

# **SMART PMC 项目管理咨询业务介绍**

## **DESCRIPTION OF SMART PMC**

**SMART EPC**



SMART EPC LTD., Canada

## 一、 Introduction of Smart PMC (Project Management Consultancy) 关于 Smart PMC (项目管理咨询)

### 1.1. About SMART PMC 简介

Smart PMC is an organization with a management team entirely dedicated and focused on the provision of PMC services to deliver projects worldwide for our Chinese clients. Smart PMC sponsors, supports and honors the contract execution throughout its life-cycle, as single point of contact. The management team of Smart PMC has an extensive experience in managing large oil and gas contracts, with a strong cost consciousness to help Clients control the cost of their investments.

Smart PMC 是一个专注于为我们中国客户的全球项目提供 PMC 服务的管理团队。Smart PMC 可以监管，支持和作为单一接触点来履行项目全周期的合同。Smart PMC 的管理团队在管理大型石油和天然气合同方面拥有丰富的经验，具有强大的成本意识以帮助客户控制投资成本。

At Smart PMC, we understand that managing large-scale projects takes more than just having exceptional project execution capabilities and advanced monitoring tools. It requires people with the right experience and the understanding of how to deliver a successful project in the particular region and local environment. Smart PMC 团队明白，管理大型项目不仅仅需要具备卓越的项目执行能力和先进的监控工具，更要求具有正确经验的人以及对如何在特定地区和当地环境下实现项目成功的理解。

Smart PMC assists Clients to achieve their investment objectives and deliver their projects, by providing Project Management Consultancy (PMC) services from the definition to the operational phases.

Smart PMC 具有提供项目全周期（从项目前期定义到投产运行）的项目管理咨询（PMC）服务，协助客户实现其投资目标和交付项目。

Smart PMC specialists have carried out some of the world's most challenging EPC projects. From the technology and licensor selection phase to the management of multinational consortia in the execution and successful delivery of world-scale, lump-sum turnkey projects.

Smart PMC 的专家参与了一些全球最具挑战性的 EPC 项目。从技术和工艺包选择阶段到跨国 EPC 联合执行的项目管理，到成功交付世界级交钥匙总承包项目方面的管理。

Our specialists have not only developed efficient processes, procedures and tools, but also applied operational and effective project management skills at all levels.

我们的专家不仅开发了高效的流程，程序和工具，还包括实施各级别的可操作和有效的项目管理技巧：

 *An integrated approach* 项目集成管理法

Smart PMC offers a wide range of services, managing all phases of a project starting from feasibility studies, basic design and FEED, detailed engineering and procurement, through to construction, commissioning and start-up of the facilities. The PMC team may combine Client and Smart PMC personnel with no duplication of roles.

Smart PMC 提供广泛的服务，从可行性研究，基础设计和 FEED，详细设计和采购，施工，调试和开工，管理项目的各个阶段。PMC 团队可以由雇主人员与 Smart PMC 人员有机组合在一起，避免岗位重复。

#### **Timely mobilization and global sourcing 及时的调动和全球采购**

Smart PMC understands the challenges Clients face in awarding contracts “as planned”. Consequently, following an award, the immediate mobilization of a qualified PMC team is the focus. The PMC staffing process coordinates global sourcing, identification of skilled personnel and submittal of qualified candidates to our Client, to ensure a smooth transition into PMC implementation.

Smart PMC 了解客户在“按计划”授标合同时面临的挑战。因此，在授标后，立即调动合格的 PMC 团队到指定位置是重中之重。PMC 招聘程序将协调全球人力资源渠道，选定技能合格人员，并向客户提交合格的候选人，以确保顺利过渡到 PMC 实施阶段。

As a global company, Smart has a diversified workforce, with personnel and consultants from various backgrounds, locations and cultures, making PMC teams creative and dynamic. Our global presence and local footprint enable us to mobilize people with the right experience in the right place, at the right time, with the acceptable rates.

作为一家全球性公司，Smart 拥有多元化的员工队伍，来自不同背景，地域和文化的人员和顾问，使得 PMC 团队更有创造性和活力。我们全球经历和本地化员工方案使得我们在正确的时间快速调动有经验的工作人员到达正确的工作地点，同时，还可以把服务费用降低到可接受的水平。

## **1.2. Project Management Consultancy for all types of projects 针对各类型项目的项目管理咨询**

Smart PMC has developed a comprehensive competency in project management for our Chinese Clients to manage the interfaces with global companies. This expertise is an important part of the value-added PMC services provided to our Client.

Smart PMC 已经为我们的中国客户开发了全面管理与全球公司对接的项目管理能力。这项专业技术是为我们客户提供的 PMC 增值服务的重要组成部分。

### **Our Mission 我们的任务**

To ensure smooth interface and integration between Chinese EPC companies and Top world owner companies.

确保中国 EPC 公司与顶级世界业主公司之间项目执行中顺利的接合。

## **Our Core Competencies 我们的核心竞争力**

- ✚ The collective experiences of our founders in both EPC companies and Owner companies.

我们的创始人在 EPC 公司和业主公司的集体经验。

- ✚ The proven track record of scalable project management system.

过去项目证实的具有扩展性的项目管理系统。

## **Services' Scope 服务范围**

Services for Part or Full Lifecycle of Project.

部分或全部项目生命周期的服务。

## **What Smart PMC provides-Smart PMC 提供哪些服务**

The success of a project with respect to cost effectiveness, schedule compliance, safety, operability and maintainability is dependent upon the project management team and how it integrates with both the EPC contractor's project team, and the Client's own representatives:

一个项目的成本效益，计划一致性，安全性，可操作性和可维护性方面的成功取决于项目管理团队，还取决于它如何与 EPC 承包商的项目团队和客户代表进行集成：

### **✚ Project management 项目管理**

Smart PMC manages and integrates the activities of the engineering, procurement, and construction phases of the project. Clients with large, complicated capital projects, sometimes in challenging locations, can assign Smart PMC as their overall program manager to ensure their expectations are met. Acting as the Client's single point of contact, Smart PMC consolidates under one seamless execution all contractors and subcontractors, often from diverse cultures and backgrounds, to deliver a successful project.

Smart PMC 管理和整合项目的设计，采购和施工阶段的各项任务。拥有庞大而复杂的基本工程项目的客户，有时在具有挑战性的地域，可以指派 Smart PMC 作为他们的总体项目经理，以确保达到他们的预期。作为客户的单一联络点，Smart PMC 确保来自不同文化和背景的所有承包商和分包商无缝对接，以实现项目的成功。

### **✚ Resourcing strategy 资源策略**

Identification of key personnel with relevant experience; maximization of personnel with local experience and use of local/regional staff.

识别具有相关经验的关键人员；最大限度地利用本地经验人员，和使用当地/地域的员工。

### **✚ Project Controls 项目控制**

A detailed understanding of managing the project costs and schedule is critical. Smart PMC draws from the specialists' experience to enhance its project management and control capabilities.

对管理项目成本和进度的详细了解至关重要。Smart PMC 吸取专家的经验，以提高其项目管理和控制能力。

#### **Engineering Management and Procurement 设计管理和采购**

Attention is given to detail in defining the requirements, aligning the stakeholder teams and ensuring a disciplined approach to implementation will result in a successful project.

在项目定义要求时，统一利益相关者团队认识时，和确保项目执行的严格方案时需要关注细节，这是保证项目成功的关键。

#### **Construction Management 施工管理**

Focuses on safety, schedule, costs, staffing, quality and methods to ensure the success of construction. Our experience in executing EPC projects allows us to develop a construction plan which manages and mitigates risk.

聚焦于安全，时间表，成本，人员配置，质量和方法，以确保成功的施工。我们执行 EPC 项目的大量经验，保证了我们有能力编制一个具有管理和降低风险的施工计划。

#### **Commissioning 项目试运行**

Led by the PMC team the commissioning phase focuses on safety, cleanliness, on time and on specifications completion. Our specialists' experience of directly commissioning grassroots and brownfield facilities ensures a smooth commissioning phase, with easy access to advice on all aspects of the plant.

在 PMC 团队的带领下，试运行阶段侧重于安全，清洁，准时和技术达标。我们专家的在全新项目试车和改造项目试车的经验可确保试运行阶段的顺利进行，并且可以轻松获得类似工厂的各方面建议。

#### **Pro-actively managing the risk elements of a project through 通过以下方式积极管理项目的风险要素：**

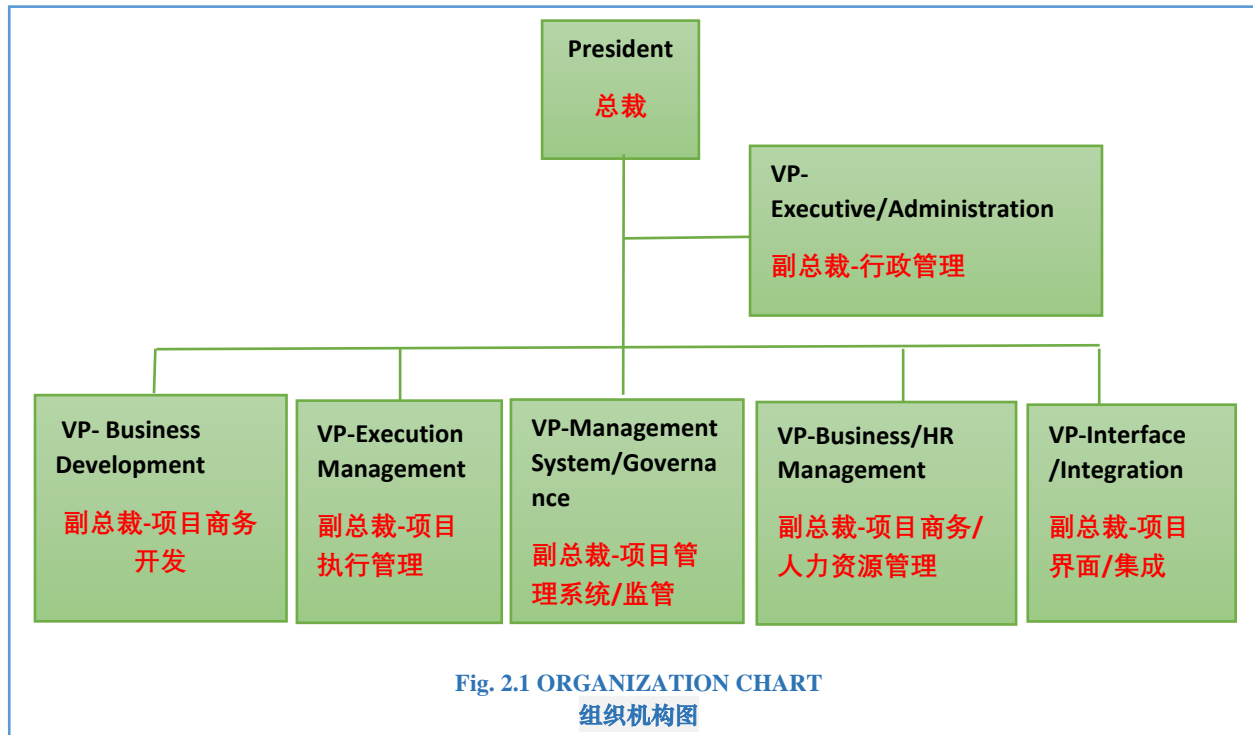
- Meeting QHSE expectations, including flow-down through the prime, sub and sub-subcontractors  
满足 QHSE 的预期，包括贯穿于主承包商，分包商和子分包商
- Delivering to schedule and budget targets  
按时间表和预算目标交付
- Obtaining experienced, qualified personnel  
获得经验丰富的合格人员
- Managing contractors, especially during the EPC phase  
管理承包商，特别是在 EPC 阶段
- Delivering “fit for purpose” facilities  
交付“适合目的”的设施
- Achieving national content targets

实现国家满意的目标

- Using proven software tools  
使用成熟的软件工具

## 二、 Management Team (Founders)管理团队（创建人）

### 2.1 SMART PMC Organization Chart 组织架构示意图



### 2.2 SMART PMC Management Team (Founders) -SMART 管理团队（创建人）

#### ■ Chengshan Zhang, President.

张成山，总裁

Mr. Zhang has been working in oil and gas sector for 25+ years, with experiences of facilities construction, maintenance, EPC project management both in China and Canada, and later on training/consultancy business when Smart EPC Ltd, which is founded in 2007.

张先生一直在石油和天然气领域工作超过 25 年，拥有中国和加拿大的设施建设，维护，EPC 项目管理方面的经验，以及具有在 2007 年创建的 Smart EPC Ltd 公司的培训/咨询业务方面的管理经验。

Mr. Zhang holds a Bachelor degree in Petrochemical Equipment and Machineries from Daqing Petroleum Institute, a Master degree in Mechanical Engineering from Harbin Institute of Technology and a Master degree in Project Management from University of Calgary, Canada.



张先生拥有大庆石油学院石油化工设备和机械专业学士学位，哈尔滨工业大学机械工程硕士学位和加拿大卡尔加里大学项目管理硕士学位。

#### ■ Ying An, VP-Executive and Administration

安颖，副总裁-执行官/行政管理

Mrs. Ying An, a project controls specialist with over 15 years' experience in cost control and accounting with a proven track record in leading, reporting and training cost personnel in all aspects of cost and change management. In the recent years her duties have been extended to project coordination and administration, acting as the administrative point of contact between project managers and the team / contractors, providing secretarial and administrative support. Her project experience includes midstream energy, power transmission and distribution, petroleum refining projects, tar sand plant modification, upgrading and gas process plants. The projects are various in sizes with budgets up to \$1 billion.

安颖女士是一位在成本控制和会计方面拥有超过 15 年经验的项目控制专家，在成本及变更管理的各个方面，领导，报告和培训造价人员，有着可靠的工作业绩。近年来，她的职责扩展到项目协调和管理，作为项目经理与团队/承包商之间的行政联络点，提供秘书和行政支持。她的项目经验包括中游能源，输配电，石油炼制项目，油砂精炼厂升级改造和天然气处理厂等。这些项目规模各不相同，最高预算达 10 亿美元。

Mrs. Ying An obtained two Bachelor degrees in Mechanical engineering and Accounting, and she has been a AACE member (the Association for the Advancement of Cost Engineering).

安颖女士拥有机械工程学位和会计学士学位，并且是 AACE 成员。

#### ■ Pei F Ling, VP Business Development

Pei F Ling，副总裁-商务开发

Mr. Ling, P.Eng., has over 32 years of experience in technical solutions, business operation, and project management of oil and gas, petrochemical, and pipeline projects and industries. He started as a design engineer, and has developed his career encompassing engineering management, procurement, contracts management, construction, project controls, and project management. He has involved as owners, prime contractors and project management contractors (PMCs) in respective global companies, and has extensive experiences in hands-on work and leadership from owner project development and definition to project contracting, EPC executions and deliveries in oil sands, upgrading, SAGD, refineries, pipelines, polystyrene, utilities and infrastructures.

凌先生是一名专业工程师，在石油天然气，石油化工，管道项目和行业的技术解决方案，商业运营和项目管理方面拥有超过 32 年的经验。他最初是一名设计工程师，职业生涯涵盖工程管理，采购，合同管理，施工，项目控制和项目管理。他曾在不同的跨国公司中担任过业主，总承包商和项目管理服务商（PMC），在业主项目开发的各个阶段（项目定义到

项目发包，EPC 执行，项目交付）都具有丰富的实践经验和领导经验，项目涵盖：油砂开发，SAGD，炼油厂，管道，聚苯乙烯，公共设施和基础设施等。

Mr. Ling has been instrumental in the development of project management systems, procedures, guidelines and practices on various large capital projects. Most of these large projects required multiple EPC contract parties and joint ventures in the project execution and turn over to operating assets. These project management systems have been provided as the fundamental operating basis, quality assurance and risk management for reliable delivery of project goals in safety, quality, schedule and cost.

凌先生在各种大型资本项目的项目管理系统，规程，指导方针和实践的开发中发挥了重要作用。这些大型项目中的大多数需要多个 EPC 合同方和联合体来执行项目并转交到业主成为运营资产。这些项目管理系统已成为至关重要的项目运营基础，质量保证和风险管理工具，以实现在安全，质量，进度和成本方面项目目标的可靠交付。

Mr. Ling obtained a Bachelor of Engineering degree in Civil Engineering from Zhejiang University, and a Master of Engineering degree in Steel Structure Engineering from Tsinghua University. He has been a P.Eng. in both APEGA (Alberta) and APEGBC (British Columbia).

凌先生拥有浙江大学土木工程学士学位和清华大学钢结构工程硕士学位。他是一名 APEGA（艾伯塔省）和 APEGBC（不列颠哥伦比亚省）认证的专业工程师。

#### ■ **Bob Lo, VP Execution Management**

**Bob Lo, 副总裁-执行管理**

Bob is a value-driven senior manager with over 38 years of experience and expertise in project management activities including project planning and execution, cost control and change management, for Front End Loading (FEL) and Engineering and Construction of heavy oil, refineries, gas processing and mining facilities in Canada and overseas.

Bob 是一位以价值为驱动的高级经理，在项目管理方面拥有超过 38 年的经验和专业知识，包括加拿大和海外的重油，炼油厂，天然气加工以及采矿设施的项目规划和执行，成本控制 and 变更管理，项目前期准备（FEL）和工程建设。

He has been recognized as a self-motivated and results-oriented team leader with demonstrated leadership skill to manage multiple responsibilities in a fast-paced environment with critical deadlines.

他被公认为一个自我激励，以结果为导向的团队领导者，具有卓越的领导能力，能够在关键期限内的快节奏环境中管理多重职责。

He successfully implemented proven processes in project setup to enable efficient personnel mobilization and sound project baselines for effective monitoring and control; coached and stewarded the project controls team to evolve into high performing team and delivered consistent value to projects. He was instrumental in the development, training and deployment of project delivery processes and procedures for an international oil & gas company.



他成功的实施了经过验证的项目组织流程，以实现有效的人员调动和合理的项目基准，从而达到有效的监督和控制；指导和管理项目控制团队成长为高绩效团队并为项目提供一致的价值观。他具有帮助国际石油和天然气公司负责开发，培训和全公司内部部署项目执行体系和流程的成功经验。

Bob graduated from Sir Sandford Fleming College in Ontario, Canada and is an active member of AACE International.

Bob 毕业于加拿大安大略省的桑福德弗雷明学院，是国际成本工程协会的一名正式会员。

#### ■ John Zhao, VP Management System/Governance.

**John Zhao, 副总裁-管理系统/治理**

With a total of 30 years' experience in heavy construction industry of petrochemical and oil & gas sector, John spent 8 years with international contractors (Far/Middle East), 7 years with EPC consulting firms (Canada) and past 12 years with major oil & gas companies (North America and Europe), his knowledge, skills and experiences always add values to project organizations in the specialty area of Project Management, Cost Controls and Risk Management.

John 在石化和石油天然气行业拥有 30 年的工程经验，曾为国际承包商（远东/中东）工作 8 年，在 EPC 咨询公司（加拿大）工作 7 年，在过去的 12 年中就职于国际知名石油和天然气公司（北美和欧洲），他的知识，技能及经验始终为项目管理，成本控制和风险管理等专业领域的项目组织增加价值。

Holding MSc. (Distinction) and BSc. (Honors) from England, John developed a proprietary RISCOR simulation model to evaluate the probability of major projects' cost overruns at a given budget / AFE in consideration of potential delays and systemic risks. He has presented on the world stages in many occasions on the topic of risk management, contracting strategy and project contingency simulations. His presentation included talks at various conferences including Nashville 2017, Calgary 2017 & 2014, SPE in Denver 2011, London 2010, Miami in 2007, IQPC in Abu Dhabi 2008, and AACE in Las Vegas in 2005.

John 在英格兰获得了荣誉学士学位和优秀硕士毕业生。John 独立开发了 RISCOR 专利模拟商业软件，本软件通过考虑潜在的工期延误和系统性风险来评估并预测特定预算/ AFE（投资审批）中主要项目成本超支的可能性。他多次在世界级场合上就风险管理，合同战略和项目应急模拟等议题做过专题演讲。包括在 2017 年纳什维尔，2014 年和 2017 年卡尔加里，2011 年丹佛 SPE，2010 年伦敦，2007 年迈阿密，2008 年阿布扎比 IQPC 和 2005 年拉斯维加斯 AACE 等各种会议上进行的演讲。

John's focused area is on risk quantification technique but he also skillfully weaves risk practices into complex contracting and procurement strategy, which provide a semi-quantitative tool to conduct bids evaluation and contract selection. John volunteers to coach and mentor the young professionals, contributing studentship to local universities. As an advisor developing a risk-based

Project Management Gate review and scoring system, his work is applicable in the industries of energy, mining, petrochemicals and commercial construction.

John 的重点领域是风险量化技术，但他也巧妙地将风险实践融入复杂的合同和采购策略中，为实施投标评估和合同选择提供了一种半定量工具。John 志愿为当地大学培训和指导年轻的专业人员，并提供奖学金。作为开发基于风险的项目管理阶段评审和评分系统的顾问，他的工作适用于能源，采矿，石化和商业建筑等行业。

#### ■ Max Wei, VP Business/HR Management

##### Max Wei, 副总裁-商务/人力资源管理

In addition to his early career in infrastructure work, including as a concrete expert consultant to the design and construction of Confederation Bridge, Toronto Airport Tunnel and Vancouver Sky Train project, etc., Max has 20 years of Canadian oil & gas and mining industry experience with progressive responsibilities from engineering & project management including roles as department manager of a major EPC company, to Director of Engineering of a major oil company and a managing director and CEO of mining companies.

除了早期在基础设施工作方面的职业生涯，包括作为联邦大桥，多伦多机场隧道和温哥华空中列车等项目的设计和建造的混凝土方面的专家顾问，Max 还拥有 20 年的加拿大石油天然气和采矿业经验，担任工程和项目管理的职责，包括国际知名大型 EPC 公司的部门经理，知名石油公司的工程总监以及矿业公司的总经理和首席执行官。

He has excellent knowledge and skills in corporate/project governance, management controls, financing, engineering/project management, safety management, project reviews, cost reduction, emergency recovery, and international business mergers, acquisitions, JVs, and insolvency issues, etc.

他在企业/项目监管，管理控制，投资，工程/项目管理，安全管理，项目审查，成本节约，应急救援以及国际企业合并，收购，合资企业和破产问题等方面拥有卓越的知识 and 技能。

Max is also an expert in the global market for engineering, construction, fabrication and supply of materials and equipment for the mining and petro-chemical industries; has done numerous reviews, audits and trouble-shooting for engineering companies, fabrication shops and construction sites in Canada, Asia and other countries.

Max 还是矿业和石油化工行业的工程，施工，制造和材料及设备采购的全球市场专家；已经为加拿大，亚洲和其他国家的工程公司，制造厂和建筑工地完成了大量的审查，审计和故障排除工作。

Max has also delivered numerous seminars and workshop trainings to the oil, gas and mining industry on a variety of subjects, especially on global EPC integration, engineering management, safety management.

Max 还为石油，天然气和采矿业举办了各种研讨会和工厂培训，涉及各种主题，尤其是全球 EPC 集成，工程管理和安全管理。

#### ■ David Chan, VP Interface/Integration

##### David Chan, 副总裁-界面/集成

David Chan, registered Professional Engineer with APEGGA, has worked in Canadian Oil & Gas industry for over 20 years. He is experienced in all aspects of capital project management in various phases of a project life cycle, from initiating planning, front-end loading, detailed engineering, modularization, field execution, turnover, C&SU, to project close-out. He is an expert in streamlining data extraction and automating project status reports, earned value analysis, quantitative risk analysis and developing what-if scenario studies. His innovative approaches to identify and implement multiple process improvements help increase the efficiency of the project management.

David Chan, APEGGA 注册专业工程师，曾在加拿大石油和天然气行业工作超过 20 年。从项目规划，前期设计，详细设计，模块化，现场执行，工程移交，C&SU 到项目竣工，他在项目生命周期的各个阶段都拥有丰富的项目管理经验。他是简化数据提取和项目状态自动报告，挣值分析，定量风险分析和开发假设分析方案研究的专家。他鉴定和实施多个流程改进的创新方法有助于提高项目管理的效率。

He obtained Master of Science degree in Project Management Specialization from University of Calgary.

他获得了加拿大卡尔加里大学项目管理专业的理学硕士学位。

### 三、 Function Description 职能描述

#### ◆ Business Development 商务开发

We provide project management services on a global basis in the fields of engineering, procurement, construction, operations and maintenance in the energy industry.

我们在能源行业的工程设计，采购，施工，运营和维护领域为全球提供项目管理服务。

Our team represents our clients' interests, and manages projects throughout all phases, requiring dedicated project/program management teams across all stages, including planning, engineering, procurement, contracting, construction, and close-out. The current team of professionals across Canada and China combines extensive industry experience with best-in-class project management processes.

我们团队代表了我们的客户的利益，管理项目贯穿所有阶段，要求在整个项目阶段（包括规划，设计，采购，合同，建造和竣工）建立敬业的项目管理团队。目前我们加拿大和中国的专业团队能够做到丰富的行业经验和一流的项目管理流程的统一。

The Business Development (BD) leader and the BD team have their focus on large capital projects and development with particular emphasis on the oil and gas industry. The BD team has a proven

ability to drive success, develop new business, provide strategic plans, and collaborate with client and all involved parties to achieve client business goals and targets.

商务开发 (BD) 领导者和 BD 团队特别重视石油和天然气行业, 专注于大型基建工程项目和开发。BD 团队已证明了自己的能力, 能够以项目成功为驱动力, 开发新业务, 提供战略计划, 并与客户和所有相关方进行协作, 以实现客户商务目标和指标。

The BD team is also responsible to learn, liaise and cooperate with the other internal and external groups and functions, and proactively lead and participate in the development of an integrated solution for our clients.

BD 团队还负责与其他内部和外部团队及职能进行学习, 联络和合作, 积极主导并参与为客户开发综合解决方案。

#### ◆ Execution Management 执行管理

VP of the Project Execution is responsible for the overall project management function, providing leadership, coordination and management of the project execution processes and functions. He is responsible to set-up the team of PMC with the Clients and steward the team to ensure the project objectives are met.

执行管理副总裁担负整体项目管理职能, 为项目执行程序 and 职能提供领导, 协调和管理。

同时, 也负责与客户一起建立 PMC 团队, 并管理团队来确保项目目标的实现。

##### Key Responsibilities 核心职责:

- Coordinate PMC personnel and resources required to successfully complete the projects.  
协调成功完成项目所需的 PMC 人员和资源。
- Manage performance of PMC personnel to ensure that Client's objectives are achieved by understanding and exceeding customer's needs and expectations in order to make their business a success.  
管理 PMC 人员的绩效, 通过了解和超出客户的需求和期望确保客户的目标实现, 从而使其商务取得成功。
- Establish key performance measures to both drive and monitor the success we achieve in delivering our customer's needs.  
建立关键绩效指标, 推动和监督我们在实现客户需求方面所取得的成功。
- Review Projects to ensure project scope or work, time and cost are understood, communicated, monitored and controlled and when required proactive mitigation is implemented.  
审查项目以确保项目的范围或工作, 时间及成本被正确的理解, 沟通, 监督和控制, 并在需要时实施前瞻性措施以减轻损失。
- Ensure that profitability and targets of the contracts are understood, maintained and maximized.  
确保合同的利润率和目标被理解, 保持和最大化。
- Implement cost tracking and performance improvement initiatives.

#### 实施成本跟踪和工作效率改进方案

- Develop and maintain close relationships with client's key stakeholders.  
与客户的关键利益相关者建立并保持密切的关系。
- Sustain growth of the contracts through strategic execution of our services to our clients and the expansion of service offering.  
通过战略性执行我们向客户提供的服务和我们提供服务的可扩展性能力，维持合同价值的增长。
- Support a strategy to evolve the business by analyzing client needs and opportunities through continuous improvement.  
通过持续改进来分析客户的需求和机遇，为业务发展提供策略性支持。
- Develop growth strategy through close client relationships.  
通过密切的客户关系开发业务增长战略。
- Monitor customer feedback and ensuring high levels of client satisfaction.  
监控客户反馈并确保高水平的客户满意度。
- Collect, manage and disperse knowledge throughout the organization.  
在整个组织内收集，管理和分散知识。
- Analyze and monitor the finance of all projects/contracts, present reports, budgets, forecasts and performance indicators.  
分析和监督所有项目/合同的财务状况，提交报告，预算，预测和绩效指标。

#### ◆ Management System and Governance 管理系统/监管

Construction Project Management system and associated phase gate governance and procedures are critical pieces for capital projects' success. The Project Lifecycle Phase Gate System provides opportunities for decision makers to reject, recycle or approve a capital project based on the objective results of its maturity and readiness assessment. It uses the customize-designed Project Phase Gate Evaluation Checklist, an enriched version of PDRI (Project Definition Rating Index) focusing not only on engineering but also construction execution and RFO (Ready for Operations) phases. The review process is conducted by an independent reviewer and attended by key project team stakeholders, in a workshop format, at various phases or stages in the offices, fabrication yard or construction sites.

工程项目管理系统和相关联的项目阶段审查“门”的监管和程序是基建工程项目成功的关键部分。项目生命周期阶段审查“门”系统为决策者提供了基于其成熟度和准备完善情况评估的客观结果做出正确决策的机会：砍掉项目，重新做（修改）前期工作或批准工程项目进入下一个阶段。它使用定制设计的项目阶段审查清单，这是一个具有丰富内容的 PDRI(项目定义评分指数表)版本，不仅集中在工程设计上，而且还包括施工执行和 RFO（运营就绪）阶段。



审查过程由独立评审员和关键项目利益相关者参加，以研讨会形式，根据项目执行的阶段不同，审查会地点可能会在办公室，预制场地或施工现场。

The risk-based Gate Review process is one of the leading-edge management tools, not only generating a qualitative Risk Register with assigned risk owners but also a list of action items with deadlines.

基于风险的阶段项目审查流程是最先进的管理工具之一，不仅可以为指定风险责任人创建定性的风险登记表，还可以创建带有最终期限的行动项目清单。

We will maximize the probability of your project success by implementing our best in class Project management System.

我们将通过实施我们一流的项目管理系统来最大限度地提高项目成功的可能性。

#### ◆ Business and HR Management 商务/人力资源管理

The business and finance management function is focused on integrating the EPC services with the owner business objectives and management systems/tools in order to maximize the value and economic for the project. Another aspect is to facilitate the translation of project cost estimate, cash flow forecast, and payments into ECP (Engineering Change Proposal) and owner company's financing plans and accounting systems. Automated data and information flow and integration is one of our key competencies here.

商务和财务管理职能侧重于将 EPC 服务与业主的商务目标和管理系统/工具相结合，以最大限度地提高项目的价值和经济效益。另一方面是促进将项目成本估算，现金流预测和支付转化为工程变更计划（ECP）和业主公司的财政计划及会计系统。自动化的数据，信息流和集成是我们的核心竞争力之一。

The main HR management's objectives is to bring the most competent, dedicated and best-fit-for-the-project professionals to the project from our worldwide talent pool to achieve smooth integrated and effective team work for costs. Our key staff will have exceptional understanding and experience in EPC project development for both owners and EPC contractors, and our key differentiator is our people's experience in global project management integration, including in bringing the Chinese EPC and manufacture capability, speed and efficiency to the global markets. HR is also accountable for the training of staff on management systems, processes and procedures, safety, and project or country specific culture, especially on integration with the owner's people management objectives and systems.

人力资源管理部门的主要目标是从我们全球的人才库中为项目选择最胜任，最专业和最适合的专业人员，以实现成本的顺利整合和有效团队工作。我们的核心员工对 EPC 项目开发的业主和 EPC 承包商有着出色的认识和经验，主要区别在于我们的员工在全球项目管理整合方面的经验，包括将中国 EPC 公司和制造能力，速度和效率带到全球市场。人力资源部



还负责对员工进行管理系统，流程和程序，安全以及项目或国家特定文化的培训，特别是与业主人员管理目标和系统的整合。

#### ◆ **Interface and Integration 界面和集成**

Capital engineering and construction projects involve many stakeholders with different geographical locations and working cultures and involve complex interface dependencies between diverse contracting parties. These interfaces can create challenges to successful project execution. Project Integration is the practice of making certain every part of the project is coordinated. Project integration identifies and manages the points of interaction between various elements of the project, integrate all functions towards the successful completion of the project within the scope, budget and on time.

基建项目涉及许多具有不同地域和工作文化的利益相关者，并且涉及各个缔约方之间复杂的界面依赖关系。这些界面可能会给项目的成功执行带来挑战。项目集成是确保项目的每个部分都得到完美协调后的执行。项目集成鉴别和管理项目各要素之间的相互作用点，高度集成所有职能，以确保项目范围完整，在预算内和规定时间成功完成项目。

Integrative undertaking requires each project process to be appropriately aligned and connected with the other processes to facilitate coordination. Project management tools must be used to prepare the project plan, record, manage, monitor and report project information. Project integration improves alignment between stakeholders and reduces project issues and conflicts.

集成任务要求每个项目程序与其他项目程序恰当对接并完美关联，以促进项目执行的一致性。项目管理工具必须用于准备项目计划，记录，管理，监控和报告项目信息。项目集成改善了利益相关者之间的项目信息一致性，并减少了项目争议和冲突。