

excerpts from the book

Customer-Anchored Supply Chains

An Executive's Guide to Building Competitive Advantage in the Oil Patch.

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Foreword

To those on the outside of supply chain management, our task is simple take the order, procure or build the product, and send it out the door to the customer. With more than 50 years of combined experience in and around the oilfield, Gary Flaharty and Noman Waheed know the task is anything but simple.

To achieve success, they argue we must not only serve our customers but more importantly our customer's customer. Indeed, they advocate anchoring in your customer's customer to align the value chain and ensure imperatives are understood, goals are aligned, and communication flow is fully alive.

Having held the senior supply chain executive role, I would describe the business of oilfield supply chain management as a fickle one at best. For starters, you are only as good as your last bad delivery. When you have an issue, it feels like it lasts an eternity.

Within the oilfield, the complexities are exponential. Each basin and each well within a basin has its own signature. Each producer has its own signature. Each service arm has its own flavor of customization. The

combined hydrocarbon recovery process is as much an art as a science, so timing is never as one plans. Wrap all of his complexity into the simple, understated term *supply chain*, and you have yourself an extremely complex, dynamic and, if well run, agile value chain. If not well run, you have chaos, unhappy customers, and lost revenue.

In this book, Gary and Noman set out to connect the dots, anchor you to the real value and set a foundation for success. They have hit the mark with the customer anchored supply chain concept. It all starts and ends with the customer's customer.

Focusing on the end state value chain ensures that all the segments within that chain have the same goal in mind. Alignment creates speed and high-quality outcomes. Detailing this value chain, focusing on where the true requirements of each segment are derived from, and detailing the basics of how to structure, measure, evaluate and create momentum for flow, creates a heartbeat for success. Once the rhythm is found, the flow is made sustainable, and agility for this incredibly dynamic environment is established, the leader of a supply chain can begin to deliver true value to the customer's customer.

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by
Gary Flaharty
and Noman Waheed




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Customer-Anchored Supply Chains

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I recall endless hours in our corporate offices with my team white boarding the segments of the value chain: detailing how they should work, how we should measure, what had to change, who we had to communicate with and how we could drive success for the company.

Gary was always the larger voice of reason; ensuring the customer's needs were the driver of the value chain. Noman was the key to establishing how to create the sustainable planning mechanisms and driving signals to connect the globe in the plan for efficiency and cash control.

Customer-Anchored Supply Chains makes a significant contribution to the understanding of comprehensive supply chain alignment. The book shows the way in which any new executive in this sometimes daunting, but incredibly important leadership role, should consider establishing his or her elements of value, execution and measurement. The executive summary and checklist make this an invaluable and comprehensive read. It is also a great reference book as you continue to refine your value chain for customer alignment and success.

Why anchor your supply chain to your customer's customer? Where do you begin? How do you know it will be successful? In this book you will find a well thought out guide to building

the foundation, alignment, and velocity required for success. The concepts will help you develop a fresh perspective on the supply chain and supply chain strategy that will prevent you from stumbling into some of the pitfalls many have struggled with for decades.

Tammi Morytko

April 2015

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Preface

We wrote this book to fill a gap that we perceive exists in the oilfield services and E&P sectors. While we acknowledge that there are many good books available on supply chain practices, there are few that approach the subject from the perspective of the oilfield services industry. Adoption of leading supply chain practices in the oil that trend corrected. We believe that a book that speaks to this industry, using some of its language and with examples that are more familiar, can be a catalyst for increasing the pace of adoption.

We do not think that accessibility of the concepts is the only thing that has held supply chain advancement back. This industry has experienced volatility unlike any other industry. In the "good times," with oil over \$100 per barrel, business is insanely good. The focus of oilfield service supply chain management teams is on firefighting and expediting as they scramble to keep up with an order backlog growing faster than they could have expected.

In many respects, the old ways of doing things seem just fine when the orders are flowing. In the “bad times,” when oil is less than \$50 per barrel, the focus is intense on preserving margins and in the most violent of downturns, staying in the black. In both cases, investing in the future seems to be relegated to the back burner. We believe that now is the time for the oilfield services supply chain to adopt of these leading practices. We are confident in saying *now*, even though we do not know where the oil price is as you are reading this. In some ways, it does not matter. At \$120 per barrel or \$40 per barrel, we want to encourage companies to implement these leading practices today.

We also see an industry that is intent on developing executives with broad ranges of operational and business experience, including supply chain. This is good; however, increasingly, business leaders without extensive supply chain experience inherit the supply chain or its top position or a critical position on its executive team. We wanted to write this book to give that executive a reference book that ties supply chain thought and leading practices to the oilfield services world.

We love the oilfield service industry and have spent the majority of our careers in the oilfield services sector—much of it in supply chain. We know this industry can do a better job of supply chain management. In that spirit, we wrote this book to share the knowledge that comes from over fifty years of industry experience. We bristle when others describe the oilfield services industry as not up to par when compared to other industries. We bristle because it is embarrassing *and* because it is true.

We have not applied leading practices. We are behind.

We wanted to give hope and encouragement to those on the front line fighting the day-to-day battles. This industry has always prided itself on its service attitude. Many companies in other industries would love to have the “can-do” attitudes that are prevalent in the oil patch. We do not want to lose that focus, but we do think there are better ways to do the job. We hope this book gives encouragement to executives, supply chain managers, supply chain interns, and supply chain students to gather the courage to stand in the gap and push for techniques and approaches we know will work.

Our thoughts matured as we went through the book-writing process. We found ourselves looking at the larger supply chain rather than the smaller pieces. Concepts like “end-to-end” and “natural” supply chains seemed to be only partial solutions. We came to believe that these approaches sometimes fall short when implemented if they do not purposefully anchor in the customers’ customers.

A recent industry meeting in Houston with oil company asset teams, oil company procurement teams, oil service company salespeople, oil service company supply chain manufacturing and procurement executives, and vendors to the oil service companies in attendance reinforced our developing thesis. The lack of coordination and shared understanding of roles in the room was breathtaking. Some sensed that they were part of a larger supply chain. Few recognized that everyone in the room was part of one supply chain. Each saw his or her organization responding to a customer and being supported by a supply chain.

The language though was one of *us* and *them*. We would be okay if *they* would just get their act together. The reality was that most participants’

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vision was so myopic that they did not know what their customers' customers needed to succeed and what information they needed to be supplying to their suppliers' suppliers.

Last, we recognized the need for supply chain executives to engage with sales and field operations, marketing, and product development executives in the execution of the firm's customer-facing strategies. Traditional S&OP processes, organized around geographies and product lines, fail to provide a platform for executive decision-making. We came to believe that the customer-application, a concept developed to organize the process of anchoring the supply chain in its customers, should be the primary organizing theme of the monthly executive S&OP meeting.

Managing customer-applications, rather than geographies or product lines, anchors the firm firmly in satisfying its customer's requirements and building profitable market share.

There is no time like the present for companies to adopt these leading supply chain practices.

Overbuilt for the shale boom of the last decade, the oilfield service industry in North America must restore profit margins and improve returns without the benefit of a growth market. Trimming staffing levels and squeezing supplier margins alone will not be sufficient. We believe that the approaches outlined in *Customer-Anchored Supply Chains* will help firms implement operational changes that will lead to gaining competitive advantage, improved profits, efficient

use of the shareholder's capital and revenue growth through share gains.

Introduction

Customer-Anchored Supply Chains is about applying supply-chain fundamentals proven in other industries to the oilfield services industry. Its examples are drawn from the oil patch. The focus of the book is on planning and the processes that link planning with execution and through performance monitoring back to execution.

The book is written to be a practical guide for the oilfield executive to whom supply chain reports, the top supply-chain executive, and the supply-chain management team including sales and operations planning, order entry and acknowledgment, master scheduling and materials management, manufacturing, strategic sourcing and procurement, distribution and logistics.

We believe that the leaders to whom supply chain reports need not be experts in management, inventory management, and MRP. This book introduces these and other concepts without becoming a detailed how-to book. For example, we only dedicate a chapter to MRP while the subject could—and has—filled books. We expect the supply-chain practitioner who needs detailed information about these subjects will obtain it elsewhere.

Each chapter ends with an executive summary and an executive checklist. We know the time crunch executives face, so we have tried to write each chapter so that it stands alone, and we have concluded each chapter with a review of the basic concepts introduced. The executive checklist is meant to assist the executive in developing probing questions to assess the sophistication of his or her supply chain's implementation of these leading practices.

The book is organized from the top down, or—if you think of an onion—from the inside out. (See illustration 1.)

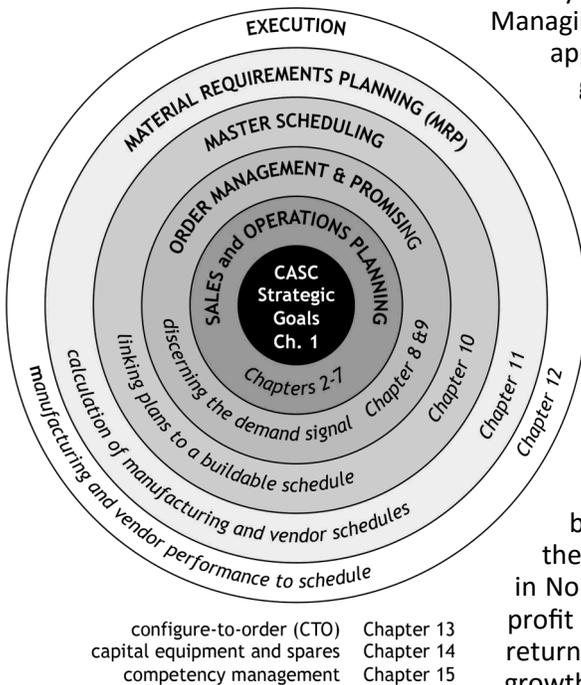


Illustration 1

As we move from the strategy in the center of the circle to the outer circle, plans take shape and, combined with actual customer orders, turn into detailed schedules. The cadence also changes as we move from the annual reviews of strategy in the center to the monthly rhythm of sales and operations planning (S&OP), to the weekly cadence of the master schedule, and ultimately to the hourly drumbeat of execution.

Section 1 is about the center of the customer-anchored supply chain: supply chain's strategic goals. If a company gets these wrong, the ramifications will ripple through each subsequent layer. Setting strategic goals for the customer-anchored supply chain is about integrating the supply-chain imperatives (health, safety, and environment—HS&E—and quality) with the internal objectives relevant to the shareholders and the external objectives important to the customer. We introduce the concept of the customer-anchored supply chain as a lens through which strategic goals and initiatives should be viewed. The interface between the core strategic objectives and the next layer, S&OP, are the initiatives that comprise the supply chain's strategic plans.

Section 2 is about S&OP. S&OP takes the business's strategic plans, supply chain's strategic plans, the demand plans, inventory plans, and supply or resource plans and integrates them into one plan. This is the *one* playbook that the organization will follow. We dedicate a chapter to each step of the S&OP cycle: "Demand Management—Demand Planning" (chapter 3), "Inventory Planning" (chapter 4), "Resource Planning" (chapter 5), and "Performance Monitoring" (chapter 6). The section concludes with chapter 7, "Monthly Executive S&OP Meeting."

Section 3 focuses on the interface between planning and execution. In chapter 8, we discuss the selection of planning and execution strategies and then move to discerning the demand signal in chapter 9, "Demand Management—Order Management and Order Promising."

In chapter 10, we discuss "Materials Management—The Master Schedule"—the link between the planning functions and execution. The explosion of the master schedule to manufacturing and purchasing schedules is covered in chapter 11 on "Materials Management — Materials Requirements Planning (MRP)." Section 3 concludes with chapter 12, "Execution." We outline some of the systemic causes of failure in execution and application of select lean manufacturing principles to improve execution. The authors understand that without strong execution, by both manufacturing and procurement, the effort spent in developing detailed plans is wasted and that with excellence in execution, the planning process is greatly simplified.

In **section 4**, we cover particular cases of the planning and execution system we outlined. In chapter 13, the focus is on dealing with complexity through a configure-to-order model. Chapter 14 discusses the particular needs of planning for capital equipment and spare parts. Last, but certainly not least, in chapter 15, we discuss the need for a comprehensive competency management program.

Section 1 Introducing the Customer-Anchored Supply Chain

As executives, sometimes our knowledge and our experiences betray us. We think we know. We are expected to know. It would be embar-

without strong execution, by both manufacturing and procurement, the effort spent in developing detailed plans is wasted

rasing to admit that we do not know. So we do not ask.

In this section, we want to encourage supply-chain executives to ask and listen. We want you to be as good as your direct customer at understanding and being able to articulate what their customer needs to succeed. And we want you to be as good as your supplier at understanding and being able to articulate what their supplier needs for them to succeed. This is the lens through which supply-chain strategic goals should be set to achieve competitive advantage.

A supply chain's initiatives should be designed to efficiently use its resources to achieve the supply-chain imperatives, reward shareholders, and please customers.

A customer-anchored supply chain's strategic goals can be classified into three broad categories: supply-chain imperatives, which must be addressed, internal goals that drive performance for the shareholders, and external goals that drive competitive advantage.

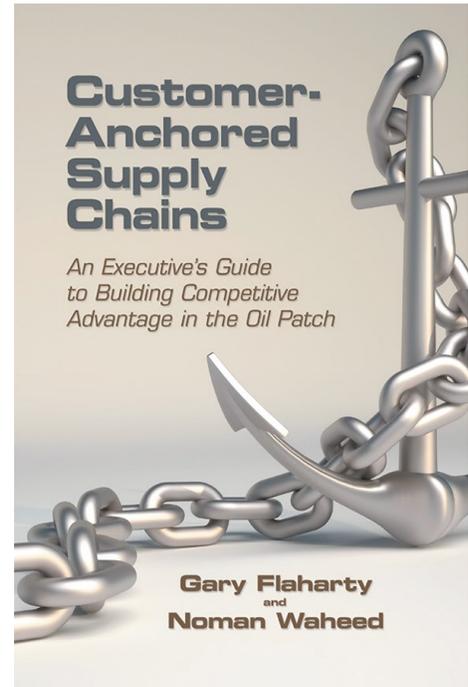
Every supply chain's imperative goals are health, safety, and environment (HS&E), as well as quality. These imperative goals always take precedence over external and internal goals. No company should ever knowingly allow anybody to get hurt or damage the environment, and every supply chain should strive to manufacture a quality product.

A company's shareholders or owners drive internal goals. They expect the firm to be good stewards of the capital they invest in it, show a return on that capital, generate positive cash flow, and maintain a profit margin for the business.

Section 1 is about customers and their satisfaction. We introduce the concept of segmenting the firm's business into customer-applications and using customer-anchoring statements to document the critical

success factors that drive customer satisfaction and build competitive advantage.

When a firm's customers recognize that it is consistently delivering superior performance based on the critical success factors, competitive advantage is built and rewarded. A



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supply chain's initiatives should be designed to efficiently use its resources to achieve the supply-chain imperatives, reward shareholders, and please customers. The initiatives should stretch the management team to perform, but they must also remain realistic in terms of the resources available to the supply chain. The customer-anchored supply chain sets its strategic goals with these critical success factors in mind, and in time, it will deliver on the promise of a supply chain that creates competitive advantage.

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