The Knowledge Leader for Project Success

Owners • Contractors • Academics

10-10 Performance Assessment – Question Mapping

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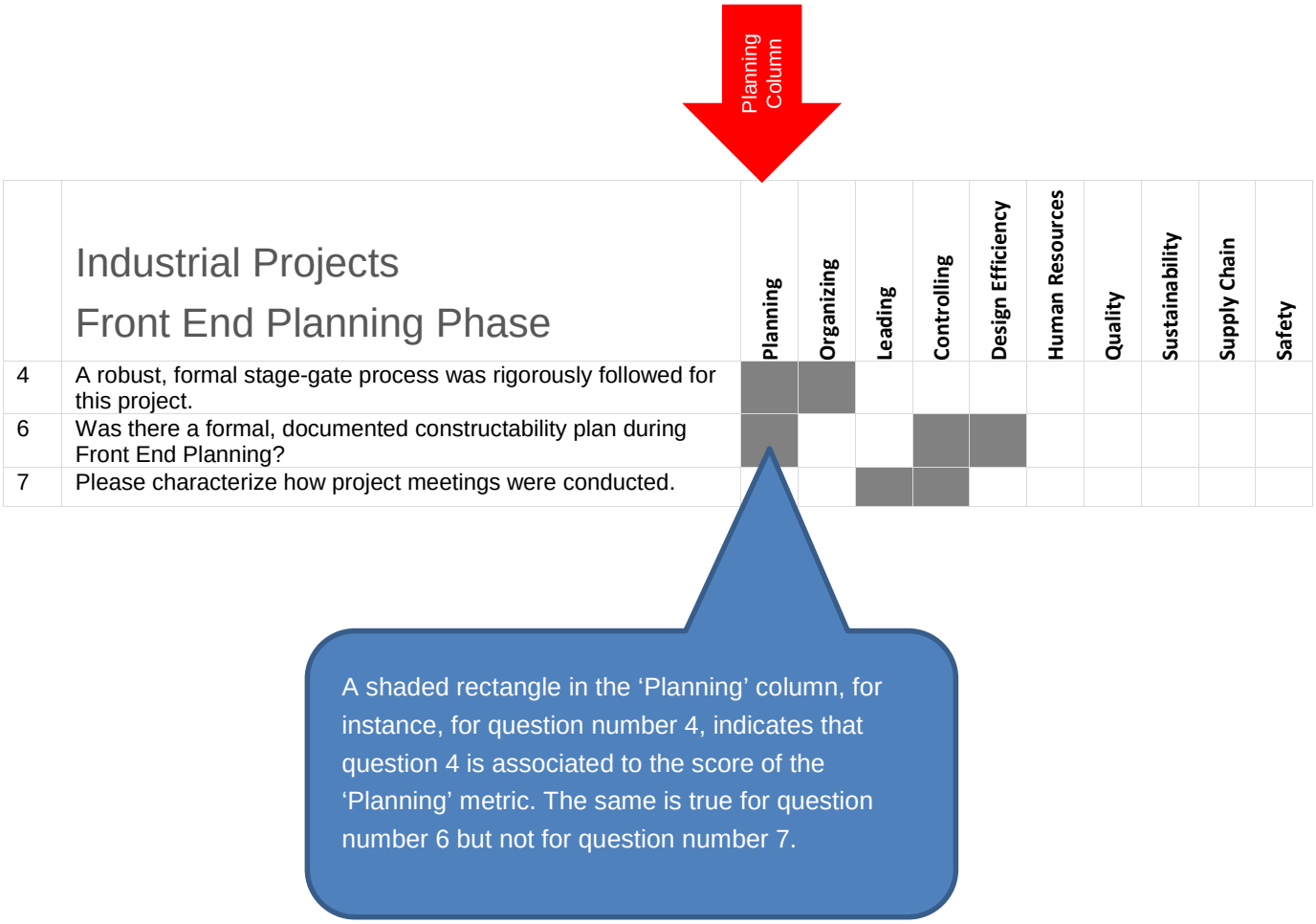
Questions to Input Measures Mapping

This document is intended to help you interpreting the 10-10 Project report. It will allow you to identify which questions are related to each Input metric score. For a given report, for instance, the Industrial Front End Planning (IND-FEP) report, you should refer to the IND-FEP sheet of this document (represented below). There you will find one column for each of the 10 input metrics. The shaded rectangles indicate that a given question (row) is associated with a given input metric (column).



	Industrial Projects – Front End Planning Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
4	A robust, formal stage-gate process was rigorously followed for this project.	■	■								
6	Was there a formal, documented constructability plan during Front End Planning?	■			■	■					
7	Please characterize how project meetings were conducted.			■	■						
8	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
9	Was there a formal (documented in writing) change management process for this project?				■						
10	Was a life cycle cost analysis completed for this project?	■						■	■		
11	Did Front End Planning incorporate community relations issues?	■			■				■		
12	Was the owner's project manager assigned at the beginning of Front End Planning?	■	■	■							
13	Was the Construction manager assigned during Front End Planning?	■	■	■	■		■				
14	Was the Engineering manager assigned during Front End Planning?	■	■	■	■		■				
15	Was the lead scheduler assigned during Front End Planning?		■				■				
16	Was the cost engineer assigned during Front End Planning?		■		■		■				
17	The project had integrated peer reviews during Front End Planning.			■	■						
18	The Front End Planning process included sufficient resources necessary to adequately define the scope.	■	■		■		■				
19	The owner level of involvement was appropriate.	■	■	■							
20	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■		■						
21	The Procurement strategy and plan were developed and communicated to the project team during Front End Planning.	■		■	■			■		■	
22	The project team was well aligned in terms of the owner’s objectives, needs and expectations.	■	■								
23	The project execution plan supported the objectives of this project.	■									
24	The Front End Planning process adapted to changes in project objectives or market conditions.	■	■								
25	The equipment Procurement and vendor schedules were not a significant challenge during Front End Planning on this project.	■			■					■	
26	The project had an effective risk identification and management process.	■	■		■			■			
27	Preassembly, prefabrication, modularization, and offsite fabrication were thoroughly evaluated during Front End Planning.	■	■	■	■	■	■	■	■	■	■
28	A formal Startup execution plan was developed which incorporated operations and maintenance philosophy.	■			■			■			
29	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
30	The project team including project manager(s) had skills and experiences with similar projects / processes.		■		■		■				
31	The project management team was adequately staffed.		■				■				
32	People on this project worked effectively as a team.			■	■						

	Industrial Projects – Front End Planning Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
33	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
34	The interfaces between project stakeholders were well managed.		■	■							
35	Key project team members understood the owner's goals and objectives of this project.	■	■								
36	All of the necessary, relevant project team members were involved in the risk assessment process.		■		■						
37	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
38	Leadership effectively communicated business objectives, priorities, and project goals.			■							
39	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
40	The project management team maintained open and effective communication.			■	■						
41	Project team members had the information they needed to do their jobs effectively.			■	■			■			
42	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
43	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
44	The project's Startup objectives were appropriately communicated to the relevant project team members.			■	■						
45	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.		■	■	■	■		■			
46	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
47	Regulatory requirements (e.g., permitting and environmental issues) were properly managed and Front End Planning is in compliance.				■		■	■	■		■
48	The project team members attended sufficient professional training directly related to their work in the phase.						■				

	Industrial Projects – Engineering Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
4	Did the project objectives change during Engineering?	■		■	■	■		■			
6		■									
7	Please characterize how project meetings were conducted.			■	■						
8	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
9	Was a life cycle cost analysis completed for this project?								■		
11	Was the Construction Manager involved during Detailed Engineering?		■								
12	Were multiple Design offices used on this project?	■	■			■					
13	The owner level of involvement was appropriate.	■	■	■							
14	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■	■	■						
15	The Procurement strategy and plan were communicated to the project team during Engineering.	■		■	■			■		■	
16	The project objective and priorities were clearly defined.	■		■							
17	The equipment Procurement and vendor schedules were not a significant challenge during Engineering.	■			■					■	
18	Comprehensive constructability suggestions (e.g., preassembly, prefabrication, modularization, and offsite fabrication) were evaluated and incorporated into the Engineering of the project.	■	■		■	■					
19	A formal Startup execution plan including operations and maintenance philosophy was incorporated in Engineering.	■			■			■			
20	This project incorporated community relations issues in Engineering.	■			■				■		
21	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
22	Project team members had the authority necessary to do their jobs.		■	■							
23	The project team including project manager(s) had skills and experiences with similar projects / processes.		■		■		■				
24	People on this project worked effectively as a team.			■	■						
25	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
26	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Detailed Design / Engineering.		■	■		■		■		■	
27	The interfaces between project stakeholders were well managed.		■	■							
28	Key project team members understood the owner's goals and objectives of this project.	■	■					■			
29	All of the necessary, relevant project team members were involved in an effective risk identification and management process for Engineering.	■	■		■						
30	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
31	Leadership effectively communicated business objectives, priorities, and project goals.			■							
32	Resources were allocated according to project priorities.	■		■			■				

	Industrial Projects – Engineering Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
33	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
34	Project team members had the information they needed to do their jobs effectively.			■	■						
35	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
36	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
37	The project's Startup objectives were appropriately communicated to the relevant project team members.			■	■						
38	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.			■	■	■		■			
39	The number and quality of Engineering personnel was sufficient.		■				■				
40	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
41	Regulatory requirements (e.g., permitting and environmental issues) were properly managed and Engineering is in compliance.				■		■	■	■		■
42	Engineering deliverables were released in a timely manner as a result of a good Engineering work sequence on this project.		■		■	■					
43	The Engineering deliverables were complete and accurate (possessing a minimal amount of errors and omissions).				■	■		■			
44	The project control system was effective in monitoring project progress in terms of cost, schedule, and scope.				■						
45	A dedicated process was used to proactively manage change on this project.				■						
46	A formal project Quality Management System was used for the Engineering of this project.				■			■			
47	An interim product database and/or standardized Designs were used extensively in the Engineering of this project.	■				■		■		■	
48	The project team members attended sufficient professional training directly related to their work in the phase.						■				
49	The customer was satisfied with the Engineering deliverables.							■			
50	The cost of quality was determined during the Engineering phase of this project.							■			

	Industrial Projects – Procurement Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
4	Did the project objectives change during Procurement?	■			■	■					
5	This project experienced a high number of:	■									
6	Please characterize how project meetings were conducted.			■	■						
7	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
8	Was a life cycle cost analysis completed for this project?								■		
9	The owner level of involvement was appropriate.	■	■	■	■						
10	Preferred suppliers were used effectively to streamline the Procurement process.	■			■			■		■	
11	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■	■	■						
12	The project objective and priorities were clearly defined.	■	■	■							
13	The Procurement plan adapted to changing market conditions.	■	■		■					■	
14	The materials management plan for this project appropriately addressed elements such as project goals, responsibility, cost & schedule, and transportation & logistics.				■					■	
15	The equipment Procurement and vendor schedules were not a significant challenge for this project.	■			■					■	
16	A formal Startup execution plan including operations and maintenance philosophy was incorporated in the Procurement.	■			■			■			
17	Sustainability was an important consideration for the Procurement phase of this project.	■							■		
18	The Procurement plan addressed local content requirements.	■	■								
19	Appropriate contingencies were established to address materials and labor cost escalation.	■			■						
20	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
21	Project team members had the authority necessary to do their jobs.		■	■							
22	The project team including project manager(s) had skills and experiences with similar projects / processes.		■		■		■				
23	People on this project worked effectively as a team.			■	■						
24	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
25	The interfaces between project stakeholders were well managed.		■	■							
26	Key project team members understood the owner's goals and objectives of this project.		■								
27	All of the necessary, relevant project team members were involved in an effective risk identification and management process for Procurement.	■	■		■						
28	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
29	Leadership effectively communicated business objectives, priorities, and project goals.			■							
30	Resources were allocated according to project priorities.			■							
31	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
32	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Procurement.		■	■						■	
33	Project team members had the information they needed to do their jobs effectively.			■							
34	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						

	Industrial Projects – Procurement Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
35	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
36	The project's Startup objectives were appropriately communicated to the relevant project team members.			■	■						
37	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.			■	■			■			
38	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
39	Regulatory requirements (e.g., permitting and environmental issues) were properly managed and Procurement is in compliance.				■		■	■	■		■
40	The project encountered few problems associated with the late delivery of equipment and bulk materials.				■			■		■	
41	Site materials management was effective.	■			■			■		■	■
42	Major equipment was delivered complete and on time.				■					■	
43	Risks were appropriately allocated through effective purchasing agreements.	■	■		■					■	
44	This project implemented a supplier quality surveillance program.				■			■		■	■
45	The project control system was effective in monitoring project progress in terms of cost, schedule, and scope.				■						
46	A dedicated process was used to proactively manage change on this project.				■						
47	A formal project Quality Management System was used for the Procurement of this project.				■			■			
48	The project team members attended sufficient professional training directly related to their work in the phase.						■				
49	The customer was satisfied with the Procurement phase deliverables.							■			
50	The cost of quality was determined during the Procurement phase of this project.							■			

	Industrial Projects – Construction Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
G	What was the typical foreman to craft ratio?		■		■		■				
G	Overall how many workers per safety professional were typically (i.e., in terms of the average workforce) on site?				■		■				■
4	Did the project objectives change during Construction?	■				■					
5	This project experienced a high number of:	■									
6	Was a turnaround involved in the scope of this project?	■			■		■				
7	Please characterize how project meetings were conducted.			■	■						
8	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
9	This project used the following methods.	■	■	■	■	■		■			■
10	Formal (classroom) safety training was attended:			■							■
11	Did the original primary contractor(s) complete the project?		■								
13	Was safety performance a criterion for contractor and subcontractor selection?		■								■
14	Were safety toolbox meetings held daily?										■
15	Were accidents including near misses formally investigated?										■
16	The availability and competency of craft labor was adequate.	■					■	■			■
17	The owner level of involvement was appropriate.	■	■	■							
18	The owner and primary contractor(s) maintain a long-standing partnering arrangement.	■	■	■						■	
19	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■	■	■						
20	A formal Startup execution plan including operations and maintenance philosophy was incorporated in the Construction.	■			■			■			
21	The work planning and scheduling processes were effective.	■									
22	Project cash flow was managed well during Construction.				■						
23	The Construction execution plan addressed community relations issues.	■			■						
24	The project team including project manager(s) had skills and experiences with similar projects / processes.		■		■		■				
25	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
26	All of the necessary, relevant project team members were involved in an effective risk identification and management process for Construction.	■	■		■						
27	Project safety procedures were well defined and strictly followed.		■	■							■
28	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
29	Subcontractors provided the majority of the Construction craft workers.		■		■		■				
30	People on this project worked effectively as a team.			■	■						
31	Key project team members understood the owner's goals and objectives of this project.		■								
32	The interfaces between project stakeholders were well managed.		■	■							
33	Engineering deliverables were released in a timely manner and in a proper sequence.				■	■					
34	Project team members had the authority necessary to do their jobs.		■	■							
35	This project experienced a minimum amount of labor disruption		■		■		■				
36	The owner and primary contractor(s) maintained positive working relationships.	■		■	■					■	
37	Leadership effectively communicated business objectives, priorities, and project goals.			■							

	Industrial Projects – Construction Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
38	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Construction.		■	■							
39	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
40	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
41	The project's Startup objectives were appropriately communicated to the relevant project team members.			■	■						
42	Resources were allocated according to project priorities.			■							
43	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
44	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.			■	■			■			
45	Project team members had the information they needed to do their jobs effectively.			■							
46	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
47	The Engineering deliverables were complete and accurate (possessing a minimal amount of errors and omissions).				■	■		■			
48	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
49	The project encountered few problems associated with the late delivery of equipment and bulk materials.				■					■	
50	A dedicated process was used to proactively manage change on this project.				■						
51	A formal project Quality Management System was used for the Construction of this project.				■			■			
52	Regulatory requirements (e.g., permitting and environmental issues) were properly managed and Construction is in compliance.		■	■	■		■	■	■		■
53	Site materials management was effective.	■			■					■	
54	The project employed regular safety audits or observations.										■
55	Materials and equipment were typically received on time, without damage, and per Design specification.				■					■	
56	The project team members attended sufficient professional training directly related to their work in the phase.						■				
57	The customer was satisfied with the Construction deliverables.							■			
58	The cost of quality was determined during the Construction phase of this project.							■			
59	Sustainability was an important consideration for the Construction phase of this project.								■		

	Industrial Projects – Startup Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
4	Was a turnaround involved in the scope of this project?	■			■		■				
5	Please characterize how project meetings were conducted.			■	■						
6	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
7	Was there a written, Startup-Specific safety plan for this project?	■									■
8	The owner level of involvement was appropriate.	■	■	■							
9	A formal Startup execution plan including the impact to operations and maintenance was implemented.	■			■			■			
10	The Startup planning and scheduling processes were effective.	■									
11	The Startup plan addressed community relations issues.	■			■				■	■	
12	The Startup team had skills and experiences with similar projects / processes.		■		■		■				
13	The project experienced a minimum number of Startup team personnel changes.		■	■	■		■				
14	All of the necessary, relevant Startup team members were involved in an effective risk identification and management process for Startup.	■	■		■						
15	Startup management team members were clear about their roles and how to work with others during Startup.	■	■	■	■						
16	People on this project worked effectively as a team.			■	■						
17	Key Startup management team members understood the owner's goals and objectives of this project.	■	■								
18	Startup management team members had the authority necessary to do their jobs.		■	■							
19	Leadership effectively communicated Startup goals and priorities.			■							
20	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Startup.		■	■							
21	Startup leaders were open to hearing "bad news", and they wanted input from Startup team members.			■							
22	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
23	The project team members were familiar with the Startup plan and they used it to manage their work.	■		■	■	■					
24	Resources were allocated according to Startup priorities.	■		■							
25	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
26	The Startup processes and systems supported project success.							■	■		
27	Startup management team members had the information they needed to do their jobs effectively.			■							
28	Project leaders recognized and rewarded outstanding personnel and results during Startup.			■			■				
29	The Startup met the operability and product quality objectives.				■			■	■		■
30	When issues arose, there were effective mechanisms to ensure they were resolved.				■						
31	A dedicated process was used to proactively manage change during Startup.				■						
32	Regulatory requirements (e.g., permitting and environmental issues) were properly managed and Startup is in compliance.				■		■	■	■		■
33	The project's Startup processes were explicitly defined, managed, measured, and controlled				■						
34	The Startup management team members attended sufficient professional training directly related to their work.						■				

	Industrial Projects – Startup Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
35	The customer was satisfied with the Startup deliverables.							■			
36	The cost of quality was monitored during the Startup of this project.							■			
36	Sustainability was an important consideration for the Startup of this project.								■		
37	The project's process safety objectives were appropriately communicated amongst the relevant Startup management team members.										■
38	Startup safety procedures were well defined and strictly followed.										■
39	Pre-task planning (including safety) was regularly conducted by foremen and/or other Startup managers.	■			■						■

	Building Projects – Programming Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
5	A robust, formal stage-gate process was rigorously followed for this project.	■	■								
7	Were pre-construction services used and was a constructability plan developed?	■	■		■						■
8	Please characterize how project meetings were conducted.			■	■						
9	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
10	Was there a formal (documented in writing) change management process for this project?				■						
11	Was a life cycle cost analysis completed for this project?	■						■	■		
12	Is this project intended to be LEED certified or equivalent (certifiable)?								■		
13	Were bridging documents produced during Programming?	■			■						
14	Did Programming incorporate community relations issues?	■			■				■		
15	Was the owner's project manager assigned at the beginning of Programming?	■	■	■							
16	Was the Construction manager assigned during Programming?	■	■	■	■		■				
18	Was the lead scheduler assigned during Programming?		■				■				
19	Was the cost engineer assigned during Front End Planning?		■		■		■				
20	The project had integrated peer reviews during Programming.			■	■						
21	The Programming process included sufficient resources necessary to adequately define the scope.	■	■		■		■				
22	The owner level of involvement was appropriate.	■	■	■							
23	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■		■						
24	The Procurement strategy and plan were developed and communicated to the project team during Programming.	■		■	■			■		■	
25	The project team was well aligned in terms of the owner's objectives, needs and expectations.	■	■								
26	The project execution plan supported the objectives of this project.	■									
27	Programming process adapted to changes in project objectives or market conditions.	■	■								
28	The Procurement and vendor schedules were not a significant challenge during Programming on this project.	■			■			■		■	
29	The project had an effective risk identification and management process.	■	■		■			■			
30	Preassembly, prefabrication, modularization, and offsite fabrication were thoroughly evaluated during Programming.	■	■	■	■	■	■	■	■	■	■
31	A formal Commissioning execution plan was developed which incorporated operations and maintenance philosophy.	■			■			■			
32	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
33	The project team including project manager(s) had skills and experiences with similar projects / processes.		■		■		■				
34	The project management team was adequately staffed.		■				■				
35	People on this project worked effectively as a team.			■	■						
36	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
37	The interfaces between project stakeholders were well managed.		■	■							
38	Key project team members understood the owner's goals and objectives of this project.	■	■								

	Building Projects – Programming Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
39	All of the necessary, relevant project team members were involved in the risk assessment process.		■		■						
40	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
41	Leadership effectively communicated business objectives, priorities, and project goals.			■							
42	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
43	The project management team maintained open and effective communication.			■	■						
44	Project team members had the information they needed to do their jobs effectively.			■	■			■			
45	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
46	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
47	The project's Commissioning objectives were appropriately communicated to the relevant project team members.			■	■						
48	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.		■	■	■	■		■			
49	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
50	Regulatory requirements (e.g., permitting and environmental issues) were properly managed and Programming is in compliance.				■		■	■	■		■
51	The project team members attended sufficient professional training directly related to their work in the phase.						■				

	Building Projects – Design Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
5	Did the project objectives change during Design?	■		■	■	■		■			
7	This project experienced a high number of:	■									
8	Please characterize how project meetings were conducted.			■	■						
9	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
10	Was a life cycle cost analysis completed for this project?								■		
11	Is this project intended to be LEED certified or equivalent (certifiable)?								■		
12	Did this project use a Building Information Model?	■				■					
14	Was the Construction manager involved during Design?	■	■								
15	Were multiple Design offices used on this project?	■	■			■					
16	The owner level of involvement was appropriate.	■	■	■							
17	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■	■	■						
18	The Procurement strategy and plan were communicated to the project team during Design.	■		■	■			■		■	
19	The project objective and priorities were clearly defined.	■		■							
20	The equipment Procurement and vendor schedules were a significant challenge during Design.	■			■					■	
21	Comprehensive constructability suggestions (e.g., preassembly*, prefabrication*, modularization*, and offsite fabrication*) were evaluated and incorporated into the Design of the project.	■	■		■	■					
22	A formal Commissioning execution plan including operations and maintenance philosophy was incorporated in Engineering.	■			■			■			
23	This project incorporated community relations issues in Design.	■			■				■		
24	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
25	Project team members had the authority necessary to do their jobs.		■	■							
26	The project team including project manager(s) had skills and experiences with similar projects /processes.		■		■		■				
27	People on this project worked effectively as a team.			■	■						
28	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
29	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Design.		■	■		■		■		■	
30	The interfaces between project stakeholders were well managed.		■	■							
31	Key project team members understood the owner's goals and objectives of this project.	■	■					■			
32	All of the necessary, relevant project team members were involved in an effective risk identification and management process for Design.	■	■		■						
33	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
34	Leadership effectively communicated business objectives, priorities, and project goals.			■							
35	Resources were allocated according to project priorities.	■		■			■				
36	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
37	Project team members had the information they needed to do their jobs effectively.			■	■						
38	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						

	Building Projects – Design Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
39	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
40	The project's Commissioning objectives were appropriately communicated to the relevant project team members.			■	■						
41	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.			■	■	■		■			
42	The number and quality of Design personnel was sufficient.		■				■				
43	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
44	Regulatory requirements (e.g., permitting and environmental issues) were properly managed and Design is in compliance.				■		■	■	■		■
45	Design deliverables were released in a timely manner as a result of a good Design work sequence on this project.		■		■	■					
46	The Design deliverables received from consulting engineers or other architects were complete and accurate (possessing a minimal amount of errors and omissions.				■	■		■			
47	The project control system was effective in monitoring project progress in terms of cost, schedule, and scope.				■						
48	A dedicated process was used to proactively manage change on this project.				■						
49	A formal project Quality Management System was used for the Design of this project.				■			■			
50	An interim product database and/or standardized Designs were used extensively in the Design of this project.	■				■		■		■	
51	The project team members attended sufficient professional training directly related to their work in the phase.						■				
52	The customer was satisfied with the Design deliverables.							■			
53	The cost of quality was determined during the Design of this project.							■			

	Building Projects – Procurement Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
5	Did the project objectives change during Procurement?	■			■	■					
6	This project experienced a high number of:	■									
7	Please characterize how project meetings were conducted.			■	■						
8	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
9	Was a life cycle cost analysis completed for this project?								■		
10	Is this project intended to be LEED certified or equivalent (certifiable)?								■		
11	The owner level of involvement was appropriate.	■	■	■	■						
12	Preferred suppliers were used effectively to streamline the Procurement process.	■			■			■		■	
13	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■	■	■						
14	The project objective and priorities were clearly defined.	■	■	■							
15	The Procurement plan adapted to changing market conditions.	■	■		■					■	
16	The materials management plan for this project appropriately addressed elements such as project goals, responsibility, cost & schedule, and transportation & logistics.				■					■	
17	The equipment Procurement and vendor schedules were not a significant challenge for this project.	■			■					■	
18	A formal Commissioning execution plan including operations and maintenance philosophy was incorporated in the Procurement.	■			■			■			
19	Sustainability was an important consideration for the Procurement of this project.	■							■		
20	The Procurement plan addressed local content requirements.	■	■								
21	Appropriate contingencies were established to address materials and labor cost escalation.	■			■						
22	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
23	Project team members had the authority necessary to do their jobs.		■	■							
24	The project team including project manager(s) had skills and experiences with similar projects / processes.		■		■		■				
25	People on this project worked effectively as a team.			■	■						
26	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
27	The interfaces between project stakeholders were well managed.		■	■							
28	Key project team members understood the owner's goals and objectives of this project.		■								
29	All of the necessary, relevant project team members were involved in an effective risk identification and management process for Procurement.	■	■		■						
30	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
31	Leadership effectively communicated business objectives, priorities, and project goals.			■							
32	Resources were allocated according to project priorities.			■							
33	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
34	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Procurement.		■	■						■	
35	Project team members had the information they needed to do their jobs effectively.			■							

	Building Projects – Procurement Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
36	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
37	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
38	The project's Commissioning objectives were appropriately communicated to the relevant project team members.			■	■						
39	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.			■	■			■			
40	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
41	Regulatory requirements (e.g., permitting and environmental issues) were properly managed and Procurement is in compliance.				■		■	■	■		■
42	The project encountered few problems associated with the late delivery of equipment and bulk materials.				■			■		■	
43	Site materials management was effective.	■			■			■		■	■
44	Major equipment was delivered complete and on time.				■					■	
45	Risks were appropriately allocated through effective purchasing agreements.	■	■		■					■	
46	This project implemented a supplier quality surveillance program.				■			■		■	■
47	The project control system was effective in monitoring project progress in terms of cost, schedule, and scope.				■						
48	A dedicated process was used to proactively manage change on this project.				■						
49	A formal project Quality Management System was used for the Procurement of this project.				■			■			
50	The project team members attended sufficient professional training directly related to their work in the phase.						■				
51	The customer was satisfied with the Procurement deliverables.							■			
52	The cost of quality was determined during the Procurement of this project.							■			

	Building Projects – Construction Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
G	What was the typical foreman to craft ratio?		■		■		■				
G	Overall how many workers per safety professional were typically (i.e., in terms of the average workforce) on site?				■		■				■
5	Did the project objectives change during Construction?	■				■					
6	Please characterize how project meetings were conducted.			■	■						
6	This project experienced a high number of:	■									
7	Was a renovation to an operating facility included in the scope of this project?	■									
9	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
10	This project used the following methods:	■	■	■	■	■		■			■
11	Formal (classroom) safety training was attended:			■							■
12	Did the original primary contractor(s) complete the project?		■								
13	Was safety performance a criterion for contractor and subcontractor selection?		■								■
14	Were safety toolbox meetings held daily?										■
15	Were accidents including near misses formally investigated?										■
16	The availability and competency of craft labor was adequate.	■					■	■			■
17	The owner level of involvement was appropriate.	■	■	■							
18	The owner and primary contractor(s) maintain a long-standing partnering arrangement.	■	■	■						■	
19	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■	■	■						
20	A formal Commissioning execution plan including operations and maintenance philosophy was incorporated in the Construction	■			■			■			
21	The work planning and scheduling processes were effective.	■									
22	Project cash flow was managed well during Construction.				■						
23	The Construction execution plan addressed community relations issues.	■			■						
24	The project team including project manager(s) had skills and experiences with similar projects / processes.		■		■		■				
25	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
26	All of the necessary, relevant project team members were involved in an effective risk identification and management process for Construction.	■	■		■						
27	Project safety procedures were well defined and strictly followed.		■	■							■
28	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
29	Subcontractors provided the majority of the Construction craft workers.		■		■		■				
30	People on this project worked effectively as a team.			■	■						
31	Key project team members understood the owner's goals and objectives of this project.		■								
32	The interfaces between project stakeholders were well managed.		■	■							
33	Design deliverables were released in a timely manner and in a proper sequence.				■	■					
34	Project team members had the authority necessary to do their jobs.		■	■							
35	This project experienced a minimum amount of labor disruption		■		■		■				

	Building Projects – Construction Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
36	The owner and primary contractor(s) maintained positive working relationships.	■		■	■					■	
37	Leadership effectively communicated business objectives, priorities, and project goals.			■							
38	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Construction.		■	■							
39	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
40	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
41	The project's Commissioning objectives were appropriately communicated to the relevant project team members.			■	■						
42	Resources were allocated according to project priorities.			■							
43	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
44	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.			■	■			■			
45	Project team members had the information they needed to do their jobs effectively.			■							
46	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
47	The Design deliverables were complete and accurate (possessing a minimal amount of errors and omissions).				■	■		■			
48	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
49	The project encountered few problems associated with the late delivery of equipment and bulk materials.				■					■	
50	A dedicated process was used to proactively manage change on this project.				■						
51	A formal project Quality Management System was used for the Construction of this project.				■			■			
52	Regulatory requirements (e.g., permitting and environmental issues) were properly managed and Construction is in compliance.		■	■	■		■	■	■		■
53	Site materials management was effective.	■			■					■	
54	The project employed regular safety audits or observations.										■
55	Materials and equipment were typically received on time, without damage, and per Design specification.				■					■	
56	The project team members attended sufficient professional training directly related to their work in the phase.						■				
57	The customer was satisfied with the Construction deliverables.							■			
58	The cost of quality was determined during the Construction of this project.							■			
59	Sustainability was an important consideration for the Construction of this project.								■		

	Building Projects – Commissioning Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
5	Was a renovation to an operating facility included in the scope of this project?	■									
6	Please characterize how project meetings were conducted.			■	■						
7	Which of the following statements characterized the decisions made by the manager(s) of this project?	■									■
8	Was there a written, Commissioning-specific safety plan for this project?			■							
9	The owner level of involvement was appropriate.	■	■	■							
10	A formal Commissioning execution plan including the impact to operations and maintenance was implemented.	■			■			■			
11	The Commissioning planning and scheduling processes were effective.	■									
12	The Commissioning plan addressed community relations issues.	■			■				■	■	
13	The Commissioning team had skills and experiences with similar projects / processes.		■		■		■				
14	The project experienced a minimum number of Commissioning team personnel changes.		■	■	■		■				
15	All of the necessary, relevant Commissioning team members were involved in an effective risk identification and management process for Commissioning.	■	■		■						
16	Commissioning management team members were clear about their roles and how to work with others during Commissioning.	■	■	■	■						
17	People on this project worked effectively as a team.			■	■						
18	Key Commissioning management team members understood the owner's goals and objectives of this project.	■	■								
19	Commissioning management team members had the authority necessary to do their jobs.		■	■							
20	Leadership effectively communicated Commissioning goals and priorities.			■							
21	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Commissioning.		■	■							
22	Commissioning leaders were open to hearing "bad news", and they wanted input from Startup team members.			■							
23	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
24	The project team members were familiar with the Commissioning plan and they used it to manage their work.	■		■	■	■					
25	Resources were allocated according to Commissioning priorities.	■		■							
26	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
27	The Commissioning processes and systems supported project success.							■	■		
28	Commissioning management team members had the information they needed to do their jobs effectively.			■							
29	Project leaders recognized and rewarded outstanding personnel and results during Commissioning.			■			■				
30	The Commissioning process achieved the operability and product quality objectives.				■			■	■		■
31	When issues arose, there were effective mechanisms to ensure they were resolved.				■						
32	A dedicated process was used to proactively manage change during Commissioning.				■						
33	Regulatory requirements (e.g., permitting and environmental issues) were properly managed and Commissioning is in compliance.				■		■	■	■		■

	Building Projects – Commissioning Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
34	The project's Commissioning processes were explicitly defined, managed, measured, and controlled				■						
35	The Commissioning management team members attended sufficient professional training directly related to their work.						■				
36	The customer was satisfied with the Commissioning phase deliverables.							■			
37	The cost of quality was monitored during the Commissioning of this project.							■			
38	Sustainability was an important consideration for the Commissioning phase of this project.								■		
39	The project's process safety objectives were appropriately communicated amongst the relevant Commissioning management team members.										■
40	Commissioning safety procedures were well defined and strictly followed.										■
41	Pre-task planning (including safety) was regularly conducted by foremen and/or other Commissioning managers.	■			■						■
42	Virtually all of punch list items were not very difficult to address in terms of time and cost.				■			■			

	Infrastructure Projects – Front End Planning Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
4	A robust, formal stage-gate process was rigorously followed for this project.	■	■								
6	Was there a formal, documented constructability plan during Front End Planning?	■			■	■					
7	Please characterize how project meetings were conducted.			■	■						
8	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
9	Was there a formal (documented in writing) change management process for this project?				■						
10	Was a life cycle cost analysis completed for this project?	■						■	■		
11	Did Front End Planning incorporate community relations issues?	■			■				■		
12	Was the owner's project manager assigned at the beginning of Front End Planning?	■	■	■							
13	Was the Construction manager assigned during Front End Planning?	■	■	■	■		■				
14	Was the Engineering manager assigned during Front End Planning?	■	■	■	■		■				
15	Was the lead scheduler assigned during Front End Planning?		■				■				
16	Was the cost engineer assigned during Front End Planning?		■		■		■				
17	The project had integrated peer reviews during Front End Planning.			■	■						
18	The Front End Planning process included sufficient resources necessary to adequately define the scope.	■	■		■		■				
19	The owner level of involvement was appropriate.	■	■	■							
20	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■		■						
21	The Procurement strategy and plan were developed and communicated to the project team during Front End Planning.	■		■	■			■		■	
22	The project team was well aligned in terms of the owner's objectives, needs and expectations.	■	■								
23	The project execution plan supported the objectives of this project.	■									
25	The equipment Procurement and vendor schedules were not a significant challenge during Front End Planning on this project.	■			■					■	
26	The project had an effective risk identification and management process.	■	■		■			■			
27	Preassembly, prefabrication, modularization, and offsite fabrication were thoroughly evaluated during Front End Planning.	■	■	■	■	■	■	■	■	■	■
28	A formal Commissioning execution plan was developed which incorporated operations and maintenance philosophy.	■			■			■			
29	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
30	The project team including project manager(s) had skills and experiences with similar projects / processes.		■		■		■				
31	The project management team was adequately staffed.		■				■				
32	People on this project worked effectively as a team.			■	■						
33	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
34	The interfaces between project stakeholders were well managed.		■	■							
35	Key project team members understood the owner's goals and objectives of this project.	■	■								

	Infrastructure Projects – Front End Planning Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
36	All of the necessary, relevant project team members were involved in the risk assessment process.		■		■						
37	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
38	Leadership effectively communicated organizational objectives, priorities, and project goals.			■							
39	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
40	The project management team maintained open and effective communication.			■	■						
41	Project team members had the information they needed to do their jobs effectively.			■	■			■			
42	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
43	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
44	The project's Commissioning objectives were appropriately communicated to the relevant project team members.			■	■						
45	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.		■	■	■	■		■			
46	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
47	The acquisition of land and/or Right of Way (ROW) proceeded according to plan	■	■	■	■	■		■	■		
48	The project team members attended sufficient professional training directly related to their work in the phase.						■				
49	Key stakeholders including the public were properly identified and involved during Front End Planning.	■	■	■	■	■	■	■		■	■
50	All required environmental impact assessments were completed.	■			■			■	■		
51	The initial site and/or existing facility conditions were fully verified for the deliverables of this phase.	■				■		■	■		■
52	All applicable national, regional, and local compliance requirements were well defined and understood by all relevant project stakeholders.	■	■	■		■		■	■		■
53	Effective cooperation and coordination existed amongst the organizations and regulatory agencies involved in this project.	■	■	■	■	■		■	■	■	

	Infrastructure Projects – Engineering Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
4	Did the project objectives change during Engineering?	■		■	■	■		■			
6	This project experienced a high number of :	■									
7	Please characterize how project meetings were conducted.			■	■						
8	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
9	Was a life cycle cost analysis completed for this project?								■		
11	Was the Construction Manager involved during Detailed Engineering?		■								
12	Were multiple Design offices used on this project?	■	■			■					
13	The owner level of involvement was appropriate.	■	■	■							
14	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■	■	■						
15	The Procurement strategy and plan were communicated to the project team during Engineering.	■		■	■			■		■	
16	The project objective and priorities were clearly defined.	■		■							
17	The equipment Procurement and vendor schedules were not a significant challenge during Engineering.	■			■					■	
18	Comprehensive constructability suggestions (e.g., preassembly, prefabrication, modularization, and offsite fabrication) were evaluated and incorporated into the Engineering of the project.	■	■		■	■					
19	A formal Commissioning execution plan including operations and maintenance philosophy was incorporated in Engineering.	■			■			■			
20	This project incorporated community relations issues in Engineering.	■			■				■		
21	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
22	Project team members had the authority necessary to do their jobs.		■	■							
23	The project team including project manager(s) had skills and experiences with similar projects / processes.		■		■		■				
24	People on this project worked effectively as a team.			■	■						
25	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
26	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Engineering.		■	■		■		■		■	
27	The interfaces between project stakeholders were well managed.		■	■							
28	Key project team members understood the owner's goals and objectives of this project.	■	■					■			
29	All of the necessary, relevant project team members were involved in an effective risk identification and management process for Engineering.	■	■		■						
30	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
31	Leadership effectively communicated organizational objectives, priorities, and project goals.			■							
32	Resources were allocated according to project priorities.	■		■			■				
33	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
34	Project team members had the information they needed to do their jobs effectively.			■	■						
35	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						

	Infrastructure Projects – Engineering Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
36	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
37	The project's Commissioning objectives were appropriately communicated to the relevant project team members.			■	■						
38	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.			■	■	■		■			
39	The number and quality of Engineering personnel was sufficient.		■				■				
40	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
41	Engineering deliverables were released in a timely manner as a result of a good Engineering work sequence on this project.		■		■	■					
42	The Engineering deliverables were complete and accurate (possessing a minimal amount of errors and omissions).				■	■		■			
43	The project control system was effective in monitoring project progress in terms of cost, schedule, and scope.				■						
44	A dedicated process was used to proactively manage change on this project.				■						
45	A formal project Quality Management System was used for the Engineering of this project.				■			■			
46	An interim product database and/or standardized Designs were used extensively in the Engineering of this project.	■				■		■		■	
47	The project team members attended sufficient professional training directly related to their work in the phase.						■				
48	The customer was satisfied with the Engineering phase deliverables.							■			
49	The cost of quality was determined during the Engineering phase of this project.							■			
50	The acquisition of land and/or Right of Way (ROW) proceeded according to plan	■	■		■	■		■	■		
51	Key stakeholders including the public were properly identified and involved during Front End Planning.	■	■	■	■	■	■	■		■	■
52	All required environmental impact assessments were completed.	■			■	■		■	■		
53	The initial site and/or existing facility conditions were fully verified for the deliverables of this phase.	■				■		■	■		■
54	All applicable national, regional, and local compliance requirements were well defined and understood by all relevant project stakeholders.	■	■	■	■	■		■	■		■
55	Effective cooperation and coordination existed amongst the organizations and regulatory agencies involved in this project.	■	■	■	■	■	■	■	■	■	

	Infrastructure Projects – Procurement Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
4	Did the project objectives change during Procurement?	■			■	■					
5	This project experienced a high number of (please check all that apply):	■	■								
6	Please characterize how project meetings were conducted.			■	■						
7	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
8	Was a life cycle cost analysis completed for this project?								■		
9	The owner level of involvement was appropriate.	■	■	■	■						
10	Preferred suppliers were used effectively to streamline the Procurement process.	■			■			■		■	
11	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■	■	■						
12	The project objective and priorities were clearly defined.	■	■	■							
13	The Procurement plan adapted to changing market conditions.	■	■		■					■	
14	The materials management plan for this project appropriately addressed elements such as project goals, responsibility, cost & schedule, and transportation & logistics.				■					■	
15	The equipment Procurement and vendor schedules were not a significant challenge for this project.	■			■					■	
16	A formal Commissioning execution plan including operations and maintenance philosophy was incorporated in the Procurement.	■			■			■			
17	Sustainability was an important consideration for the Procurement phase of this project.	■							■		
18	The Procurement plan addressed local content requirements.	■	■								
19	Appropriate contingencies were established to address materials and labor cost escalation.	■			■						
20	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
21	Project team members had the authority necessary to do their jobs.		■	■							
22	The project team including project manager(s) had skills and experiences with similar projects / processes.		■		■		■				
23	People on this project worked effectively as a team.			■	■						
24	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
25	The interfaces between project stakeholders were well managed.		■	■							
26	Key project team members understood the owner's goals and objectives of this project.		■								
27	All of the necessary, relevant project team members were involved in an effective risk identification and management process for Procurement.	■	■		■						
28	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
29	Leadership effectively communicated organizational objectives, priorities, and project goals.			■							
30	Resources were allocated according to project priorities.			■							
31	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
32	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Procurement.		■	■						■	
33	Project team members had the information they needed to do their jobs effectively.			■							

	Infrastructure Projects – Procurement Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
34	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
35	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
36	The project's Commissioning objectives were appropriately communicated to the relevant project team members.			■	■						
37	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.			■	■			■			
38	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
39	The project encountered few problems associated with the late delivery of equipment and bulk materials.				■			■		■	
40	Site materials management was effective.	■			■			■		■	■
41	Major equipment was delivered complete and on time.				■					■	
42	Risks were appropriately allocated through effective purchasing agreements.	■	■		■					■	
43	This project implemented a supplier quality surveillance program.				■			■		■	■
44	The project control system was effective in monitoring project progress in terms of cost, schedule, and scope.				■						
45	A dedicated process was used to proactively manage change on this project.				■						
46	A formal project Quality Management System was used for the Procurement of this project.				■			■			
47	The project team members attended sufficient professional training directly related to their work in the phase.						■				
48	The customer was satisfied with the Procurement phase deliverables.							■			
49	The cost of quality was determined during the Procurement phase of this project.							■			
50	The acquisition of land and/or Right of Way (ROW) proceeded according to plan	■	■		■				■	■	
51	The initial site and/or existing facility conditions were fully verified for the deliverables of this phase.	■								■	
52	All applicable national, regional, and local compliance requirements were well defined and understood by all relevant project stakeholders.	■		■	■			■	■	■	
53	Effective cooperation and coordination existed amongst the organizations and regulatory agencies involved in this project.	■	■	■	■					■	

	Infrastructure Projects – Construction Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
G	What was the typical foreman to craft ratio?		■		■		■				
G	Overall how many workers per safety professional were typically (i.e., in terms of the average workforce) on site?				■		■				■
4	Did the project objectives change during Construction?	■				■					
5	This project experienced a high number of (please check all that apply):	■									
6	Was a turnaround involved in the scope of this project?	■			■		■				
7	Please characterize how project meetings were conducted.			■	■						
8	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
9	This project used the following methods (please check all that apply):	■	■	■	■	■		■			■
10	Formal (classroom) safety training was attended:			■							■
12	Did the original primary contractor(s) complete the project?		■								
13	Was safety performance a criterion for contractor and subcontractor selection?		■								■
14	Were safety toolbox meetings held daily?										■
15	Were accidents including near misses formally investigated?										■
16	The availability and competency of craft labor was adequate.	■					■	■			■
17	The owner level of involvement was appropriate.	■	■	■							
18	The owner and primary contractor(s) maintain a long-standing partnering arrangement.	■	■	■						■	
19	The project team members were familiar with the project execution plan (PEP) and they used it to manage their work.	■	■	■	■						
20	A formal Commissioning execution plan including operations and maintenance philosophy was incorporated in the Construction phase.	■			■			■			
21	The work planning and scheduling processes were effective.	■									
22	Project cash flow was managed well during Construction.				■						
23	The Construction execution plan addressed community relations issues.	■			■						
24	The project team including project manager(s) had skills and experiences with similar projects / processes.		■		■		■				
25	The project experienced a minimum number of project management team personnel changes		■	■	■		■				
26	All of the necessary, relevant project team members were involved in an effective risk identification and management process for Construction.	■	■		■						
27	Project safety procedures were well defined and strictly followed.		■	■							■
28	Project management team members were clear about their roles and how to work with others on the project.	■	■	■	■						
29	Subcontractors provided the majority of the Construction craft workers.		■		■		■				
30	People on this project worked effectively as a team.			■	■						
31	Key project team members understood the owner's goals and objectives of this project.		■								
32	The interfaces between project stakeholders were well managed.		■	■							
33	Engineering deliverables were released in a timely manner and in a proper sequence.				■	■					
34	Project team members had the authority necessary to do their jobs.		■	■							
35	This project experienced a minimum amount of labor disruption		■		■		■				
36	The owner and primary contractor(s) maintained positive working relationships.	■		■	■					■	
38	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Construction.		■	■							

	Infrastructure Projects – Construction Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
39	Project leaders were open to hearing "bad news", and they wanted input from project team members.			■							
40	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
41	The project's Commissioning objectives were appropriately communicated to the relevant project team members.			■	■						
42	Resources were allocated according to project priorities.			■							
43	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
44	The project's work processes and systems (e.g., document management, project controls, business and financial systems) supported project success.			■	■			■			
45	Project team members had the information they needed to do their jobs effectively.			■							
46	Project leaders recognized and rewarded outstanding personnel and results.			■			■				
47	The Engineering deliverables were complete and accurate (possessing a minimal amount of errors and omissions).				■	■		■			
48	When issues arose, there were effective mechanisms to ensure they were resolved.			■	■						
49	The project encountered few problems associated with the late delivery of equipment and bulk materials.				■					■	
50	A dedicated process was used to proactively manage change on this project.				■						
51	A formal project Quality Management System was used for the Construction of this project.				■			■			
52	Site materials management was effective.	■			■					■	
53	The project employed regular safety audits or observations.										■
54	Materials and equipment were typically received on time, without damage, and per Design specification.				■					■	
55	The project team members attended sufficient professional training directly related to their work in the phase.						■				
56	The customer was satisfied with the Construction phase deliverables.							■			
57	The cost of quality was determined during the Construction phase of this project.							■			
58	Sustainability was an important consideration for the Construction phase of this project.								■		
59	The acquisition of land and/or Right of Way (ROW) proceeded according to plan	■	■		■			■	■		
60	Key stakeholders including the public were properly identified and involved during Front End Planning.	■	■	■	■	■	■	■		■	■
61	The initial site and/or existing facility conditions were fully verified for the deliverables of this phase.	■			■	■		■	■		■
62	All applicable national, regional, and local compliance requirements were well defined and understood by all relevant project stakeholders.	■	■	■	■	■		■	■		■
63	Effective cooperation and coordination existed amongst the organizations and regulatory agencies involved in this project.	■	■	■	■		■	■	■	■	

	Infrastructure Projects – Commissioning Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
5	Please characterize how project meetings were conducted.			■	■						
6	Which of the following statements characterized the decisions made by the manager(s) of this project?			■							
7	Was there a written, Commissioning-specific safety plan for this project?	■									■
8	The owner level of involvement was appropriate.	■	■	■							
9	A formal Commissioning execution plan including the impact to operations and maintenance was implemented.	■			■			■			
10	The Commissioning planning and scheduling processes were effective.	■									
11	The Commissioning plan addressed community relations issues.	■			■				■	■	
12	The Commissioning team had skills and experiences with similar projects / processes.		■		■		■				
13	The project experienced a minimum number of Commissioning team personnel changes.		■	■	■		■				
14	All of the necessary, relevant Commissioning team members were involved in an effective risk identification and management process for Commissioning.	■	■		■						
15	Commissioning management team members were clear about their roles and how to work with others during Commissioning.	■	■	■	■						
16	People on this project worked effectively as a team.			■	■						
17	Key Commissioning management team members understood the owner's goals and objectives of this project.	■	■								
18	Commissioning management team members had the authority necessary to do their jobs.		■	■							
19	Leadership effectively communicated Commissioning goals and priorities.			■							
20	The key stakeholders (owner, design, vendors and suppliers) were fully aligned during Commissioning.		■	■							
21	Commissioning leaders were open to hearing "bad news", and they wanted input from Startup team members.			■							
22	Plan and progress including changes were communicated clearly and frequently amongst project stakeholders.			■	■						
23	The project team members were familiar with the Commissioning plan and they used it to manage their work.	■		■	■	■					
25	A high degree of trust, respect and transparency existed amongst companies working on this project.			■						■	
26	The Commissioning processes and systems supported project success.							■	■		
27	Commissioning management team members had the information they needed to do their jobs effectively.			■							
28	Project leaders recognized and rewarded outstanding personnel and results during Commissioning.			■			■				
29	The Commissioning process achieved the operability and product quality objectives.				■			■	■		■
30	When issues arose, there were effective mechanisms to ensure they were resolved.				■						
31	A dedicated process was used to proactively manage change during Commissioning.				■						
32	The project's Commissioning processes were explicitly defined, managed, measured, and controlled				■						
33	The Commissioning management team members attended sufficient professional training directly related to their work.						■				

	Infrastructure Projects – Commissioning Phase	Planning	Organizing	Leading	Controlling	Design Efficiency	Human Resources	Quality	Sustainability	Supply Chain	Safety
34	The customer was satisfied with the Commissioning phase deliverables.							■			
35	The cost of quality was monitored during the Commissioning of this project.							■			
36	Sustainability was an important consideration for the Commissioning phase of this project.								■		
37	The project's process safety objectives were appropriately communicated amongst the relevant Commissioning management team members.										■
38	Commissioning safety procedures were well defined and strictly followed.										■
39	Pre-task planning (including safety) was regularly conducted by foremen and/or other Commissioning managers.	■			■						■
40	Key stakeholders including the public were properly identified and involved during Front End Planning.	■	■	■	■	■	■	■		■	
41	The initial site and/or existing facility conditions were fully verified for the deliverables of this phase.	■						■	■		■
42	All applicable national, regional, and local compliance requirements were well defined and understood by all relevant project stakeholders.	■	■	■		■		■	■		■
43	Effective cooperation and coordination existed amongst the organizations and regulatory agencies involved in this project.	■	■	■	■		■	■	■		