



## ***DUE DILIGENCE: How Operational Are the Operations?***

*by Ellen B. Richstone*

Last October, I described the due diligence necessary to properly assess a company's sales and marketing activities. But in many economic sectors, it is often more important to thoroughly evaluate what happens earlier in the value chain – in operations such as production, quality, and purchasing.

As with the due diligence required with sales and marketing, more often than not the right questions are either not asked or not asked correctly. Questions must be posed in the right way and subtleties and ambiguities in the answers given must be followed up with further questions. The operational side of the business is often assumed to be “workable” – in integration as well as in due diligence. The too-frequent result: issues are not discovered and integration decisions are not implemented.

Although many of my examples assume a target company in the manufacturing sector – technology or non-tech – the basic

diligence themes apply to service firms too. I've broken the operational areas into seven categories and added a question template that will help you further:

### **Vendors**

A good due-diligence initiative covers the inflow of component parts and materials, the suppliers that make them, and the channels that deliver them to the loading dock. Once you list out the vendors, make careful note of these factors:

- the quality process for ensuring that all supplied parts meet the company's standards
- how easily the vendors can flex with the company's varying volume needs – and at the right price and in the right timeframes
- what alternative suppliers can provide critical parts
- what long-term agreements are backed by a thorough evaluation of whether the vendor can achieve its commit-

- ments if changes are needed
- payment terms, particularly compared to the company's cash inflow from customers
- lead times until purchase orders become firm.

My firm has seen companies discover that some vendors – even good ones – lack the capability to meet a strong production ramp-up. International sourcing both helps and adds complexity. We have seen companies outsource to Asia to cut manufacturing costs only to find that they spend the money in working capital because of the long-lead transportation costs – on top of the carrying costs of the inventory.

### **Inventory**

Conventional due diligence will look at total inventory turns, but it's important to include: inventory turns by major products and/or product lines; turns by major raw material and sub-assemblies; inventory records accuracy at the individual SKU level, particularly if using ran-

dom access warehousing systems; actual condition of the inventory and its storage environment; and newer product lines – especially those expected to be the highest revenue producers in the future.

Inventory is an area where both the operational due-diligence team and their counterparts on the finance side must be involved. Each will evaluate from its own perspective, looking for answers to issues such as calculations of excess and obsolete inventory (it can be helpful to get input from the R&D and quality due-diligence teams here too) as well as write-offs by product category over the last two years.

It is crucial to evaluate new or planned products versus those now generating the bulk of the revenue if you are to get a complete picture for the future. One of my colleagues discovered inventory issues that he felt would at least have been highlighted if, during due diligence, the acquirer had spent time assessing the “actual condition” of the inventory and also looking at how it was stored over time.

## **Facilities**

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Ideally, the acquirer should be able to reach a quick decision about whether the target company’s facilities are needed. But implementation usually gets mired in the reality of the details. To minimize the issues that are discovered after facility closure decisions, acquirers should scrutinize:

- Capacity and process flow throughout the entire company;
- Locations of manufacturing engineers and other production specialists (how easy would it be to move them?)
- Locally accessible and clear documentation supporting the manufacturing of the product (example: if the product is made in Eastern Europe, is all documentation in place and how easily could it be understood elsewhere if the company transferred production?)
- Planned product changes and their impact on manufacturing requirements
- Operational or financial reasons for facilities to be close to customers – as in aerospace
- Whether the facilities are in special trade zones and what would be the operational and financial consequences of moving them.

The issue of clear documentation has been a real problem in many deals. Even in the best of companies, there are often elements of the manufacturing process that are “understood” more than they are documented. When one adds different languages and cultures to this equation, the issue gets extremely complicated. We know of cases where plants were going to be consolidated quickly, but when the documentation was fully evaluated, the acquirer ended up having to rewrite it, delaying the transfer of production, and keeping the target company’s engineers on staff for a long time to ensure good product quality.

## **Business Processes**

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This is an area where inconsistencies, redundancies, or gaps across organizations end up frustrating and potentially alienating all stakeholders. Proper due diligence here will allow the acquirer to better access the time commitments and actions needed once the deal is done, and thus to make realistic commitments to its stakeholders.

Examination should include: customer complaint handling and related chargebacks; warranty terms and customer service standards; access methods and coverage, product/ service quality acceptance standards and purchase order terms and conditions, as well as order entry methods. It is vital to have clear performance metrics across all functions, entities, and locations, with consistent and comparable algorithms and good data integrity.

We’ve seen big difficulties surface in comparisons of total life-cycle costs and on-time delivery statistics. In several companies, we found that 90% of the product sold came from 5% to 10% of the product offerings. Unless one is looking at new products being introduced, this is often a great opportunity to reduce costs. Often, the response from the customer relationship manager was that “the customer requires the special design”. When the customer was approached directly, it turned out that the additional offering was not critical to their decision to buy.

## Manufacturing

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It's fundamental to ask about the standard lead times quoted to customers for each product line and to learn what dictates manufacturing lead times. Do the new products mean big changes to manufacturing processes or expenditures? If so, what does that mean to the acquirer? How different are the processes and procedures used to manufacturing the different products – and how different are they from those used by the acquirer? There are important ramifications for training and quality standards.

Effective due diligence will closely evaluate the proportional relationships between total production costs and the costs of material, direct labor, indirect labor, and manufacturing overhead. Other essential pieces of information are component utilization percentages and the extent of component standardization across product lines. A thorough assessment will also determine which products are standard and which are built to order. We've seen many situations – especially in acquisitions of technology companies – where product believed to be standard actually had a customized element to it. It meant the synergies expected from the acquisition were either never realized or realized much later – after significant effort to rationalize product lines.

## Quality

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Among the key queries here are these: What are the current quality standards? If flawed product does leave the factory, how much work has to be done in the field to bring it up to acceptable levels? The questions on quality must be asked in every part of the company – not just manufacturing. Has the company met the ISO requirements? If not, why not? What would it take to meet them?

We've seen companies being bought for their new technology and new products. The acquisition candidate had been shipping the new product, although not necessarily always in large quantities. More than once, it turned out that the product needed plenty of “on site support” once it arrived at the customer—well beyond what would be considered acceptable in any normal situation. In some cases, it turned out to be a manufacturing quality issue that was fairly easily remedied; in others, the result was that the new products had to be redesigned. In all cases, the costs to remedy were well beyond what the acquiring company had expected. The fall-out wasn't only financial; it also disappointed customers who expected immediate resolution from the new owner.

***Please take a moment and view the “Due Diligence” Checklist on the next page.***

## Relationship with Sales

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You should have the potential acquisition describe their mechanism for forecasting sales and developing the master production schedules. It's then interesting to follow the actual process through the forecast, the booking, the connections to purchasing and production, right through to shipment. The exercise often exposes vulnerable issues or processes that will need shoring up after acquisition.

## Conclusion

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Don't underestimate the levels of questioning necessary to develop a clear picture of the target company's current and future health. And be alert to the dangers of “wanting to do the deal too much.” That's when it can be useful to have third-party professionals lend an objective hand. Sometimes it's the question you didn't ask that is the most critical one.

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## ***DUE DILIGENCE CHECKLIST***

<b>Data requirement</b>	<b>Status</b>
<ul style="list-style-type: none"><li>• List and describe principal suppliers/vendors/subcontractors, with estimated annual purchase values</li></ul>	
<ul style="list-style-type: none"><li>• List and describe any sole sources among proprietary suppliers/vendors, with estimated annual purchase values</li></ul>	
<ul style="list-style-type: none"><li>• List and describe any critical parts suppliers/vendors</li></ul>	
<ul style="list-style-type: none"><li>• List and describe any special or unique supplier/vendor contracts (i.e., credit terms, rebates etc.)</li></ul>	
<ul style="list-style-type: none"><li>• List and describe any long-term supplier/vendor/subcontractor contracts</li></ul>	
<ul style="list-style-type: none"><li>• Summarize any cost reduction programs in process or planned for implementation</li></ul>	
<ul style="list-style-type: none"><li>• Get schedules for manufacturing overhead for the past two years and for the most recent interim period, including associated overhead rate calculations.</li></ul>	
<ul style="list-style-type: none"><li>• Summarize the proportional relationships between total production costs and costs of material, direct labor, indirect labor, and manufacturing overhead.</li></ul>	
<ul style="list-style-type: none"><li>• Summarize current production capacity by product family</li></ul>	
<ul style="list-style-type: none"><li>• Summarize inventory turnover by appropriate sub-groupings</li></ul>	
<ul style="list-style-type: none"><li>• Inventory cost accounting, standard cost, and product cost systems used in manufacturing operations, including:<ul style="list-style-type: none"><li>• Timing of updates</li><li>• Rate methodologies</li><li>• Variance accounts (calculations/amortization/activity)</li></ul></li></ul>	
<ul style="list-style-type: none"><li>• List all significant operational functions that are computerized</li></ul>	
<ul style="list-style-type: none"><li>• Get sample copies of documented policies and procedures, including assembly procedures, work instructions, and test periods</li></ul>	
<ul style="list-style-type: none"><li>• Provide list of production tooling that is customer funded and owned. Are there future plans for customer-funded tooling?</li></ul>	
<ul style="list-style-type: none"><li>• Ask whether customers specify components and how easily sources are changed</li></ul>	
<ul style="list-style-type: none"><li>• Define your manufacturing engineering technical capability, including people and equipment</li></ul>	
<ul style="list-style-type: none"><li>• Describe product service and warranty policies. Provide warranty, returns, and allowance history and current status.</li></ul>	
<ul style="list-style-type: none"><li>• Check status of quality program (out-of-box failures, field failures, on-time delivery.) Ask how product quality and reliability are tracked by customers and by their customers. Supply reliability information on all major product lines.</li></ul>	
<ul style="list-style-type: none"><li>• Define your manufacturing approach, including people, equipment, and procedures</li></ul>	
<ul style="list-style-type: none"><li>• Specify the level of manufacturing technology you possess vis-à-vis your competitors and state-of-the-art processes</li></ul>	
<ul style="list-style-type: none"><li>• Find out what manufacturing and management techniques are used</li></ul>	
<ul style="list-style-type: none"><li>• Provide a matrix of manufactured products by plant and by user and customer locations</li></ul>	
<ul style="list-style-type: none"><li>• Describe the demand forecasting and coordination between sales and manufacturing in developing build schedules</li></ul>	