Fluor’s Asset Management Technology (AMT) group has developed an integrated and structured work process designed to improve financial performance of businesses for new production plants as well as for expanding existing plants. We call this technical service UpFRONT®.

UpFRONT is designed to help owners integrate all the operational readiness elements that are outside of the normal engineering, procurement, and construction (EPC) scope but are necessary to meet the business case of the investment.

The process is performed in parallel with the front-end engineering and design (FEED) and EPC activities. UpFRONT confirms that the owner’s operations and maintenance (O&M) risks are identified and eliminated or mitigated.

UpFRONT will differentiate our EPC firm from competing firms, enhance client relationships, and provide opportunities for Fluor and Stork to increase revenues from steady-state support activities.

**Owner’s Benefits of Using UpFRONT**
- More efficient owner, supplier, and contractor start-up master plan and schedule
- Reduced risks for commissioning, start-up, and production ramp-up
- Better prepared workforce – aligned, trained, equipped, and ready for production
- Vendor information is received when needed to develop procedures
- Early definition of training needs
- Spares are defined, ordered, stored, and available at start-up
- Development of supply chain
- Outsourced services under contract and ready at start-up
- Operations organization is ready for handover
INTEGRATION WITH THE EPC PROCESS

BUSINESS CASE
- Evaluates capital and non-capital options for creating production capacity
- Identifies budgetary operations and maintenance estimates
- Manages location analysis, site selection, permitting, capacity creation, and community due diligence
- Performs an initial business risk evaluation

LIFE-CYCLE DESIGN SUPPORT
- Integrates life-cycle and business-case justification into the EPC process
- Identifies opportunities to increase reliability, safety, and compliance
- Applies value engineering at an early stage
- Evaluates opportunities for sustainability practices in design
- Specifies equipment supplier documentation, data, and training requirements

OPERATIONAL READINESS PLANNING
- Identifies tasks, roles, responsibilities, and execution plan for operational readiness
- Develops and reports key performance indicators (KPIs) to drive execution
- Focuses on mitigation actions for high-priority risks
- Identifies opportunities created by activities ahead of schedule

OWNER’S RISK AND READINESS REVIEWS
- Focuses on risks to operational readiness implementation
- Provides gap analysis, risk list, and mitigation plans
- Enables the project team to evaluate implementation of appropriate best practices and completion of correct tasks
MAINTENANCE READINESS
- Identifies tasks, roles, responsibilities, and execution plan for operational readiness
- Develops and reports KPIs to drive execution
- Focuses on mitigation actions for high-priority risks
- Identifies opportunities created by activities ahead of schedule

INFORMATION MANAGEMENT AND TECHNOLOGY
- Develops and implements overall information systems strategies
- Establishes information systems, databases, tools, facilities, and personnel
- Defines requirements for O&M data and documentation
- Generates EPC, original equipment manufacturer (OEM), and owner systems integration plans
- Guides client review of documentation and receipt of handover documentation

OPERATIONS READINESS
- Integrates procedures for operations, quality, logistics, and production control functions
- Develops procedures which improve the availability of systems, databases, tools, parts, facilities, and personnel for facility operations
- Supports quality assurance process and certification
- Defines operations support for commissioning and start-up

INFORMATION MANAGEMENT AND TECHNOLOGY
- Supports design of organization strategies and objectives
- Develops and implements human resources (HR) policies, databases, and procedures including recruitment and selection, hiring, pay and progression, and critical training needs
- Aligns HR policies with O&M strategies and objectives

ORGANIZATIONAL READINESS
- Establishes the plant and facility support functions:
  - Health, safety, and environmental management
  - Plant engineering
  - Facilities services
  - Utilities and energy management
  - Accounting
- Prepares policies, procedures, databases, and support systems needed for commissioning and steady-state operations

SUPPORT FUNCTIONS
- Establishes an integrated supply chain
- Develops strategy, policies, databases, work processes and procedures, and training programs
- Enables identification, procurement, and receiving of materials and services
- Guides warehouse design, implementation, and management

VERTICAL LAUNCH
- Delivers effective commissioning, start-up, and performance testing
- Combines non-invasive acceptance testing with predictive maintenance baselines
- Integrates launch procedures including commissioning, onsite system acceptance testing, performance validation, and validation of operating procedures
- Manages vendor-supplied training activities
MANAGING ALL THE PIECES OF OPERATIONAL READINESS

- Integrate and align the owner and EPC roles during FEED and construction phases
- Increases client understanding of the role and/or input into FEED and the EPC process phases
- Identifies client operational readiness requirements for vendors early on
- Helps owners integrate all the operational readiness elements that are outside normal EPC scope
- Develops methodologies to supplement and deliver missing pieces
- Delivers a schedule for implementation of all activities aligned with the construction master plan and schedule
- Identifies operational readiness risks to enable their mitigation

EPC BENEFITS OF USING UPFRONT

The UpFRONT approach to operational readiness offers an integrated solution that benefits both the owner and the EPC organizations.

- Critical client activities are aligned with the construction master plan and schedule
- Early definition of operational readiness needs for inclusion in project specifications
- Increased client understanding of roles and responsibilities
- Reduced claims for commissioning, start-up, and production ramp-up issues
- Reduced change orders from client
- Smooth handover to client
- Smooth project exit and demobilization
- Differentiation of Fluor’s EPC from competing firms
- Enhanced client relationships
- Opportunities for Stork and Fluor to increase revenue from steady-state support activities
- Progression into continuous site presence awards