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COMPANY PROFILE  
PROJECT REFERENCES  
M&E-P DESIGN, CONSULTANCY AND COMMISSIONING

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## OUR COMPANY

Optima Consultants Ltd is a leading professional engineering firm and premier provider of mechanical, electrical, plumbing (MEP) engineering and consulting services.

Optima Consultants established in 2005, specializes in state-of-the-art engineering designs for both new and renovation projects in a broad range of residential, commercial, high-rise and institutional buildings for clients throughout the region and internationally.

In the last six years, Optima Consultants has successfully completed more than 50 projects in engineering designs. We have an in-depth experience working with complex large-scale projects, as well as small-to medium-scale projects in a wide range of commercial, industrial, educational, retail, hospitality, and residential market sectors.

With over 60 years of collective experience, our team of specialized engineers has the expertise to deliver professional engineering designs with proven results.

## OUR MISSION

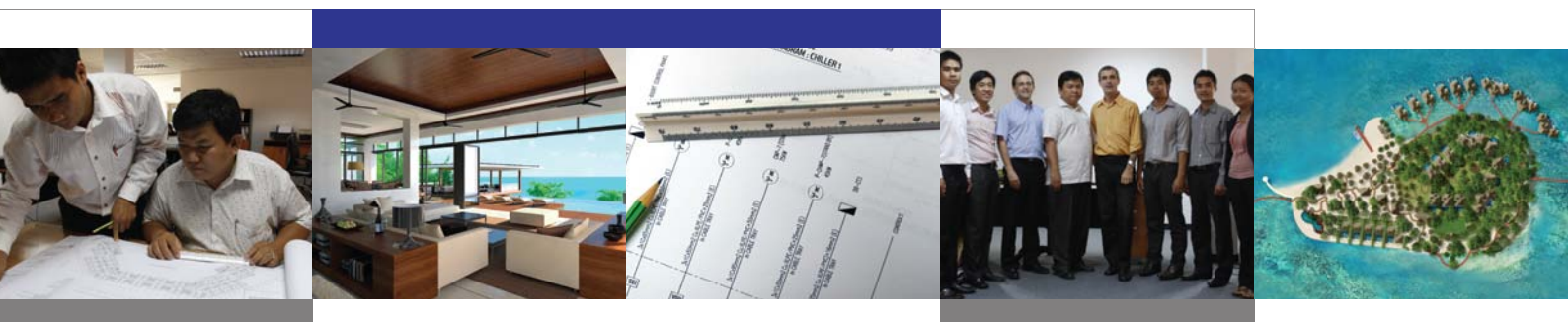
Optima Consultants is committed to providing value-driven engineering services and solutions. We provide a high level of integrity, professionalism and trust, and are committed to designing projects, from inception to completion, that maximize the value our clients derive from their investment.

## OUR SERVICES

Optima Consultants delivers cost-effective, leading-edge mechanical, electrical, and plumbing designs for long-term efficient functionality. We have a solid reputation for combining technologically advanced engineering with value-based solutions. Additionally, we offer consulting services for feasibility assessments, value engineering, energy analysis, building code analysis, cost estimates, and condition evaluations.

We strive to provide the best possible service to our clients in order to develop long-term working relationships and to generate repeat business directly and through word-of-mouth.

At Optima Consultants, our goal is the success of your project. Whether your project is large or small, our value-driven approach and unsurpassed expertise provides custom-engineering solutions designed to meet your unique objectives and help you realize your vision.



ENGINEERING EXCELLENCE

## PROJECT REFERENCES

CLIENT: ACLEDA Bank  
CONSULTANCY: MEP Design, site consultancy & commissioning  
LOCATION: Phnom Penh - Cambodia  
PERIOD: Jan. 2012 – Jan. 2014

- The new ACLEDA bank tower will be a 20-floor & 3 basement building for a total GFA of 40,000 m<sup>2</sup>. The tower will be combined with the existing 5-floor building located just in front.
- MEP full design at international standards. Transfer of existing MEP services to new facilities without business interruption.

CLIENT: Hongkong Land Ltd  
CONSULTANCY: MEP Design, site consultancy & commissioning  
LOCATION: Phnom Penh - Cambodia  
PERIOD: Sept. 11 – Feb 2012 (design); May 12 - Dec. 2012 (site)

- Renovation of the luxurious Colonial Mansion original building
- MEP full design and authorship supervision, at international standards of the renovation of the 9-floors building

CLIENT: Zannier Group (France)  
CONSULTANCY: MEP Design of a Luxury Hotel and Villa  
LOCATION: Siem Reap - Cambodia  
PERIOD: Feb. 2011 - Apr. 2012

- Luxury 5 Star Hotel in Siem Reap, bungalows, villa, restaurants & shops with a total GFA of 10,000 m<sup>2</sup>
- MEP full design and authorship supervision at international standards of the entire compound

CLIENT: iLi Consults / Inros Lackner AG  
CONSULTANCY: MEP Design of the extension of Nouakchott Airport (Mauritania)  
LOCATION: Siem Reap - Cambodia  
PERIOD: Feb. 2011 - Apr. 2012

- Extension of the Terminal Building of Nouakchott Airport from 3,000 m<sup>2</sup> GFA to 6,500 m<sup>2</sup>
- MEP full concept design and preparation of tender documents

CLIENT: Kids City  
CONSULTANCY: MEP Design  
LOCATION: Phnom Penh - Cambodia  
PERIOD: Mar. 2011 – Jan. 2012

- Kids City will be a kid's entertainment centre, including restaurants and shops. The building is 10-storeys & 2-basement for a total GFA of 6,000 m<sup>2</sup>.
- MEP full design at international standards.

## PROJECT REFERENCES

CLIENT: Morakot Island Development (KPIG Ltd)  
CONSULTANCY: MEP Design of Residential premises phase 1  
LOCATION: Sihanoukville - Cambodia  
PERIOD: Feb. 2011 - Dec. 2011

- Morakot Island is located off Sihanoukville and accessible by a 900m bridge. The island is a luxury mixed-use development on a 120-hectare tropical island. The project master plan includes over 500,000 m<sup>2</sup> of residential, commercial, recreational and amusement property for a budget of 300 millions USD.
- Full MEP design and Consultancy of the residential premise - 4 Buildings of 7 storeys, 186 serviced apartments with a total GFA of 30,000 m<sup>2</sup>

CLIENT: Brocon – Song Saa Island  
CONSULTANCY: Value Engineering, approvals & site survey  
LOCATION: Phnom Penh - Cambodia  
PERIOD: Sept. 2010 – Dec. 2011

- 27 luxury overwater, jungle and beach villas on Song Saa Private Island
- Value engineering and approval of the contractors design & built documents, site survey

CLIENT: Confluence - Raffles  
CONSULTANCY: Survey of technical services of Raffles' hotels in Cambodia  
LOCATION: Phnom Penh & Siem Reap- Cambodia  
PERIOD: Nov. 2011 - Dec. 2011

- Luxurious 5 stars hotels "Grand Hotel d'Angkor" and "Le Royal"
- Full technical survey, description and assessment

CLIENT: KPIG (Koh Puos Investment Group, Ltd) – Morakot Island  
CONSULTANCY: MEP Design of island infrastructure  
LOCATION: Phnom Penh - Cambodia  
PERIOD: Jul. 2011 – Sept. 2011

- Morakot Island is located off Sihanoukville and accessible by a 900m bridge. The island is a luxury mixed-use development on a 120-hectare tropical island. The project master plan includes over 500,000 m<sup>2</sup> of residential, commercial, recreational and amusement property for a budget of 300 millions USD.
- MEP full design of the island infrastructure services (electrical MV & LV, water, phone, internet, etc)

## PROJECT REFERENCES

CLIENT: IDP - ACE (Australian Center for Education) School

CONSULTANCY: MEP Design

LOCATION: Phnom Penh - Cambodia

PERIOD: Jun. 2011 – Sept. 2011

- The new and second campus of the Australian Center for Education in Phnom Penh
- MEP full design of the new ACE school

CLIENT: HOPE International School

CONSULTANCY: M&E Design, Site Consultancy and Commissioning

LOCATION: Phnom Penh - Cambodia

PERIOD: Jan. 2011 - June 2012

- 10,000 m<sup>2</sup> school to welcome 600 students
- Full MEP design at international standards.

CLIENT: CamAgra Investment Group Co., Ltd.

CONSULTANCY: M&E Design, Site Consultancy and Commissioning

LOCATION: Sihanoukville - Cambodia

PERIOD: Dec. 2010 - April 2011

- Chip Mill Factory consisting of 2 production lines, workshop and office facilities
- MEP full design

CLIENT: Morakot Island Development (KPIG Ltd)

CONSULTANCY: MEP Design of the Bridge landing area

LOCATION: Sihanoukville - Cambodia

PERIOD: Nov. 2010 - Dec. 2011

- Morakot Island is located off Sihanoukville and accessible by a 900m bridge.  
The island is a luxury mixed-use development on a 120-hectare tropical island.  
The project master plan includes over 500,000 m<sup>2</sup> of residential, commercial, recreational and amusement property for a budget of 300 millions USD.
- MEP full design and consultancy at international standards of the bridge landing area: 5,000 m<sup>2</sup>, offices building restaurants, fuel station, technical facilities for power plant 60MW, and water supply of 400 L/h for the entire island project

## PROJECT REFERENCES

CLIENT: Intercontinental Hotel  
CONSULTANCY: Energy Saving – Design – Site consultancy  
LOCATION: Phnom Penh - Cambodia  
PERIOD: Feb. 10 - Sept 11

- Energy saving on energy production, hot water production & chiller water production for A/C Identification of savings, development of solution and technical design, pay-back terms
- Re-design and modification of the 3MW power plant, tender documents for a 1.3 M\$US budget, including transformers – Switch-gears, full network MV, LV and back-up generators  
Site installation survey and approvals

CLIENT: UCB Bank Tower project  
CONSULTANCY: M&E Design  
LOCATION: Phnom Penh - Cambodia  
PERIOD: Jun. 2010 – Feb. 2011

- 12 Storeys and 3 basements building. 5 floors for bank area and 7 floors for offices, GFA of 11,000 m<sup>2</sup>
- M&E design including security system.

CLIENT: Ream Development phase 2 (Ream Riviera Villas and Condominium)  
CONSULTANCY: MEP Design  
LOCATION: Ream - Cambodia  
PERIOD: Nov. 09 - Apr. 11

- 3 Condominium buildings, 3 levels for a total of about 620 m<sup>2</sup> each building, main swimming pool and technical buildings. 14 large villas of 2 storeys for a total of 450 m<sup>2</sup> each villa and one swimming pool
- Design of the Electrical, Mechanical – Air Conditioning and Plumbing services

CLIENT: European Commission Premises and EU Representative Residence  
CONSULTANCY: MEP Design & site Consultancy  
LOCATION: Phnom Penh - Cambodia  
PERIOD: April 09 - Jan. 11

- The new 3,000 m<sup>2</sup> European Union premises is a 3-floor office building, 6 apartments and a residence
- Full technical design of the Electrical, Mechanical – Air Conditioning and Plumbing services following European Union Standards, as well as MEP site consultancy

## PROJECT REFERENCES

CLIENT: Saigon M&C Towers

CONSULTANCY: MEP Consultancy

LOCATION: Ho Chi Minh - Vietnam

PERIOD: April 09 - Dec. 10

- The Saigon M&C towers are a luxurious mixed used project located in centre town – offices apartment, shopping centre and data centre. 2 Towers of 40-floors – 5 basement level, linked by a “podium” building of 7-floors
- Design and built by Bouygues International; Optima is in charge of approving the “for construction” drawings, site inspections and reporting to the owner. Consultancy on M&E design and site works

CLIENT: Ream Development (Ream Riviera & hotel Project)

CONSULTANCY: MEP Design

LOCATION: Ream - Cambodia

PERIOD: July 09 - Dec. 10

- 54 room Luxurious Resort; 6 beach villas with private swimming pool, 6 building of 8 rooms, 200 meters length swimming pool; back of house & technical area of 4,000 m<sup>2</sup>
- Full technical design of the Electrical, Mechanical – Air Conditioning and Plumbing services following British Standards

CLIENT: Colonial Mansion 1 Residence - renovation

CONSULTANCY: M&E Design

LOCATION: Phnom Penh - Cambodia

PERIOD: May 10 - Sept.10

- Renovation of a high-end 9 floor Serviced Apartment building with 40 individual apartments
- Survey of existing premise and first full MEP design of renovation proposal

CLIENT: United Nations - Cambodia

CONSULTANCY: M&E Design

LOCATION: Phnom Penh - Cambodia

PERIOD: March. 09 - July. 10

- The new UN building is intended to welcome all the UN Agencies located in Cambodia in one site of 8,000 m<sup>2</sup> of newly state-of-the-art and secure premise at BS standards. The building will be LEED certified; the design will have to comply with LEED requirements
- Full technical construction design of the Electrical, Mechanical - Air conditioning and Plumbing services This 3rd contract with United Nation award Optima Consultants with the full scale of design of the Mechanical and Electrical to achieve a LEED certified building

## PROJECT REFERENCES

CLIENT: Cambodia Hospitality Co. Ltd – FCC Angkor  
CONSULTANCY: M&E Value Engineering – M&E Consultant  
LOCATION: Phnom Penh - Cambodia  
PERIOD: Nov. 08 - Dec. 09

- FCC Angkor hotel extension -25 additional rooms, restaurant, laundry, new power plant
- M&E contractor's design review, cost saving & value engineering.

CLIENT: Colonial Mansion II  
CONSULTANCY: M&E Value Engineering – M&E Consultant  
LOCATION: Phnom Penh - Cambodia  
PERIOD: June 08 - Dec. 10

- Serviced Apartment building with 63 apartments
- M&E design analysis, cost saving – 100k\$ -20% saving achieved. M&E Consultants for construction approvals

CLIENT: United Nations - Cambodia  
CONSULTANCY: M&E Design  
LOCATION: Phnom Penh - Cambodia  
PERIOD: March 08 - July 10

- The new UN building is intended to welcome all the UN Agencies located in Cambodia in one site of 8,000 m<sup>2</sup> of newly state-of-the-art and secure premise at BS standards. Electrical network – MV, LV & VLV of the new 5 storey Buildings
- M&E design of electrical installations

CLIENT: Takeo Eyes Hospital  
CONSULTANCY: M&E Design – M&E Management and Commissioning  
LOCATION: Takeo - Cambodia  
PERIOD: Oct. 07 – Jan. 2008 (design); Apr. 2008 - Mar. 2010 (site)

- The Takeo hospital is a new high quality hospital complex dedicated to eyes, including clean rooms and facilities to set-up a European standard quality hospital with a tight budget.
- M&E design of the entire complex, tender documents and consultancy on selection of the contractors. M&E Management of the project, quality control and Commissioning of M&E equipment and networks



## PROJECT REFERENCES

CLIENT: Australian Embassy  
CONSULTANCY: M&E Consultant and Commissioning  
LOCATION: Phnom Penh - Cambodia  
PERIOD: Oct. 07 - Aug 2009

- Complete M&E consultancy, on-site work follow-up and approvals for the new Australian Embassy in Cambodia. All M&E is according to Australian standards
- M&E Management of the project, liaison with Australian engineers, quality control and Commissioning of M&E equipment and networks

CLIENT: Qatar Embassy in Paris - Residence of the Ambassador  
CONSULTANCY: MEP Design  
LOCATION: Paris - France  
PERIOD: April 09 - Aug. 2009

- Luxurious 4-floors residence of the Ambassador of Qatar in France
- Full technical design of the Electrical, Mechanical – Air Conditioning and Plumbing services following French Standards

CLIENT: Istana Complex  
CONSULTANCY: M&E Design and M&E on-site Consultant  
LOCATION: Phuket - Thailand  
PERIOD: July 08 - July 2009

- M&E design of the entire complex, tender documents and consultancy on on-site works
- M&E Management of the project, quality control and commissioning of M&E equipment and networks

CLIENT: “Street 240” apartments  
CONSULTANCY: M&E Design – M&E Management and Commissioning  
LOCATION: Phnom Penh - Cambodia  
PERIOD: Dec. 07 - July 09

- 2 Towers of 7 floors and 2 underground parking level to accommodate 38 luxurious apartments
- M&E design of the entire complex, tender documents and consultancy on selection of the contractors

CLIENT: Borey Nagara  
CONSULTANCY: M&E Design – M&E Management and Commissioning  
LOCATION: Siem Reap - Cambodia  
PERIOD: Sept. 07 - July 09

- The 12,000 m<sup>2</sup> Borey Nagara complex was schedule to be one of the largest accommodation complex of Siem Reap. The design includes 33 two-floor villas and 319 apartments
- M&E design of the entire complex, tender documents and consultancy on selection of the contractors

## PROJECT REFERENCES

CLIENT: Golden Towers for a Mercure Hotel

CONSULTANCY: Budget, MEP Design brief and Feasibility study

LOCATION: Phnom Penh - Cambodia

PERIOD: April 09 - July 2009

- Feasibility study – schematics and budget of the Electrical, Mechanical – Air Conditioning and Plumbing services

CLIENT: Cap Yamu Villa 35

CONSULTANCY: M&E Design Review – M&E Re-Design

LOCATION: Phuket - Thailand

PERIOD: June 08 – Jun. 2009

- Luxurious Villa
- M&E analysis and re-design of the entire complex. Tender documents and consultancy on selection of the contractors

CLIENT: Sonja Kill Memorial Hospital – iLi Consults

CONSULTANCY: M&E Management of the Hospital construction

LOCATION: Kampot - Cambodia

PERIOD: July 07 - Feb. 09

- The Sonja Kill Memorial Hospital is the largest children hospital in Cambodia Province, a top of the art hospital with maternity and chirurgical operation theatres as per European Standard (“clean rooms”)
- M&E management of the project for iLi Consults, including design improvement & modification, approval of all M&E related construction works, quality control, up to commissioning stage

CLIENT: Siem Reap Serviced Apartment

CONSULTANCY: M&E Design – M&E Management and Commissioning

LOCATION: Siem Reap - Cambodia

PERIOD: Jan. 08 - Jan. 09

- 36 apartments, 2 buildings of 4 floors
- M&E design of the entire complex, tender documents and consultancy on on-site works. M&E Management of the project, quality control and commissioning of M&E equipment and networks

CLIENT: KRTC (Kampot Nurse School)

CONSULTANCY: MEP Design and commissioning

LOCATION: Kampot - Cambodia

PERIOD: July 08 - Dec. 2008

- Government Nurse School
- M&E design & tender specifications of the 2 nurse school buildings, assessment of bids  
Commissioning

## PROJECT REFERENCES

CLIENT: Maruhan Japan Bank

CONSULTANCY: M&E assessment of the new Bank & Office building

LOCATION: Phnom Penh - Cambodia

PERIOD: June 08 - July 2008

- New Phnom Penh head office
- Full M&E analysis of the building  
Punch list and details of the necessary modifications to bring the building to satisfactory quality and safety

CLIENT: UNDP Cambodia

CONSULTANCY: M&E Consultancy – Energy analysis

LOCATION: Phnom Penh - Cambodia

PERIOD: March 08 - July 08

- Existing United Agency buildings and facilities
- Analysis and Review of the usage of electricity in the UNDP buildings  
Recommend improvements to the entire electrical network and provide TOR for the bid document for retrofitting, remediation project, and electrical upgrade as per international best practice

CLIENT: Pacific Place Hanoi - Archetype Group

CONSULTANCY: M&E Management of final stage of Pacific Place construction

LOCATION: Hanoi - Vietnam

PERIOD: April 07 - Oct. 2007

- 23 Floors building, 16,500 m<sup>2</sup> of offices, 179 luxury apartments, 6,400 m<sup>2</sup> of retails, swimming pool and 4 restaurants
- M&E Manager of the project in its final stage construction, including final design modification, start-up of equipment, quality control, up to commissioning stage

CLIENT: Crown Factory

CONSULTANCY: Factory Power Plant

LOCATION: Phnom Penh - Cambodia

PERIOD: March 07 - October 2007

- Design and site management of implementation of 3 MW power plant – synchronized diesel generators plant

## PROJECT REFERENCES

CLIENT: SCA (Société Concessionnaire des Aéroports) International and Domestic Airports of Cambodia

CONSULTANCY: Analysis the Energy systems and cost

LOCATION: Phnom Penh and Siem Reap - Cambodia

PERIOD: Feb. 07 - Sept. 2007

- Analysis, review and preliminary study of the Energy systems of the 3 International and Domestic Airports of Cambodia: Electrical power production, Centralized Air Conditioning system, hot water production
- Complete analysis of existing operation and maintenance costs of the main equipment. Extended comparisons with alternative equipment with financial assessments

CLIENT: Raffles Hotels & Spa

CONSULTANCY: Energy Saving and Energy Management

LOCATION: Phnom Penh and Siem Reap - Cambodia

PERIOD: May 06 - May 2007

- Consultant to implement saving measure and set-up a complete monitoring system. Re-commissioning of existing system, staff information, proper set-up of chiller plant, department monitoring, training, low-investment measures
- Yearly contract to provide the owner with M&E Consultancy and Energy Management
  - Energy Audit and Operation and Maintenance Assessment
  - M&E consultant on all investments scheduled; efficiency and cost saving as a guideline to advise the best investment on equipment renewal

CLIENT: Raffles Grand Hotel d'Angkor

CONSULTANCY: Preliminary M&E Consultancy for the new Ballroom

LOCATION: Siem Reap - Cambodia

PERIOD: Feb. 07 - March 2007

- 2.5 M\$US Project – 2 floor building, 3 meeting rooms, kitchen, cold rooms, offices
- M&E design, tender documents and technical specifications

## PROJECT REFERENCES

CLIENT: Raffles Grand Hotel d'Angkor  
CONSULTANCY: Equipment renewal – 0.5 M\$US budget  
LOCATION: Siem Reap - Cambodia  
PERIOD: July 06 - Jan. 2007

- Design and Tender documents for 0.5 MUSD of investment. Selection of cost effective equipment to reduce energy bill
- Technical analysis of the bids, selection of suppliers, consultancy on equipment installation and commissioning
- Replacement of the power plant, chillers plant, hot water production and steam production
  - The power installed is 3 Perkins diesel generator 620, 815 and 1,050 kVA to replace the existing 2 x 1,500 kVA
  - Chiller plant: replacement of the 2 old chiller by York 200 T screw chiller type
  - Hot water system: Implementation of Stiebel Heat Pumps instead of the fuel steamer
  - New fuel boiler 1,000 kg/h steam
- Total operation cost saving: 0.40 M\$US per year

CLIENT: Cambodiana Hotel  
CONSULTANCY: Energy Audit and Operation and Maintenance Assessment  
LOCATION: Phnom Penh - Cambodia  
PERIOD: May 06 - Aug. 06

- Complete audit to decrease Energy Bill
- Maximizing efficiency of the existing installations with no or low cost investment
- Water cooled centrifugal chiller; generator with heat exchanger, steamer with heat exchanger, building envelop, lighting

## PROJECT REFERENCES

### OTHER PROJECTS CONDUCTED BY OPTIMA CONSULTANTS:

- Start-up & commissioning of the 60 MUSD centralized air conditioning Chiller plants SOYOUZ Center – French Guyana
  - Complete audit of chiller Plant installation and chilled water distribution, set-up and optimization of the plant and A/C distribution, set-up and optimization of the air conditioning BMS system, Commissioning of the Chiller Plant and Air conditioning distribution for AEI International – super Mall at Varsovia – Poland
  - Troubleshooting analysis and set-up chiller and cold storage – BigA supermarket Vietnam
  - Commissioning of Chiller system and distribution – Siem Reap International Airport
  - Commissioning of A/C distribution – US Embassy Phnom Penh
  - Set-up and commissioning of Chiller Plant – Heritage Hotel Siem Reap
  - Maintenance Assessment - Mobitel / Royal Telecom International (RTI) Cambodia
  - Design of A/C and Humidifier for Mobitel sub-contractor (RJ services)
  - Energy survey – Northbridge Communities
  - Troubleshooting and works supervision on Chiller Plant – Northbridge Communities
  - Set-up and commissioning of Chiller Plant – Angkor Palace Resort Hotel Siem Reap
  - Commissioning of PPM Pharmaceutical laboratory: Regulation Tuning, air balancing of clean room (600m2), commissioning of chiller
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## PROJECT REFERENCES

### DEVELOPERS, INVESTORS, INSTITUTIONS, PROJECTS

Acleda Bank  
Australian Embassy of Phnom Penh  
Australian Center for Education  
Abode Co. (Thailand)  
CamAgra Investment Group Co., Ltd.  
Cambodia Hospitality Co., Ltd.  
Cambodiana Hotel  
Cap Yamu  
Crown Factory  
European Commission  
FCC Group & FCC Angkor  
Hongkong Land Ltd  
Hope International School  
Intercontinental Hotel  
Istana Phuket  
JSM Indochina property fund  
Kampot Nurse School  
Kids City  
KPIG Co. Ltd (Morakot Island)  
Maruhan Japan Bank  
Pacific Place Hanoi  
Raffles Hotels & Spa - Cambodia  
Ream Resort Development  
Residence of the Ambassador of Qatar (France)  
Saigon M&C Tower  
Siem Reap Serviced Apartment  
Singapore Embassy in Hanoi  
Société Concessionnaire des Aéroports - Cambodia - Vinci  
Sonja Kill Memorial Hospital  
"Street 240" luxury apartments  
UCB Bank  
United Nations - UNDP Cambodia  
Zannier Group (France)

PROJECT REFERENCES

ARCHITECTS, PROJECT MANAGERS, CONSULTANTS & CONTRACTORS

AEDAS

Archetype Cambodia, France & Vietnam

AW2 France & Vietnam

Beaumont Thailand

BVN Australia

Confluence

Gfab Architects (Indonesia, Thailand)

iLi Consults

ITC Australia

LBL International

Meinhardt Thailand

Pyle Architects

RJM Consultants (Thailand)

The Room Design Studio

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Phnom Penh Center, Building B1, Level 2,  
Corner Sothearos & Sihanouk Blvd., Phnom Penh, Cambodia



PROJECT REFERENCES

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