinical Laboratory Medicine Department



Hospital Commissioning Stage

Clinical Laboratory Medicine Department

- ❖ Commissioning of the equipment and running QC
- ❖ Establishing quality control systems
- ❖ Establish NABL Lab standards and guidelines, Documentation processes,
- ❖ Internals lab audits and NC closure management



Hospital Commissioning Stage

Clinical Laboratory Medicine Department

- ❖ Statutory licenses
- ❖ Tariff fixation
- ❖ Create a good Test Portfolio as per clinical and market survey with a plan for launch of new tests
- ❖ Assistance in Lab consumption data, test wise cost Metrics and implementation of the same



Hospital Commissioning Stage

Clinical Laboratory Medicine Department

- ❖ Streamline Lab material consumption, stock management, involvement in vendor finalization in coordination with client
- ❖ Marketing programmes of the lab
- ❖ Conceptualize and prepare all the required Literature/Brochure/LBL/Folders to pursue local clients in terms of business conversion
- ❖ Training and Development of the Lab Staff and IC Team
- ❖ Liaise and Coordinate with the key internal departments to provide best customer service and TAT experience within Lab

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Hospital Commissioning Stage

Blood Bank



Hospital Commissioning Stage

Blood bank/Blood storage facility

- ❖ Designing Blood bank based on the statutory norms
- ❖ Coordinating the statutory licensing process
- ❖ Transfusion medicine policies development
- ❖ Organize blood donation campaigns

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Hospital Commissioning Stage

Central Sterile Supply Department (CSSD)



Hospital Commissioning Stage

Central Sterile Supply Department (CSSD)

- ❖ Establish the Three Zone functioning of the CSSD
- ❖ Supervise the installation, commissioning and quality control of the sterilizers
- ❖ Establish CSSD policies
- ❖ Plan for Academic programmes

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Hospital Commissioning Stage

Radiology Department



Hospital Commissioning Stage

Radiology Department

- ❖ Commissioning of the Radiology equipment
- ❖ Statutory Licensing procedures
- ❖ Marketing of Radiology

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Hospital Commissioning Stage

Quality Assurance Department (QAD)

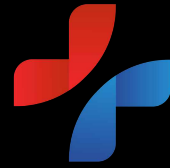


Hospital Commissioning Stage

Quality Assurance Department (QAD)

- ❖ Establishment of a good Quality Assurance Department (QAD)
- ❖ Preparation of Policies and Protocols for all departments and functions in the hospital
- ❖ Initiation of the establishment of all the Quality Policies in line with future accreditation
- ❖ Training of all employees in line with future accreditation
- ❖ Implementation of Quality Audit Systems
- ❖ Establishment of various Mandatory Committees
- ❖ Implementation of all Statutory Licenses

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Hospital Commissioning Stage

Establishment of support departments



Hospital Commissioning Stage

Establishment of support departments

- ❖ Engineering and Maintenance department
- ❖ Public Relations department

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Hospital Commissioning Stage

Biomedical Engineering Department



Hospital Commissioning Stage

Biomedical Engineering Department

- ❖ Medical Equipment Planning & Deployment
- ❖ Preparation of list of all Medical Equipment-Speciality wise
 - ❖ According to space planning
 - ❖ Based on optimum requirement of each department



Hospital Commissioning Stage

Biomedical Engineering Department

- ❖ Preparation of the neutral technical specifications of the required equipment
- ❖ Tender analysis and preparation of techno- commercial comparison
- ❖ Follow up on the purchases and co-ordination of installation processes as per the pre-determined schedule



Hospital Commissioning Stage

Biomedical Engineering Department

- ❖ Supervision of the installation process
- ❖ Training of the end users
 - ❖ HCS shall make sure that the vendor/manufacturer gives appropriate training to the end users identified

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Hospital Commissioning Stage

General Administration

Hospital Commissioning Stage

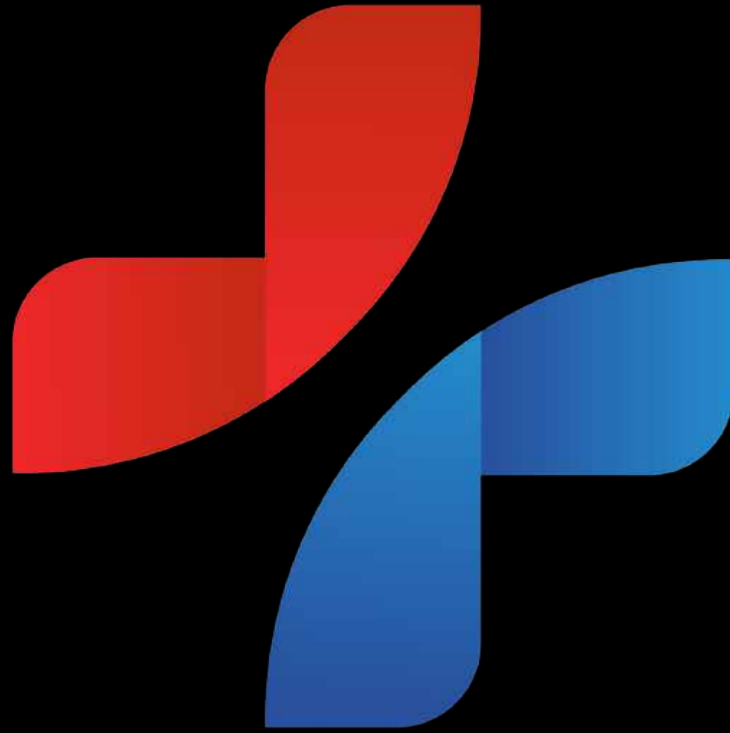
General Administration

- ❖ Establishment of
 - ❖ Administration and Office Guidelines
 - ❖ Office Hours
 - ❖ Absences and Lateness
 - ❖ Attendance
 - ❖ Dress Code
 - ❖ Bulletin Board

Hospital Commissioning Stage

General Administration

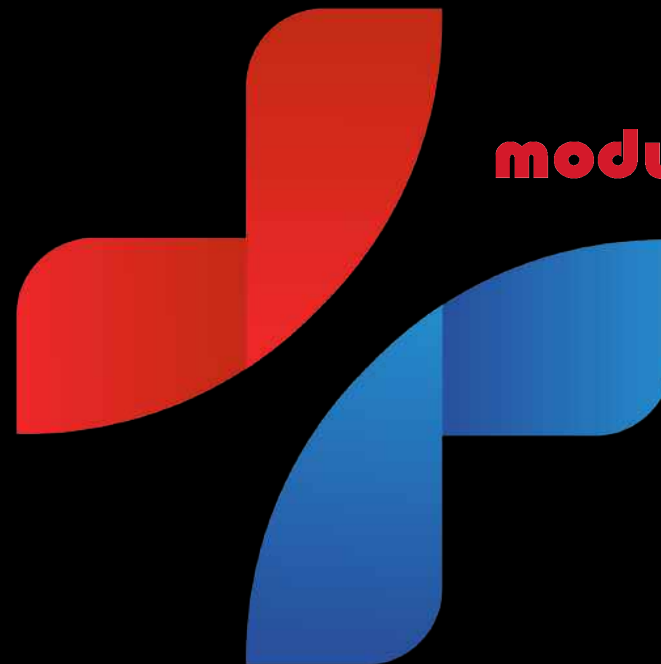
- ❖ Computer software
(Unauthorized copying)
- ❖ Copyright/Ownership issues
representing the Organization
- ❖ Personal Phone calls
- ❖ Gifts and Soliciting
- ❖ Office Security
- ❖ Using Office Equipment



HCS takes utmost care in ensuring that the designs comply with international and domestic safety standards, as well as statutory rules and norms

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155



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