fortna

White Paper

Integrated Delivery Model

A Faster, Easier, and Better Approach

www.Fortna.com

Introduction

Inevitably, every distribution intensive organization will reach a point when their warehousing capabilities require a transformation. The need may arise subtlety over time, such as through a slow antiquation of systems or by reaching physical capacity after years of steady growth. Or, it may be caused by a sudden shift in business requirements such as an acquisition of a competitor, entry into a new market or sales channel, the loss of a key customer, etc. Whatever the reason, the need for change is inescapable, and supply chain leaders must determine the most efficient and effective way to plan and execute the transformation.

Unfortunately, there are far too many examples of transformational supply chain projects highlighted on the front page of business periodicals that were poorly executed and incredibly costly in many ways. Such projects are earmarked by budget overruns, lost revenue, finger pointing, and even halted careers. Meanwhile, external partners on these projects often have limited accountability for the results, get paid regardless, and move on to other projects.

This paper explores the external partner sourcing strategy of a cross-functional, supply chain project from strategy through implementation. The tenet behind this paper is that external service providers with an "integrated delivery model" provide supply chain leaders with an opportunity to more effectively manage the time, cost, and risk of such projects. These partners have the skills and experience to lead and integrate the lion's share of cross-functional responsibilities throughout the project. And, their approach guards against siloed, functionally focused communication and accountability, which is symptomatic of a poorly executed project. In essence, the integrated delivery model offers a faster, easier, and better approach.

By way of example, we will use a fictional corporation – Retail, Inc. Retail, Inc. has grown steadily in a highly competitive market throughout the years. However, much of the growth has been fueled by retail demand on the west coast. Their direct to consumer channel has also become a much a larger percentage of their overall revenue. Meanwhile, the warehouse systems in their existing distribution centers have been heavily modified and are no longer maintained within the license agreements of their software providers. And, their material handling systems are limiting flexibility and capacity.

As the supply chain leader for Retail Inc., how would you tackle this challenge?

First, we would suggest you break this effort into three sequential phases:

- Strategy
- Design and Selection
- Implementation

Strategy

The strategy phase will define the most appropriate path forward for the organization based on a combination of rigorous alternatives analysis, business constraints, experienced-based intuition, and financial justification. The strategy will provide a practical roadmap for the future direction of:

- Facility location and mission
- Material handling equipment
- Warehouse processes
- Warehouse management and control systems
- Inventory investment and deployment
- Freight management
- Labor management
- Capital investment and budgeting

Typically, the strategy phase is coined as a "network strategy" project. In the case of Retail Inc., the basic objective is to determine the number, location, and mission of distribution facilities which will meet or exceed customer service requirements for each sales channel (retail and direct to consumer) with the least overall logistics cost.

Developing a comprehensive network strategy goes beyond the limitations of a deep analytical network optimization exercise. Multiple functional areas must be involved in assessing the impact to processes, systems, organization, inventory, etc. However, the entire effort is often led by an industrial engineering function with the skills to conduct the quantitative analysis and facilitate the input and analysis from other functional areas. Other functional areas typically provide support to the effort on a significant or limited basis.

Design and Selection

The design and selection phase will define in detail each aspect of the required transformation in distribution capabilities. It also includes the selection and contracting of any required equipment, software, and service vendors. As examples of the design and selection phase:

- Project teams will be mobilized
- New site(s), if required, will be selected
- Material handling systems will be engineered
- Equipment vendors will be selected
- Warehouse processes will be documented
- Warehouse management and warehouse control systems will be selected
- Organizational charts will be developed
- Management reports will be defined

In the design and selection phase, the skill requirements are such that a single functional area cannot adequately lead the entire design and selection effort. Instead, a designated lead can be assigned for each major activity, and a program management function can be utilized to manage integration and communication across activities and functional boundaries. The program management function also guards against the development of "functional silos" myopically focused on the results of each functional area versus a more holistic business view.

Implementation

The implementation phase is the final step in the transformation. Whereas the design and selection phase defined what will be done and who will do it, implementation is the "rubber meets the road" phase when the granular work is performed and integrated across all functional areas of the project. As examples of the implementation phase:

- Material handling equipment will be installed
- Software applications will be developed, installed, integrated, and tested
- Standard operating procedures will be documented
- People will be hired and trained
- Inventory will be deployed
- Stakeholders will be led through any resulting change

The role and focus within each functional area changes from the prior phase as illustrated by the examples in the following table. Hence, new project resources are often necessitated during this phase of the project.

Area	Design and Selection Stage	Implementation Stage
People	Managing project resources	Hiring and training new employees
Processes	Describing "to be" processes	Documenting operating procedures
Operations	Defining and procuring ancillary equipment	Setting up the physical operation
Equipment	Designing and procuring equipment needs	Installing and testing equipment
Systems	Designing and developing modifications	Testing the integration across systems
Infrastructure	Defining network requirements	Installing and testing network
Inventory	Planning inventory transition	Managing inventory receipts
Building	Designing the physical facility	Integrating the work of sub-contractors
Transportation	Planning freight volumes	Selecting new carriers
Finance	Developing the project budget	Managing project expenditures
Program Management	Managing scope, timing and resources	Identifying and eliminating bottlenecks

In addition to the more granular level of detail to define and communicate, the implementation phase involves a greater number of resources to manage. More detail and more people to manage places even more emphasis on an effective program management function to streamline communication processes, highlight and resolve issues, and maintain project momentum. Hence, program management plays a more prominent role during the implementation phase orchestrating the integration of schedules and activity across work streams.

Sourcing External Resources

A variety of skill sets will be needed throughout the project from strategy through implementation. So, as the supply chain leader for Retail Inc. a few natural questions are:

- "Do we have these skill sets internally?"
- "Of the skill sets we do have, are any these people available?"
- "Of the skill sets we don't have or cannot source internally, where do we go to source them?"

The truth is that most organizations cannot afford to have internal resources available to fully support a large project such as that of Retail Inc. Although a certain portion of the resource budget within many functional areas may be allocated to project related activity, rarely does it allow for the resource consuming effort of a network or warehouse transformation. Inevitably, external expertise and resources are needed to successfully complete and often lead the project.

Since this is the case, then where do you go for these resources?

Obviously, your choices are vast and varied from small boutique consulting shops to multi-national technology and service organizations. So, you need to whittle the list. Most organizations start by simply going to external partners they know and trust. This isn't a bad start, but it may short change success if these same partners are an ill fit for the project or provide too few of the required skills. An alternative tactic is a "best of breed" approach. This brings the obvious advantage of aligning specific skills to specific needs.

Ultimately, your partner selection decision should come down to a few simple criteria such as:

- Expertise – Who best fills our skill set gap?
- Simplicity – What is the easiest way to manage and control the project?
- Time – How will I hit my target deadlines?
- Cost – How will I minimize project costs?
- Risk – How will I mitigate the risk of project failure?
- Accountability – How accountable will my partner(s) be for overall project success?

As you can see in the following chart, Retail Inc. has a variety of options for sourcing external partners throughout the strategy, design, selection, and implementation phases of the project. The chart depicts typical capabilities of a service provider as either:

- Fully – fully capable of leading the activity
- Limited – capable of leading or supporting some but not all the activity
- Mixed – Capable on a provider specific basis of leading the activity
- Blank – Not typically capable of leading or supporting this activity in a significant way

Typical Capabilities of External Partners	Network Strategy Consulting	Warehouse Concept/ Industrial Engineer	Equipment Manufacturer	MHE Integrator	WCS Provider	WMS Provider	WMS Integrator	"Ideal" Integrated Delivery
Strategy								
Network Strategy & Business Case	Fully	Mixed						Fully
Define and Design								
Facility Concept Design		Fully	Limited	Mixed	Limited			Fully
Facility Detailed Equipment Design		Limited	Limited	Fully				Fully
Facility Process Design		Fully		Limited				Fully
WMS Requirements Definition		Mixed			Limited	Fully	Fully	Fully
WCS Requirements Definition		Mixed	Limited	Fully	Fully	Limited	Limited	Fully
Select								
Equipment Vendor Selection		Mixed	Limited	Fully				Fully
WMS Selection		Mixed						Fully
WCS Selection		Mixed	Limited	Mixed				Fully
System Development and Testing								
Application Development/Modification					Fully	Fully	Mixed	Fully
Unit Testing				Limited	Fully	Fully	Mixed	Fully
Functional Testing				Limited	Mixed	Mixed	Fully	Fully
MHE Installation								
MHE Vendor Management		Mixed	Limited	Fully				Fully
Mechanical/Electrical Installation			Limited	Fully				Fully
MHE Testing		Limited	Limited	Fully				Fully
Operational Readiness								
Procedural Documentation		Mixed	Limited	Limited	Limited	Limited	Limited	Fully
Operational Readiness Testing		Mixed	Limited	Limited	Limited	Limited	Limited	Fully
Organizational Readiness								
Training		Mixed	Limited	Limited	Limited	Limited	Limited	Fully
Change Management		Mixed						Fully
Go-Live Planning		Mixed						Fully
Program Management		Mixed		Limited				Fully

A “best of breed” approach would select the best provider for each activity requiring external sourcing. For example, an industrial engineering firm may be chosen to do the concept design, a MHE integrator may be chosen for the MHE selection and installation, and a WMS provider may be selected for their software and integration services.

Unfortunately, the more narrow the focus of the selected provider, the greater the need for other providers. This, of course, leads to a greater risk of information and tasks falling into the crevices between each internal function and provider supporting the project.

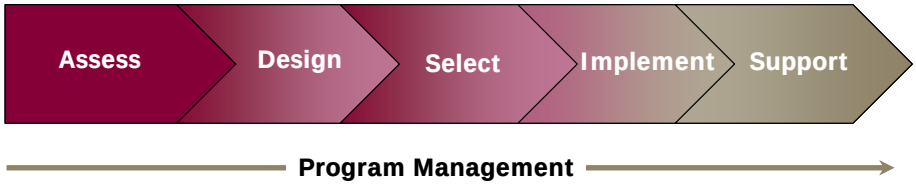
Integrated Delivery Model

It seems the ideal scenario is one in which one external service provider can provide all, or at least the vast majority, of the necessary skill set. This is considered an “integrated delivery model.” A provider offering an integrated delivery model:

- Provides the expertise where needed from strategy, to design and selection, through implementation
- Is simpler because there are fewer external partners to manage
- Is far more able to control the time, cost, and risk of the project
- Takes on lion share accountability for overall project success

A service provider with an integrated delivery model can lead major streams of activity across an entire network or warehouse transformation project from project onset to post-implementation support. And, they have proven methodologies and experience in assessment, design, selection, implementation, support, and program management.

Integrated Delivery Model Capabilities



Examples capabilities of an integrated delivery provider include:

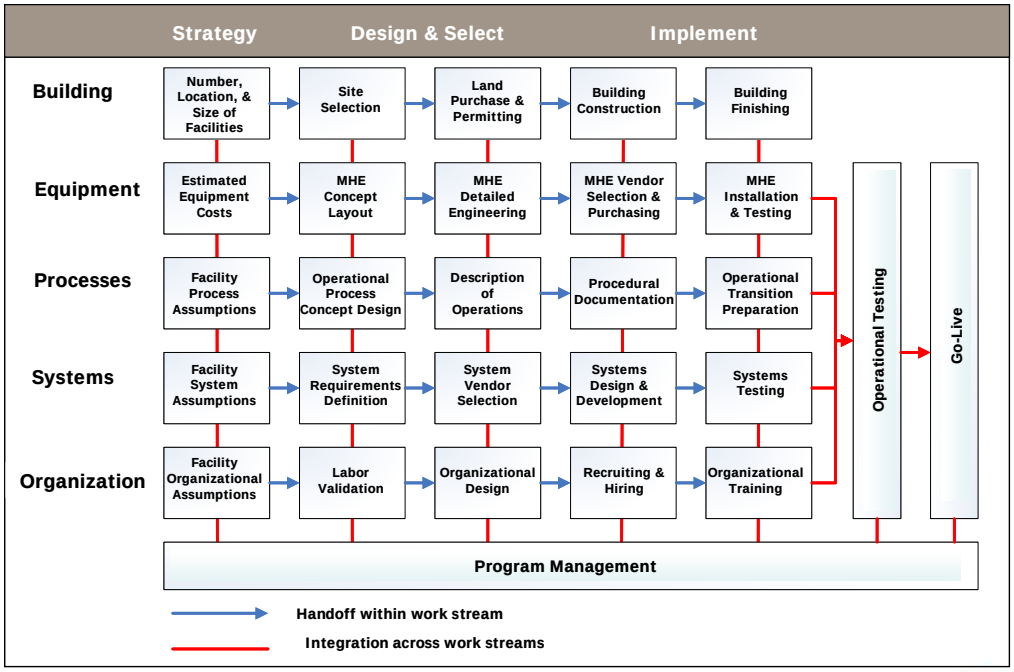
- Assess – facility layout, operational performance, capacity, network strategy
- Design – concept layout, mechanical and controls engineering design, operational design, WM and WCS requirements
- Select – equipment selection, system selection, 3PL selection
- Implement – MHE integration, WM integration, WCS integration, training, operational transition, functional and operational readiness testing
- Support – warranty maintenance, troubleshooting, periodic assessment
- Program Management – project management, communication management, issue resolution

Further, the methodologies and processes within the service provider organization are integrated such that communication and handoffs from function to function and phase to phase are streamlined.

Why Seek an Integrated Delivery Partner?

There are multiple hand-offs and integration points throughout a cross-functional, multi-phase transformation project, as illustrated in the following diagram.

Example of Multi-Phase Transformation Project



Multiple Lenses Required to Create Holistic View

With each hand-off from activity to activity or function to function there is risk of information getting lost or poorly translated. Service providers with the experience and skill set to lead multiple work streams from onset to implementation are less likely to fumble along the way.

Further, as we know, project work streams cannot successfully operate and make decisions within a vacuum. The entire project must be managed and executed with a holistic view of the project using multiple "lenses."

Multiple Lenses Required to Create Holistic View

Functional Lenses:
- Sourcing/ Procurement
- Merchandising
- Planning
- Inventory Management
- Information Technology/ Systems
- Transportation
- Warehousing/ Distribution
- Customer Service
- Human Resources
- Finance
- Legal

Business Lenses:
- Service
- Cost
- Revenue
- Key Metrics
- Risk

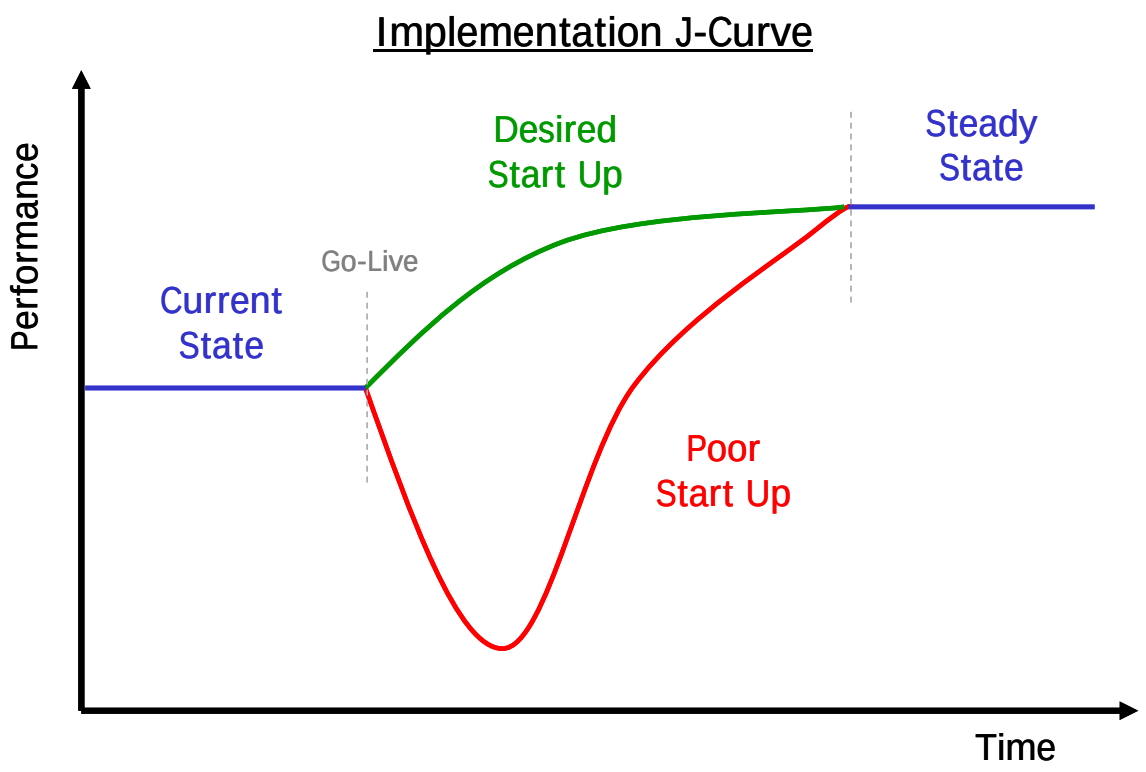
Organization Lenses:
- Resources
- Skills
- Accountabilities

Stakeholder Lenses:
- Corporate
- Customers
- Suppliers
- Service Partners

Transformation requires the ability to wear multiple lenses

Without a holistic view to ensure design decisions for processes, equipment, and systems are in synch, then gaps are inevitable. Processes might be defined for system functionality that doesn't exist. Equipment might be designed without the flexibility for expanded future process requirements. Systems might be developed or configured based on assumed versus actual needs. Training and testing might both focus exclusively on new technologies and ignore the procedural aspects of a "day in the life" of an associate. And, "go live" might take place without fully preparing corporate and business partner stakeholders for the impact it will have on them.

Unfortunately, when examples like this happen (i.e. when processes, systems, and equipment are not tightly aligned throughout the project) the results can lead to a poor post go-live start up, as typified by the "J-Curve" in the following illustration.



The performance dip illustrated in the J-Curve can lead to budget overruns, service disruptions, and lost revenue. An integrated delivery service provider with the experience and skill set to lead multiple work streams minimizes this risk.

Summary

There will come a point in time within every distribution intensive organization when a conclusion is reached that incremental change in distribution capabilities is not enough and that a major transformation is needed. But, rarely are internal resources with the required skill sets available to support such projects in an adequate way. Hence, a supply chain leader must seek external support to successfully manage, design, and implement the program.

An array of service provider options will always be available from single person shops to multi-national consultancies and integrators. The key is to select as few providers as necessary in order to control time, cost, and risk. Service providers offering an integrated delivery model provide the experience and skill set to manage and lead multiple work streams from project onset to implementation. Therefore they are able to minimize the number of providers and cross-organizational hand-offs (and potential fumbles) along the way.

So, as a supply chain leader tasked with leading a transformational effort, consider a service provider offering an integrated delivery model. It's the faster, easier, and better approach.

fortna

About Fortna

Fortna – *"Driving Supply Chain Results"*

We design, implement and support complete end-to-end solutions for our clients through supply chain consulting, material handling systems implementation and systems selection and implementation. Our "no-silos" business approach ensures alignment strategically, financially and operationally and brings our clients' supply chain strategy to life. Our integrated services and unmatched supply chain design tools have provided long term and trust-based relationships with clients in a wide range of industries including multi-channel retail, consumer products, electronics, parts distribution and third party logistics. **www.fortna.com**

Atlanta, Georgia | Cleveland, Ohio | Nashville, Tennessee | Reading, Pennsylvania | Latin America

fortna