

The Warehouse Management Handbook By James A Tompkins

Computational Intelligence (CI) is a term corresponding to a new generation of algorithmic methodologies in artificial intelligence, which combines elements of learning, adaptation, evolution and approximate (fuzzy) reasoning to create programs that can be considered intelligent. Supply Chain Optimization, Design, and Management: Advances and Intelligent Methods presents computational intelligence methods for addressing supply chain issues. Emphasis is given to techniques that provide effective solutions to complex supply chain problems and exhibit superior performance to other methods of operations research.

This handbook begins with the history of Supply Chain (SC) Engineering, it goes on to explain how the SC is connected today, and rounds out with future trends. The overall merit of the book is that it introduces a framework similar to sundial that allows an organization to determine where their company may fall on the SC Technology Scale. The book will describe those who are using more historic technologies, companies that are using current collaboration tools for connecting their SC to other global SCs, and the SCs that are moving more towards cutting edge technologies. This book will be a handbook for practitioners, a teaching resource for academics, and a guide for military contractors. Some figures in the eBook will be in color. Presents a decision model for choosing the best Supply Chain Engineering (SCE) strategies for Service and Manufacturing Operations with respect to Industrial Engineering and Operations Research techniques Offers an economic comparison model for evaluating SCE strategies for manufacturing outsourcing as opposed to keeping operations in-house Demonstrates how to integrate automation techniques such as RFID into planning and distribution operations Provides case studies of SC inventory reductions using automation from AIT and RFID research Covers planning and scheduling, as well as transportation and SC theory and problems

India is an agricultural-based economy and is the largest producer of fruits and vegetables in the world. Fruits & vegetables, being perishable in nature require certain techniques of preservation for retaining the quality and extend the self-life of the production. The estimated annual production of fruits and vegetables in the country is about 130 million tonnes. The cold storage & cold chain facilities are the prime infrastructural component for such perishable commodities. Cold storage is a temperature – controlled supply chain network, with storage and distribution activities carried out in a manner such that the temperature of a product is maintained in a specified range, needed to keep it fresh and edible for a much longer period than in normal ambient conditions. A cold chain can be managed by a quality management system generally called as warehouse management. India's warehousing requirement is expected to grow at an annual average rate of 9%. The Indian Government focus on incentivizing the manufacturing sector is the key to growth of warehousing.

With the growth of the domestic manufacturing and retail segments, the demand for efficient warehouse management service has improved. Investment in warehouse can provide an opportunity of realizing returns in the range of 12%-20% per annum to investors willing to explore this sector. The current scenario reveals that there is a tremendous scope for the development of cold chain facilities. The cold chain industry is recognized as a sunrise sector in India and is expected to offer significant opportunities in the near future. Developing an integrated supply chain, including cold chain can save up to 300 billion annually and at the same time reduce the wastage of perishable horticulture produce. This handbook is designed to provide a thorough understanding and analysis of the cold chain industry and warehouse management. Also it contains addresses of plant & machinery suppliers with their photographs. The major content of the book are controlled atmosphere storage, types of cold storage, thermal insulation & refrigeration system, refrigeration, food storage guidelines for consumers, bananas cold storage, cold storage plant- automation, absorption refrigerator, cold chain, growth of cold storage industry, cold chain and refrigeration, shipping containers, cold chain monitor, warehouse, nabard warehousing scheme, rural godowns, solar powered cold storage, addresses of plant and machinery suppliers, sample plant layouts and photographs of machinery with suppliers contact details. It will be a standard reference book for professionals, entrepreneurs, food technologists, those studying and researching in this important area.

Containing revisions to areas, such as manufacturing logistics, integrated logistics, process design and home delivery, this handbook includes sections on warehouse receipt and despatch.

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This comprehensive research based, well received book, now in its Second Edition, continues to provide the most complete up-to-date coverage of the materials management discipline. It is the result of intensive and in-depth interactions of the authors with academic community, IIMM professionals as well as senior executives involved in materials, inventory, warehousing, logistics, supply chain, working capital and top management. This title reflects the wealth of experience gained by the authors in India and abroad in training, research, teaching and consultancy. This well-organised comprehensive book clearly analyses all the concepts, processes and applications of Materials Management, Supply Chain Management, Logistics Management, and Multimodal Transport. It covers basic principles and practices concerning these areas as well as to its application in Indian conditions. This textbook describes the concept of integrated materials management with the help of diagrams, charts, photos and solved examples, covering all the aspects of materials management. It provides a number of solved practical problems and examples for better comprehension. The suggestions of practising professionals, academicians and researchers have been appropriately

incorporated in this book. An attempt has been made to strike a balance between conceptual frameworks and practical aspects of materials and its management. Intended primarily as a textbook for graduate students pursuing materials management courses in Indian universities, this comprehensive title will also serve as a ready reckoner for the executives practising in areas such as materials, logistics, SCM, purchase, warehousing and inventory management. The students of business management, engineering, Indian Institute of Materials Management (IIMM) diploma and other related programs/courses will find this book extremely useful.

Learn from this bestselling guide all aspects of how to operate and manage the modern warehouse to optimize efficiency, costs and profit.

A comprehensive, one-stop reference for cutting-edge research in integrated risk management, modern applications, and best practices In the field of business, the ever-growing dependency on global supply chains has created new challenges that traditional risk management must be equipped to handle. Handbook of Integrated Risk Management in Global Supply Chains uses a multi-disciplinary approach to present an effective way to manage complex, diverse, and interconnected global supply chain risks. Contributions from leading academics and researchers provide an action-based framework that captures real issues, implementation challenges, and concepts emerging from industry studies. The handbook is divided into five parts: Foundations and Overview introduces risk management and discusses the impact of supply chain disruptions on corporate performance Integrated Risk Management: Operations and Finance Interface explores the joint use of operational and financial hedging of commodity price uncertainties Supply Chain Finance discusses financing alternatives and the role of financial services in procurement contracts; inventory management and capital structure; and bank financing of inventories Operational Risk Management Strategies outlines supply risks and challenges in decentralized supply chains, such as competition and misalignment of incentives between buyers and suppliers Industrial Applications presents examples and case studies that showcase the discussed methodologies Each topic's presentation includes an introduction, key theories, formulas, and applications. Discussions conclude with a summary of the main concepts, a real-world example, and professional insights into common challenges and best practices. Handbook of Integrated Risk Management in Global Supply Chains is an essential reference for academics and practitioners in the areas of supply chain management, global logistics, management science, and industrial engineering who gather, analyze, and draw results from data. The handbook is also a suitable supplement for operations research, risk management, and financial engineering courses at the upper-undergraduate and graduate levels. It is a common observation that every business acquires some materials, processes them, and hands them over to the customer. Supply chain management techniques help to ensure smoothness of this whole process. Modernization, automation, and

globalization have become the need of surviving and growing in the fast-changing world. Removal of barriers has acted as a catalyst to accelerate the process further which is increasing complexity and challenges for businesses. Remaining well informed is a need of business and growing in carrier. People want brief information and don't like to read long passages, sending extremely short message is practiced more now. Based upon these I have tried to develop a simple starter's guide after years of hard work that covers all important functions of SCM in a friend and casual way.

City logistics is one of the most popular fields of transportation sciences, dealing with sustainably supplying cities and at the same time reducing congestion and pollution related to goods transport in urban areas. Recently, humanitarian, emergency, and crises logistics has been a subject of increasing interest, often seen from an international viewpoint. However, some of the recent natural crises have shown the importance of resilience and reliability of the current urban logistics systems. The Handbook of Research on Urban and Humanitarian Logistics is a critical scholarly publication that addresses urban logistics and resilience, sustainable urban logistics, humanitarian logistics in urban areas both for crisis or long-term, and planning for resilient urban development. Featuring a broad range of topics that discuss the new and future trends in urban logistics and resilient cities, this publication is ideal for public planners; urban planners; company managers in logistics and transport; consulting agencies; regional, national, and international institutions and organizations; researchers; academicians; and students.

When work began on the first volume of this text in 1992, the science of distribution management was still very much a backwater of general management and academic thought. While most of the body of knowledge associated with calculating EOQs, fair-shares inventory deployment, productivity curves, and other operations management techniques had long been solidly established, new thinking about distribution management had taken a definite back-seat to the then dominant interest in Lean thinking, quality management, and business process reengineering and their impact on manufacturing and service organizations. For the most part, discussion relating to the distribution function centered on a fairly recent concept called Logistics Management. But, despite talk of how logistics could be used to integrate internal and external business functions and even be considered a source of competitive advantage on its own, most of the focus remained on how companies could utilize operations management techniques to optimize the traditional day-to-day shipping and receiving functions in order to achieve cost containment and customer fulfillment objectives. In the end, distribution management was, for the most part, still considered a dreary science, concerned with off-transportation rates and cost trade-offs. expediting and the tedious calculus Today, the science of distribution has become perhaps one of the most important and exciting disciplines in the management of business.

Mounting emphasis on construction supply chain management (CSCM) is due to both global sourcing of materials and a shortage of labor. These factors force increasing amounts of value-added work to be conducted off-site deep in the supply chain. Construction Supply Chain Management Handbook compiles in one comprehensive source an overview of the diverse research and examples of construction supply chain practice around the world. Reflecting the emergence of CSCM as an important area of multi-national research and practice, this volume takes an interdisciplinary perspective with contributions from leading international

authors in three major areas: production and operations analysis, organizational perspectives, and information technology. The book begins with a survey of the current literature on modeling construction supply chain production and describes a set of approaches and methods for designing and operating project supply chains with references to design and materials production. It provides the basic framework for understanding the challenges and approaches to representing and improving supply chain performance. The next section recognizes the importance of considering arrangements between the different firms involved in designing, procuring, and assembling construction, and reviews various perspectives to understanding and improving organizational issues in the supply chain. The final section provides an overview of a range of information technologies that can contribute to supply chain performance, as well as examples of effective use. The organization and sourcing of materials is increasingly complex across the global construction industry. Construction clients are demanding faster, more responsive construction processes and higher quality facilities. This volume provides an invaluable resource to understanding the implications of supply chain management, which is sure to result in more effective construction project execution.

When you invest millions on new systems you don't want yesterday's solutions. You need a global view of end-to-end material, information, and financial flows. Managers today have the same concerns managers had last year, 10 years ago, or 50 years ago: products, markets, people and skills operations, and finance. New supply chain management processes

Designed for students, young managers and seasoned practitioners alike, this handbook explains the nuts and bolts of the modern logistics and distribution world in plain language. Illustrated throughout, this second edition includes new chapters on areas previously not covered, such as: intermodal transport; benchmarking; environmental matters; and vehicle and depot security. Although tens of thousands of global users have implemented Systems, Applications, and Products (SAP) for enterprise data processing for decades, there has been a need for a dependable reference on the subject, particularly for SAP materials management (SAP MM). Filling this need, The SAP Materials Management Handbook provides a complete understanding of how to best configure and implement the SAP MM module across various types of projects. It uses system screenshots of real-time SAP environments to illustrate the complete flow of business transactions involved with SAP MM. Supplying detailed explanations of the steps involved, it presents case studies from actual projects that demonstrate how to convert theory into powerful SAP MM solutions. Includes tips on the customization required for procurement of materials and inventory management Covers the range of business scenarios related to SAP MM, including the subcontracting cycle and consignment cycle Provides step-by-step guidance to help you implement your own SAP MM module Illustrates the procure to pay lifecycle Depicts critical business flows with screenshots of real-time SAP environments This much-needed reference explains how to use the SAP MM module to take care of the range of business functions related to purchasing, including purchase orders, purchase requisitions, outline contracts, and request for quotation. It also examines all SAP MM inventory management functions such as physical inventory, stock overview, stock valuation, movement types, and reservations—explaining how SAP MM can be used to define and maintain materials in your systems.

In the industrial world, companies are always seeking competitive advantages to sustain themselves in the globalized market. A supply chain is one of these improvements that managers implement in order to stay ahead of the competition. However, certain methods of supply chains add risks such as the addition of costs, possible accidents, and economic losses. Because of this, companies are looking for techniques in which to progress their supply chain execution. The Handbook of Research on Industrial Applications for Improved Supply Chain Performance is a pivotal reference source that identifies techniques, tools, and methodologies that can improve supply chain performance and enable businesses to generate a competitive advantage in the globalized market. While highlighting topics such as material flow, route optimization, and green distribution, this publication is ideally designed for managers, executives, logistics engineers, production managers, warehouse operations managers, board directors, consultants, analysts, inventory control managers, researchers, academicians, industrial and managerial professionals, practitioners, and students looking to improve costs and quality of supply chains.

This is a fourth edition of a work first published in 1983. It contains the same number of chapters as the third edition, published in 1990. However, it has a substantial amount of new material. Major changes in warehousing in the last seven years have caused appropriate changes in the content of this text. Nearly three decades have passed since our first published writing about warehousing. The goal of our early writing was to develop a better understanding between the third-party warehouse operator and the user of these services. Today the emphasis has changed to a work that provides the tools that every warehouse manager needs. This book intends to be a comprehensive handbook consisting of everything we know that would help the manager of warehouses. Much of the information is based upon materials previously used in Warehousing Forum, our monthly subscription newsletter. While the work is designed primarily as a handbook for managers, it also serves as a guide for students. It is based upon my experience, both as a warehousing manager and executive, and later as a management advisor. The work is designed as a management reference for anyone involved in operating, using, constructing, or trading in industrial warehouses.

Supply Chain Engineering considers how modern production and operations management techniques can respond to the pressures of the competitive global marketplace. It presents a comprehensive analysis of concepts and models related to outsourcing, dynamic pricing, inventory management, RFID, and flexible and re-configurable manufacturing systems, as well as real-time assignment and scheduling processes. A significant part is also devoted to lean manufacturing, line balancing, facility layout and warehousing techniques. Explanations are based on examples and detailed algorithms while discarding complex and unnecessary theoretical minutiae. All examples have been carefully selected from an industrial application angle. This book is written for students and professors in industrial and systems engineering, management science, operations management and business. It is also an informative reference for managers looking to improve the efficiency and effectiveness of their production systems.

This state-of-the-art Handbook provides a comprehensive understanding and assessment of the field of global supply chain management (GSCM). Editors John T. Mentzer, Matthew B. Myers, and Theodore P. Stank bring together a distinguished group of

contributors to describe and critically examine the key perspectives guiding GSCM, taking stock of what we know (and do not know) about them.

The Supply Chain Handbook brings together a team of 23 experts from management, engineering, technology, consulting, and academic backgrounds. These experts share proven operations methodologies, evaluate technologies and offer practical how-to instruction on topics impacting today's supply chains. Each topic is explored in-depth to provide readers with greater understanding and the ability to put the ideas presented into action. Innovative concepts and state-of-the-art technologies such as leaning the supply chain, logistics outsourcing, RFID, and supply chain execution software are explored in-depth helping you evaluate these solutions for your supply chain. The Supply Chain Handbook also covers fundamental topics such as warehousing operations, space layout and planning, distribution network planning and design, transportation, manufacturing strategies, material handling systems and integration, inventory management and more.

More and more managers of successful companies realize the value of their distribution systems for both reducing costs and enhancing customer service. This guide covers the entire spectrum of today's key distribution issues, from marketing to order fulfillment.

This is the most authoritative and complete guide to planning, implementing, measuring, and optimizing world-class supply chain warehousing processes. Straight from the Council of Supply Chain Management Professionals (CSCMP), it explains each warehousing option, basic warehousing storage and handling operations, strategic planning, and the effects of warehousing design and service decisions on total logistics costs and customer service. This reference introduces crucial concepts including product handling, labor management, warehouse support, and extended value chain processes, facility ownership, planning, and strategy decisions; materials handling; warehouse management systems; Auto-ID, AGVs, and much more. Step by step, The Definitive Guide to Warehousing helps you optimize all facets of warehousing, one of the most pivotal areas of supply chain management. Coverage includes: Basic warehousing management concepts and their essential role in demand fulfillment Key elements, processes, and interactions in warehousing operations management Principles and strategies for effectively planning and managing warehouse operations Principles and strategies for designing materials handling operations in warehousing facilities Critical roles of technology in managing warehouse operations and product flows Best practices for assessing the performance of warehousing operations using standard metrics and frameworks

Warehouses are an integral link in the modern supply chain, ensuring that the correct product is delivered in the right quantity, in good condition, at the required time, and at minimal cost: in effect, the perfect order. The effective management of warehouses is vital in minimizing costs and ensuring the efficient operation of any supply chain. Warehouse Management is a complete guide to best practice in warehouse operations. Covering everything from the latest technological advances to current environmental issues, this book provides an indispensable companion to the modern warehouse. Supported by case studies, the text considers many aspects of warehouse management, including: cost reduction productivity people management warehouse operations With

helpful tools, hints and up-to-date information, Warehouse Management provides an invaluable resource for anyone looking to reduce costs and boost productivity.

Building accurate algorithms for the optimization of picking orders is a difficult task, especially when one considers the delays of real-world situations. In warehouse environments, diverse algorithms must be developed to enhance the global performance relating to combining customer orders into picking orders to reduce wait times. The Handbook of Research on Metaheuristics for Order Picking Optimization in Warehouses to Smart Cities is a pivotal reference source that addresses strategies for developing able algorithms in order to build better picking orders and the impact of these strategies on the picking systems in which diverse algorithms are implemented. While highlighting topics such ABC optimization, environmental intelligence, and order batching, this publication examines common picking aspects in warehouse environments ranging from manual order picking systems to automated retrieval systems. This book is intended for researchers, teachers, engineers, managers, and practitioners seeking research on algorithms to enhance the order picking performance.

In his newest book, Lean blogger, speaker, and consultant, Bill Waddell, breaks down the entire supply chain, not just materials coming in or going out but also how materials flow through the factory as a part of the supply chain. Written in sections to address specific aspects of the supply chain, The Supply Chain Manager's Handbook is a reference book to be used by supply chain managers when confronted with obstacles in their supply chain as well as by senior managers to learn how the supply chain works and to make sure that the supply chain strategy is inline with the overall business strategy. Primarily a Lean thinker, Bill does address Lean supply chain philosophy, as well as presenting his own system of leveling out production in order to meet demand pull needs in factories that mix make-to-order and make-to-stock products. However, this book approaches the supply chain not from a "Lean" approach or "Standard" approach but from the viewpoint of the supply chain as the lifeblood of the company and that any decision made concerning one part of the supply chain (whether made using the "Lean" or "Standard" school of thought) will have an impact on other areas of the supply chain. This book is intended to help supply chain and senior managers view the supply chain as a whole, as an interconnected system that has a very real impact on the overall health of the company, and to help those managers make the best decisions for their company.

In this latest edition of Supply Chain Excellence, the authors provide tools for measuring financial gains linked to value chain optimisation. (Business Digest, March 2012). To keep your sales, manufacturing, distribution, and inventory moving in perfect synchronization, you need a flawless, repeatable supply chain improvement approach that maximizes process efficiency, eliminates dysfunction, and aligns disparate organizations-globally.

Risk is of fundamental importance in this era of the global economy. Supply chains must into account the uncertainty of

demand. Moreover, the risk of uncertain demand can cut two ways: (1) there is the risk that unexpected demand will not be met on time, and the reverse problem (2) the risk that demand is over estimated and excessive inventory costs are incurred. There are other risks in unreliable vendors, delayed shipments, natural disasters, etc. In short, there are a host of strategic, tactical and operational risks to business supply chains. Supply Chain Risk: A Handbook of Assessment, Management, and Performance will focus on how to assess, evaluate, and control these various risks.

All businesses strive for excellence in today's technology-based environment in which customers want solutions at the touch of a button. This highly regarded textbook provides in-depth coverage of the principles of operations and supply chain management and explains how to design, implement, and maintain processes for sustainable competitive advantage. This text offers a unique combination of theory and practice with a strategic, results-driven approach. Now in its fourth edition, Operations Management for Business Excellence has been updated to reflect major advances and future trends in supply chain management. A new chapter on advanced supply chain concepts covers novel logistics technology, information systems, customer proximity, sustainability, and the use of multiple sales channels. As a platform for discussion, the exploration of future trends includes self-driving vehicles, automation and robotics, and omnichannel retailing. Features include: A host of international case studies and examples to demonstrate how theory translates to practice, including Airbus, Hewlett Packard, Puma, and Toyota. A consistent structure to aid learning and retention: Each chapter begins with a detailed set of learning objectives and finishes with a chapter summary, a set of discussion questions and a list of key terms. Fully comprehensive with an emphasis on the practical, this textbook should be core reading for advanced undergraduate and postgraduate students of operations management and supply chain management. It would also appeal to executives who desire an understanding of how to achieve and maintain 'excellence' in business. Online resources include lecture slides, a glossary, test questions, downloadable figures, and a bonus chapter on project management.

Learn how to operate an efficient and cost-effective warehouse, and examine the latest developments in warehouse technology, automation and robotics, operations, people management, location and design.

The growing power being exercised by today's consumer is causing significant paradigm shifts away from traditional marketing. This is leading to a whole new take on the structure and functioning of supply chain management (SCM). It's no longer so much about improving the manufacturing process as it is improving the point and speed of contact and the continued interaction that you have with your customer. The Intimate Supply Chain: Leveraging the Supply Chain to Manage the Customer Experience explores how SCM can assist companies to grow and prosper in the new global economy. It focuses on what the customer wants from the supply chain and how organizations must restructure their

outdated business models to meet their customer's needs. Covering this dramatic shift in customer management, David Ross, bestselling author and recognized industry expert, demonstrates how to design and maintain an efficient and up-to-date delivery channel, showcasing the methods and technologies needed to adapt to the evolving, demand-driven market. Exceptionally practical in his approach, Ross provides a new perspective that requires a broader mindset about the structure and functioning of SCM. He explains how effective management must start with the aim of getting personal with customers in order to bring total value to their shopping experience. Rather than concentrate on a range of products, this work defines a roadmap that will lead to increased empathy for your customers so that you will be able to provide them with unbeatable and readily recognizable value. When properly traveled, you will discover that it is a roadmap to increased profitability and market share.

Why do some distribution centers have excellent performance while others struggle? *Highly Competitive Warehouse Management* unravels the secrets of those best-in-class operations and shows how they create a competitive advantage for their companies. With the accompanying *Warehouse Maturity Scan*, distribution center and supply chain management will have a tool to analyze the current state of their operations. Based on these results, the author provides a systematic yet flexible action plan for improvement, which involves human behavior, process redesign, warehouse management systems and supply chain alignment. These materials, along with case studies, detailed examples and thought provoking questions will move your facility to best-in-class performance.

This book provides a comprehensive overview of how to strategically manage the movement and storage of products or materials from any point in the manufacturing process to customer fulfillment. Topics covered include important tools for strategic decision making, transport, packaging, warehousing, retailing, customer services and future trends. An introduction to logistics Provides practical applications Discusses trends and new strategies in major parts of the logistic industry

Warehouses are often seen as a necessary evil: places that stop the flow of goods and thus increase costs without adding value. But the truth is that they have a critical part to play in supply chain management, and warehouse managers should be centrally involved in the strategic aspects of any business. *Excellence in Warehouse Management* covers everything you need to know to manage warehouse operations as part of a streamlined and holistic system, fine-tuned to serve the customer and drive the bottom-line. With thinking points, self-assessment exercises and case studies Stuart Emmett challenges you to consider your own operations in a new way, and plot a course into the future.

The design of facilities, warehouses, and material-handling systems as well as the management of logistics operations significantly impact the success of industrial projects. *Facility Logistics: Approaches and Solutions to Next Generation Challenges* explores recent developments in the technology, industrial practices, and business environments of facility logistics. The book first discusses the main trends impacting

facility logistics operations, including visibility, security, flexibility, labor, globalization, and sustainability. It then examines the functionalities and capabilities of warehouse management systems (WMS) and outlines a comprehensive yet simple method for the quick assessment of warehouse performance. The following chapters present a set of solutions to emerging challenges in the design and management of facility logistics, along with procedures to better plan and manage the logistics activities within a production or storage facility. The final chapter reviews educational resources and offers examples of how multimedia tools can be used to develop new teaching material. With more globalization and outsourcing occurring as well as a greater emphasis on facility sustainability, new facility logistics challenges have emerged. By evaluating the impact of these issues on facility logistics, this volume helps you improve the design and management of your facility.

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In addition, the book explains how to solve a wide range of typical problems, exploit the potential of information systems, reduce damage and loss, and improve warehouse safety.

This complete hands-on guide is for the information systems manager whose company is applying data warehouse management within the IS environment and includes how to understand data warehousing and how to incorporate this technology into the company's business operations. Tells how to define a business case, develop an architectural framework, strategize policy that will generate high return on investment and more.

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