

## VI PREFACE

## 01 Section 1

### GLOBAL CONSTRUCTION PROCUREMENT TOPICS

Trends and issues we will see in 2023 and beyond  
 Procurement / Project Delivery Methods and Issues  
 Recent History and the influence of World Events on Engineering and  
 Construction Costs in the last couple of decades  
 Project Execution  
 Conventional approach: / Concurrent / Overlapping approach / Fast track approach  
 Various Types of Construction Projects: How do Purchase Orders vary from Contracts -  
 Engineering, Procurement and Construction (EPC)  
 List of Data / Engineering Deliverables supplied to Vendor to obtain fixed price quote  
 The Importance of Front End Planning  
 Defining the Project and the CAPEX Project Life Cycle Process  
 Project Team and Selection of Professional Services  
 Global Construction Procurement Purchasing / Contracting Challenges to be faced in  
 the next couple of decades and beyond

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## Section 2

### PURCHASING / PROCUREMENT AND CONTRACTING

Facility Procurement Steps  
 Specifications  
 The Buy Out / Procurement Procedure  
 Purchase Orders  
 Contracts  
 Request for proposals (RFP)  
 The General Purchasing / Procurement Planning Process  
 Fundamentals of the Purchasing / Procurement / Contracting Plan  
 Establishing Potential Bidders List / Pre-Qualify Bidders and Recommend list of  
 Pre-approved EPC, A/E, CM firms, contractors and vendors  
 Prepare Invitation to Bid Packages, Purchase Orders, and Contracts / Sub-Contracts etc.  
 Evaluation and Award of Purchase Orders Construction Contracts / Sub-Contracts /  
 Service Contracts  
 Purchase Order / Construction Contract Administration  
 The Materials / Equipment Procurement / Purchasing Responsibility Matrix  
 Planning for Commodities - Bulk / Prefabricated / Consumable Materials  
 Major Equipment (Process – Production Equipment) Planning  
 Front End Quality Planning  
 Instituting a Quality Control Plan  
 Setting up and establishing an Inspection / expediting plan  
 Some major issues to keep in mind regarding Purchasing / Procurement and Contracting

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**PURCHASING ACTIVITIES**

- Purchase Orders vs. Contracts
- The Project Team / Organization
- Home Office Procurement Group
- The Four Step Purchasing – Procurement – Contracting process
- Purchasing – Procurement – Contracting. Job descriptions
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- Proposals / Bids / Request for Proposals (RFP) / Tender Evaluations
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**QUALITY CONTROL (QC/QA), SAFETY, INSPECTION, EXPEDITING & TRANSPORTATION ACTIVITIES**

- General standards / specifications
- Quality Assurance/Quality Control Basic Steps
- Submittals, Product Data and Shop Drawing
- Issue and Approval of Shop Drawings and Samples
- The shop drawing / submittals approval cycle
- Expediting Checklist
- Transportation Issues

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**CONSTRUCTION CONTRACTS & CONTRACT ADMINISTRATION**

- Five fundamental contract types
- Fixed Price / Hard Money / Competitively Bid
- Negotiated
- Design-Build
- Reimbursable Contracts / Cost-Plus / Pass through Contract
- Schedule of Rates / Unit Price Contract
- Request to bid letter / Request for proposal cover letter
- Request for Quotation (RFQ)
- Instructions to bidders
- Bid opening / Analysis / Recommendation
- International Construction Contracts
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- Sample Design / Build Agreement related to Manufacturing Facility Expansion
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**INTERNATIONAL PROCURMENT ISSUES**

- Globalization
- Checklist of issues when working in an overseas country
- Overseas Business Practices
- Import Permits / Government Procedures
- Currencies and Exchange Rates
- Metric Considerations
- Language Differences
- Special Considerations for Working in Developing Countries
- Final Thoughts on International Procurement

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<b>144</b>	Ecuador
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<b>147</b>	Eritrea
<b>148</b>	Estonia
<b>149</b>	Ethiopia
<b>150</b>	Finland
<b>151</b>	France
<b>152</b>	Gabon
<b>153</b>	Gambia (The)

154	Georgia
155	Germany
156	Ghana
157	Greece
158	Guatemala
159	Guinea - Bissau
160	Guinea
161	Haiti
162	Honduras
163	Hong Kong
164	Hungary
165	India
166	Indonesia
167	Iran
168	Iraq
169	Israel
170	Italy
171	Jamaica
172	Japan
173	Jordan
174	Kazakhstan
175	Kenya
176	Kuwait
177	Laos
178	Lebanon
179	Libya
180	Madagascar
181	Malawi
182	Malaysia
183	Mali
184	Mexico
185	Mongolia
186	Morocco
187	Mozambique
188	Namibia
189	Nepal
190	Netherlands (The)
191	New Zealand
192	Nicaragua
193	Niger
194	Nigeria
195	Norway
196	Pakistan
197	Panama
198	Paraguay
199	Peru
200	Philippines
201	Poland
202	Portugal
203	Romania
204	Russia
205	Rwanda
206	Saudi Arabia

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<b>209</b>	South Korea
<b>210</b>	Spain
<b>211</b>	Sudan
<b>212</b>	Sweden
<b>213</b>	Switzerland
<b>214</b>	Syria
<b>215</b>	Tajikistan
<b>216</b>	Taiwan
<b>217</b>	Thailand
<b>218</b>	Togo
<b>219</b>	Tunisia
<b>220</b>	Turkey
<b>221</b>	Ukraine
<b>222</b>	United Kingdom
<b>223</b>	United States of America
<b>224</b>	Uzbekistan
<b>225</b>	Venezuela
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intends to use; the consequence of this selection approach will many times will have an influence on the final cost and the final completion date of the construction project. Scores of construction projects are delayed many times because of tardy ordering and delivery of materials, equipment or services to the site. The number one reason for these delays is that not enough front end planning is completed; early front end planning can many times optimize this situation. Before the initiation of any construction activities, a detailed purchasing / procurement / contracting plan should be integrated into the overall project execution plan, showing start and finish dates for the Inquire, Negotiate and Purchase (INP) for Purchase Orders, Construction Contracts and any other professional services contracts.

*The number one reason for these delays is that not enough front end planning is completed; early front end planning can many times optimize this situation.*

lapping EPC activities specific to a twenty month EPC effort. The illustration shown is a typical “generic” overall project plan related to the construction of a medium sized manufacturing facility in North America or Western Europe and demonstrates the various interactions and sequences between engineering, procurement and construction.

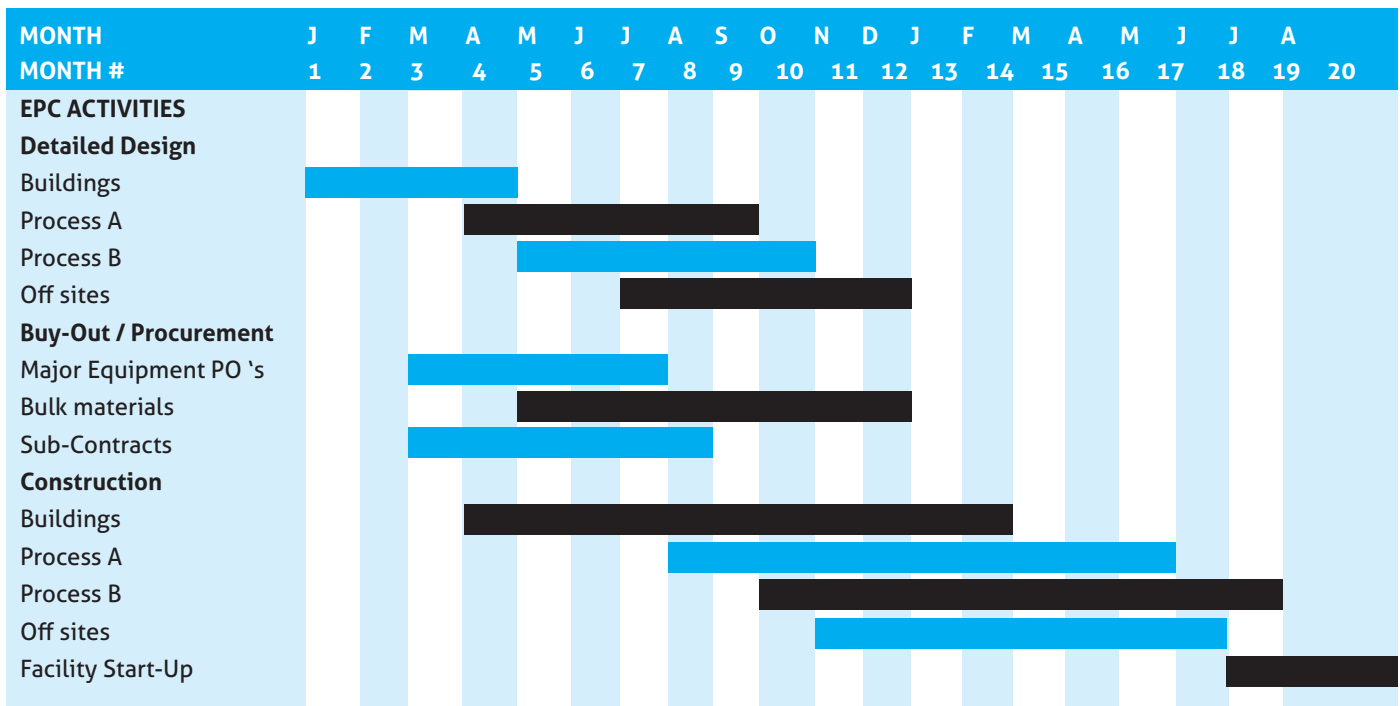
**FUNDAMENTALS OF THE PURCHASING / PROCUREMENT / CONTRACTING PLAN**

The purchasing / procurement / contracting or material management plan (refer to earlier comments), which is part of the plan indicated in Figure 2.1 below, must act within the context of the overall project implementation approach. The Purchasing / Procurement / Contracting Plan should

Figure 2.1 shown below is an illustration of an overall Engineering (Detailed design), Procurement and Construction (EPC) project that shows the over-

mesh with the total project goals, i.e. schedule, cost, quality and safety issues.

**FIG. 2.1**



- Minimize overhead costs.
- Minimize the hiring and firing of the specialist labor force as work is awarded and then completed.
- The General contractor can focus on the work that they do best and maximize the ROI of this work scope.

It is anticipated that this movement will continue in the future as General Contractor(s) focus on key trades that they self perform, i.e. carpentry, concrete work and perhaps millwork / internal carpentry work, as General Contractors endeavor to maximize their profit potential on each construction project. It has been estimated that specialist Sub-contractor(s) are responsible for between 60% to 80% of all the construction work that is put in place each year in North America and in Western Europe: There are a few General Contractors that self perform the total work scope, however most of these are large EPC firms that direct hire all the various trades, the vast majority of this work is heavy civil or heavy industrial related work. The contracting and sub-contracting planning and execution process is comparable to materials and equipment planning and execution, typically bought out using a purchase order, whereas contracting and sub-contracting uses a formal contract. Some of the issues that need to be considered are as follows:

- An approved list of contractors and subcontractors must be formulated and approved by owner / EPC firm.
- A detailed scope of work needs to be established.
- Critical milestone data needs to be compiled and incorporated into contract.
- Contractual issues and terms and conditions must be pulled together and documented.
- A contracting / subcontracting approach must be developed for each area of work, making sure there are no overlaps and ensuring that no scope is missed.
- Coordination procedures, supplementary terms and conditions and standard contracting forms must be revised and incorporated into bid / proposal package.

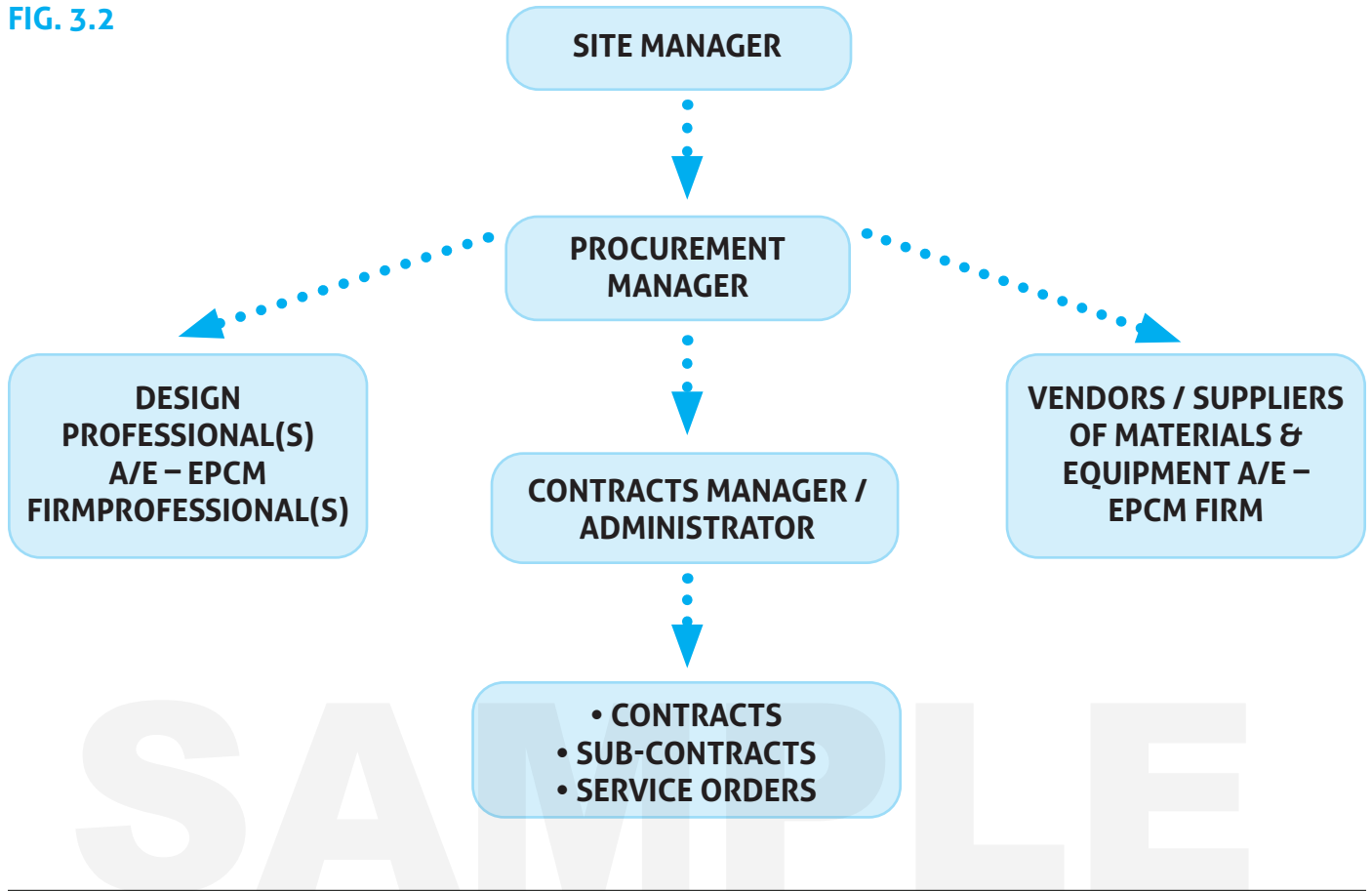
A formal sub-contract between the General Contractor and the sub-contractor(s) delineates the boundaries of responsibility and the terms and conditions of how the sub-contract will be executed between the General Contractor and the sub-contractor(s). This contract document(s), explains and corroborates all previous discussions, interactions, clarifications, bids and offers and is an audit trail / proof of both final offer and subsequent acceptance by both Contractor and sub-contractor to the terms and conditions of the sub-contract. The contractor will many times endeavor to pass on the owner's terms and conditions / contractual language onto the sub-contractor, remember that the owner will not be part of the contract between the General contractor and the sub-contractor(s).

### **INFORMATION THAT SHOULD BE CONSIDERED WHEN FORMULATING THE PURCHASING / CONTRACTING / SUBCONTRACT EXECUTION PLAN**

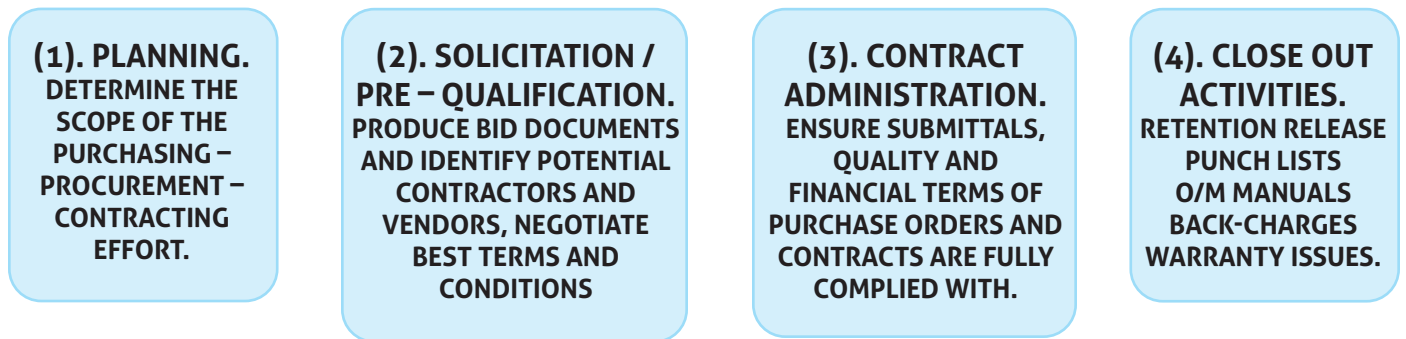
At some point in the crucial development and planning phase, consideration on how to maximize the projects success potential and how to reduce risk through correct Purchasing / Contract / Subcontract methods. The path forward is to select and expand the most favorable project procurement approach from topics that need to be considered and reconciles included, some or all of the following:

- Facility – building purpose / configuration and possible development approach
- Budget development / ROI economic analysis and funding options
- Identification of options, such as design – build / lease, location, new build or revamp
- Current status of front end / feasibility studies and current project approach
- National and local Government / Statutory / Permitting requirements and specific project issues
- Need for front end / preliminary project design to develop budget / schedule
- Identification of Procurement Purchasing / Contracting options and selection of which organization(s) will complete the Procurement Pur-

**FIG. 3.2**



**FIG. 3.3**





## Procurement / Contractual Checklist

### OVERSEAS COUNTRY

#	QUESTION	YES	NO	REMARKS
1	Can we hire local staff, what are the rules and regulations of this action?			
2	Payments terms, in local currency or are there issues that need to be resolved?			
3	What are the standard contracts used in the overseas country?			
4	What are the specific issues related to purchase orders and contracts, are there any issues that need to be reviewed?			
5	At what point does title or transfer of materials and equipment pass on a sale?			
6	What are the legal ramifications of a dispute, how will disputes be handled?			
7	Are there any tax holidays, incentives available for this particular project? Does the host country provide financing for new facilities and plants through grants, low-interest loans and training?			
8	Do we have to set up a LLC, Corporation, "S" Corp, Ltd. company or Joint Venture with perhaps an indigenous company?			
9	What are the requirements related to work permits, visa, and number of days allowed in country?			
10	What are the current tax regulations in effect, for: expatriates, locals?			
11	What are the current tax regulations in effect, for: Imports, VAT / GTS and other local province / city taxes?			
12	Can profits be moved out of country?			
13	What do construction professionals make per year?			
14	What do construction workers make per hour?			
15	Are there any issues related to importing equipment / bulk materials into country.			
16	Is there any issues regarding nationalization / government take over of facilities? Consider what is happening in Venezuela and Peru.			
17	Obtain a listing of Vendors, contracts and A/E firms; also obtain a telephone directory if possible.			
18	Check if we would need to set up a temporary work camp.			
19	Are there any government rules specific to using a high percentage of local content, i.e. some countries stipulate that a high percentage of local materials are to be used on project.			
20	Collect names of various customs departments, transport companies, inspection firms, trade union organizations and other addresses that may be appropriate.			
21	Determine / find out what hotels cost, what houses rent for per month.			

**FRANCE**

What can be said of France? France is a “top five” modern and vibrant country in the heart of Europe. Sophisticated and chic, it has it all.



**DATA TABLE**

1. Type of Government: Republic
2. Capital: Paris 2,700,000
3. Major Cities: Lyon, Brest, Marseille, Nice, Lille, Bordeaux
4. Population: 66.2 million
5. Area: 651,000 sq km
6. GDP: \$2,710 billion
7. GDP per Head: \$43,070
8. Inflation Rate: 2.9% - 5.9%
9. Time: + 6 EST
10. VAT / Sale Tax: 20%
11. Exchange Rate: 0.95 Euro
12. Freight from USA: 6.5 – 9.5 / 15 – 20 - 25 days
13. Local freight: 2% - 3% of material / equipment purchase price
14. Government website:  
<http://www.premier-ministre.gouv.fr/en>
15. Import duties: Refer to websites mentioned above under General Notes, note 15 and [www.finances.gouv.fr](http://www.finances.gouv.fr)
16. Electricity 230 v – 50 Hz
17. Telephone code: 33
18. Professional Architect / Engineer / Accountant / Purchasing Agent etc: \$85 - \$165
19. Skilled Worker rate: \$45 - \$57
20. Unskilled worker rate: \$35 - \$44
21. Worker Productivity vs. USA Gulf Coast (Houston = 1.00): 0.95 – 1.40
22. Location Factor vs. USA Gulf Coast (Houston = 1.00): 0.98 - 1.00
23. Local Bulk Material Factor vs. USA Gulf Coast (Houston = 1.00): 1.00 – 1.03
24. Major Sea Ports: Le Havre, Brest, Marseille, Bordeaux