

Driven by Perseverance & Grit"



inerchem

Engineering & Commissioning Services



<https://inerchem.com>

Corporate Presentation

Commissioning Strategy Overview





Two Lines of Action

LINE 1



Early Integration of Commissioning

Involvement of Commissioning from the early stages of the project to ensure excellence during commissioning and start-up.

LINE 2



Green Line Strategy

Development of the project around a Commissioning-Driven Critical Path to enable the earliest safe and controlled first production.

Driven by Perseverance & Grit"





LINE 1 : Early Integration



... Commissioning as an Integrated Project Function

Direct involvement throughout the project lifecycle provides **continuity from design through construction, start-up and operation.**

inerchem

Design & Engineering

Construction

Commissioning

Operation

"Driven by Perseverance & Grit"



LINE 1 : Early Integration



Contract Review

1. Contract Review
2. Project Design
3. Commissioning Strategy
4. Procurement / Logistics
5. Construction Supervision
6. Commissioning Execution

- ***Detailed Scope / Boundaries of Commissioning***
- ***Commissioning Resource Allocation***
- ***Acceptance Criteria and Project Handover***
- ***Budget Review for Commissioning Activities***

Driven by Perseverance & Grit"





LINE 1 : Early Integration



Project Design

1. Contract Review

2. Project Design

3. Commissioning Strategy

4. Procurement / Logistics

5. Construction Supervision

6. Commissioning Execution

- ***Centralization of Lessons Learned Across Projects***
- ***Early Integration of Commissioning Requirements***
- ***Flexible Commissioning of Systems from DCS***

Driven by Perseverance & Grit"





LINE 1 : Early Integration



Commissioning Strategy

1. Contract Review
2. Project Design
3. Commissioning Strategy
4. Procurement / Logistics
5. Construction Supervision
6. Commissioning Execution

- **Identification of the Project Critical Path** (*Green Line*)
- **Commissioning Procedures**
- **Required Equipment and Resources**
- **System Integration** (*TOP's for Green Line*)
- **Procurement Processes** (*for Consumables and Commissioning tools*)

Driven by Perseverance & Grit"



LINE 1 : Early Integration



Procurement / Logistics

1. Contract Review
2. Project Design
3. Commissioning Strategy
4. Procurement / Logistics
5. Construction Supervision
6. Commissioning Execution

- ***Timely delivery of required equipment and materials***
- ***Availability of temporary commissioning tools***
- ***Strategy for quick delivery of consumables***
- ***Facilitates efficient project execution***

Driven by Perseverance & Grit"





LINE 1 : Early Integration



Construction Supervision

1. Contract Review
2. Project Design
3. Commissioning Strategy
4. Procurement / Logistics
5. Construction Supervision
6. Commissioning Execution

- ***Critical oversight of construction progress***
- ***Commissioning supervision support***
- ***Verification of piping cleanliness***
- ***Early detection of deficiencies***
- ***Installation of temporary systems***
- ***Preparation for Commissioning Phase***

Driven by Perseverance & Grit"





LINE 1 : Early Integration



Commissioning Execution

1. Contract Review
2. Project Design
3. Commissioning Strategy
4. Procurement / Logistics
5. Construction Supervision
6. Commissioning Execution

- ✓ **Project Site Organization**
- ✓ **Organization Chart**
- ✓ **Budget Estimation**
- ✓ **Tools and Consumables**
- ✓ **Commissioning Procedures**
- ✓ **TOP's Definitions**
- ✓ **Checklists**
- ✓ **Functional Test**
- ✓ **Training**
- ✓ **Handover**

Driven by Perseverance & Grit"





LINE 2 : Green Strategy



Definition of commissioning-driven critical path to achieve the earliest safe and controlled first production

The Concept

- ▷ **Identifying Process Path for First Production**
- ▷ **Selection of Priority Systems**
- ▷ **Determination of Construction Critical Path**
- ▷ **Overlapping of Project Activities**
- ▷ **Safety Requirements & Constraints**
- ▷

Driven by Perseverance & Grit"



LINE 2 : Green Strategy



Progressive commissioning of prioritized systems to achieve early production

Execution
Strategy



- ▷ **Progressive System Turnover**
- ▷ **Early Energization and Utilities**
- ▷ **Overlapping of Field Activities**
- ▷ **Functional testing by subsystem**
- ▷ **Temporary Arrangements where justified**
- ▷ **First Operation Strategy**
- ▷ **Progressive Capacity Ramp-up**

"Driven by Perseverance & Grit"



LINE 2 : Green Strategy



Controlled execution without compromising commissioning standards and safety

Risk Management



- ▷ **Operation with Partially Completed Facilities**
- ▷ **Interfaces with Ongoing Construction**
- ▷ **Temporary Systems / Manual Operation**
- ▷ **Clear Operational Boundaries and Responsibilities**
- ▷ **Specific Risk Assessment and Mitigation Plan**

Driven by Perseverance & Grit™





Project Commissioning Strategy



Structured Approach for Project Execution



**Early Integration
of Commissioning**

**Green Line
Strategy**

**Project
Prioritization**

**Execution
Strategy**

**Risk
Management**

**Ramp-up &
Performance
Test**

"Driven by Perseverance & Grit"

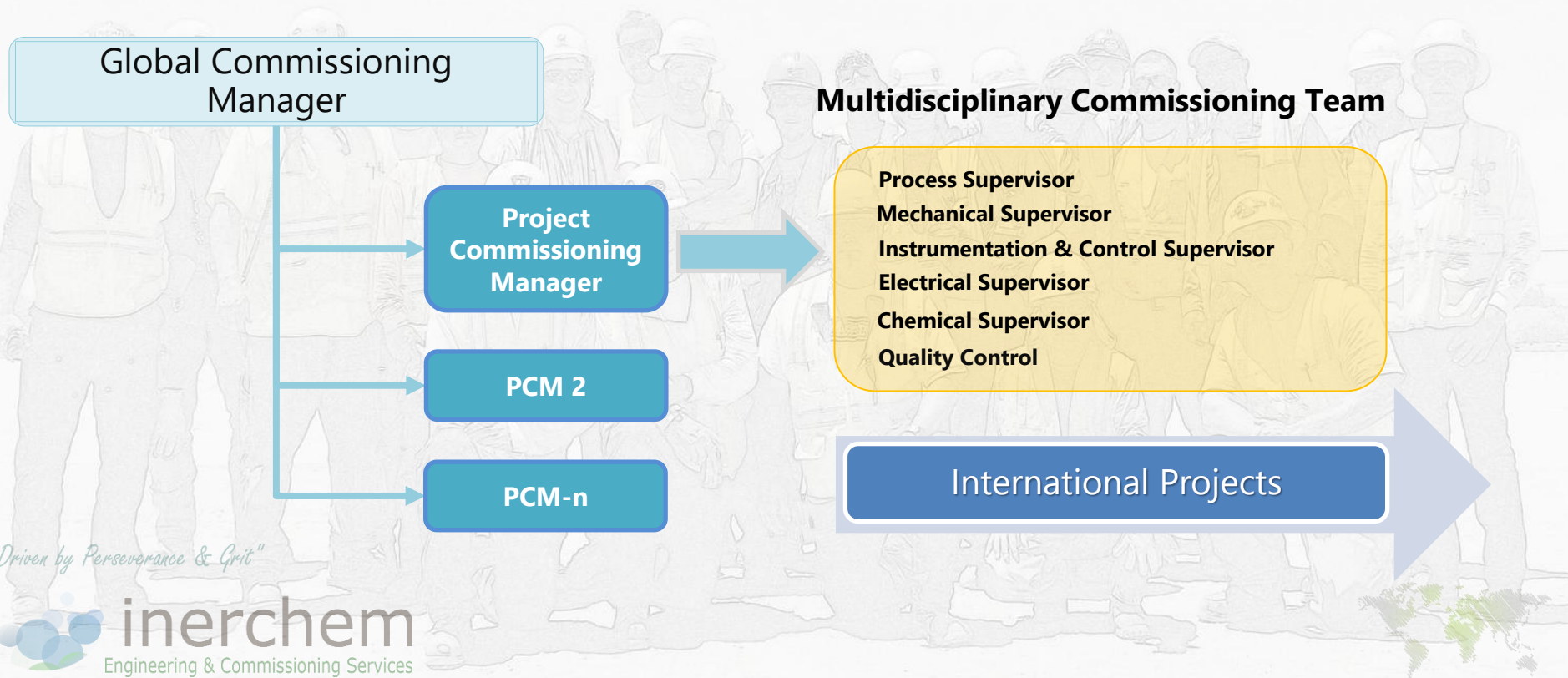




General Organization

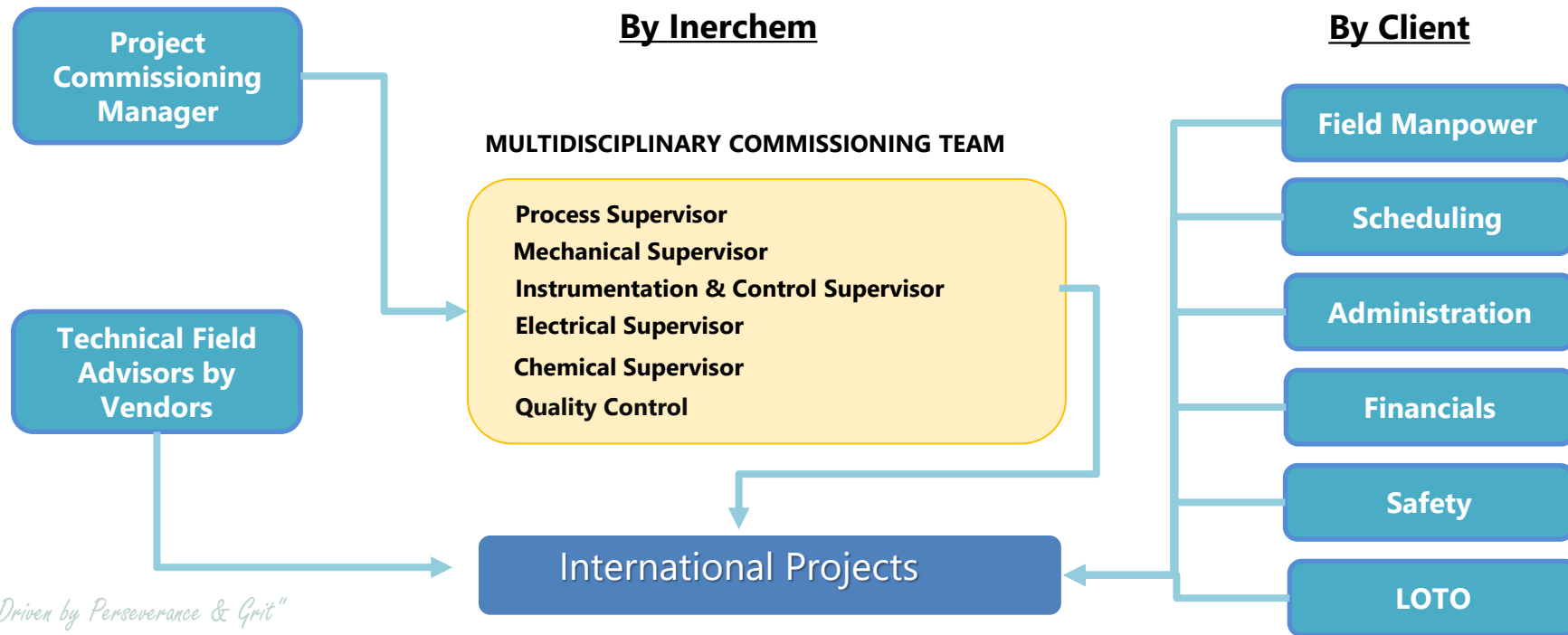


Flexible deployment of multidisciplinary specialists according to project requirements





Project Organization



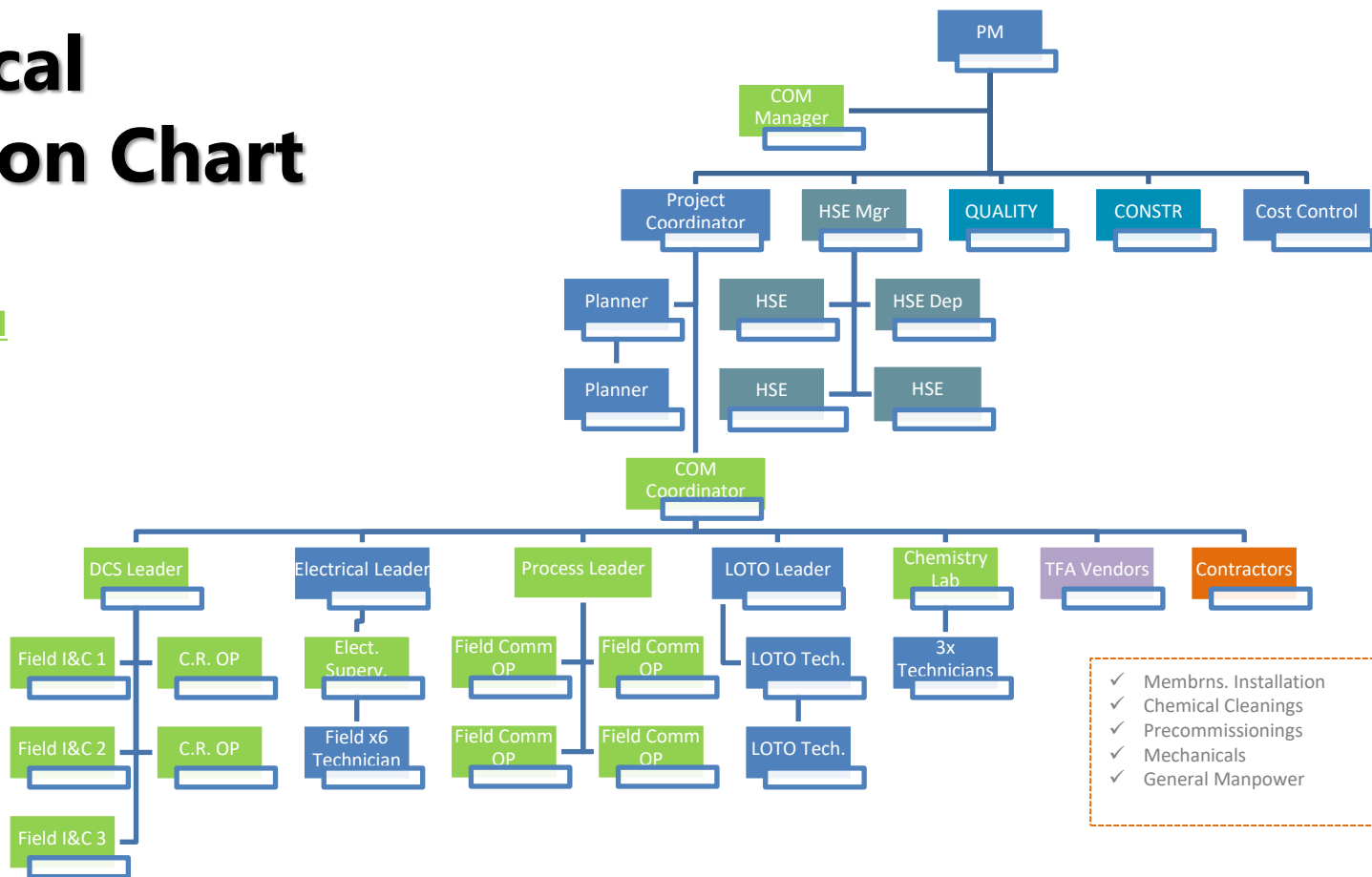
Driven by Perseverance & Grit"





Typical Organization Chart

By Inerchem **in GREEN**



Driven by Perseverance & Grit"





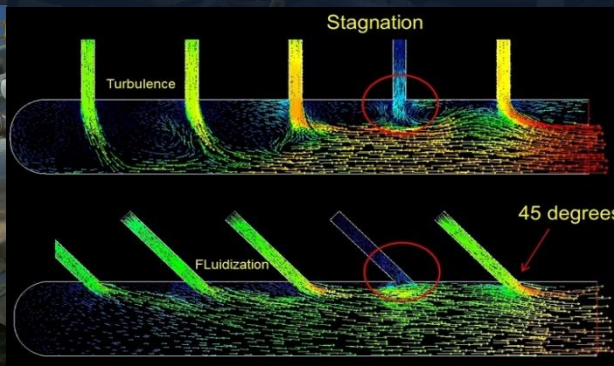
WATER TREATMENT • POWER PLANTS • DESALINATION FACILITIES • CHEMICAL INDUSTRY

Engineering Precision / Field-Proven Solutions

"Driven by Perseverance & Grit"

inerchem
Engineering & Commissioning Services

ENGINEERING • COMMISSIONING • TROUBLESHOOTING



Driven by Perseverance & Grit"



Get in **Touch** with us!



www.inerchem.com
+971 52 410 2992
Al Messaned - Al Mitsannid - Sharjah
United Arab Emirates

