

BETTER NEW BUSINESS DEVELOPMENT AT DuPONT—II

A “business initiative process” provides teams and their leaders with frameworks and tools to support the application of judgment and learning to their NPD projects.

Robin A. Karol, Ross C. Loeser and Richard H. Tait

OVERVIEW: *DuPont has developed a structural framework—the “Business Initiative Process”—to help its business leadership and development teams navigate successfully through the new business development (NBD) minefield. A key element of this framework is a comprehensive set of guidelines and tools to support the development teams as they drive their NBD projects.*

*Robin Karol is director of innovation processes for sustainability, safety, health, and environmental excellence at E.I. DuPont de Nemours and Company, Wilmington, Delaware. At the time this work was done, she managed a group of internal business consultants in DuPont Consulting Solutions with responsibility for the installation of managing processes for business growth and renewal. Karol has been with DuPont for 19 years. Prior to working at DuPont she was a professor at Baylor College of Medicine in Houston, Texas. She holds a Ph.D. in biochemistry from the State University of New York at Buffalo. **Robin.A.Karol@usa.dupont.com***

Ross Loeser is a business process manager with DuPont in Charlotte, North Carolina, and currently functions as a Master Black Belt in the company’s Six Sigma program. He was the PACE manager for DuPont’s Dacron® Polyester business for five years. Prior to that, he held a number of positions in the quality management area, including senior examiner for the Malcolm Baldrige National Quality Award in the early 1990s. He received his BSChE from Bucknell University.

Ross.C.Loeser@usa.dupont.com

Richard Tait is president of R. H. Tait Associates, Inc., a West Chester, Pennsylvania management consulting firm that helps companies excel at product innovation and new business development. During the time this work was done he was a principal consultant and project leader in DuPont Consulting Solutions (DuPont’s internal management consulting group). He received his Ph.D. in physics from Cornell University.

rhtait@aol.com

These guidelines and tools cover the full range of NBD activities from business case development through detailed development and alliance negotiation to full commercial launch.

DuPont is involved in a systematic effort to improve the overall return from its investment in new business development (NBD) by developing and implementing a set of processes, tools and organizational structures to help business management and project teams significantly enhance NBD performance. The objective of this effort is to find or develop a set of benchmarked best practices to support/manage the full range of NBD tasks, from strategy development through to full market launch, with a particular focus on alliance formation and management.

In Part I of this article (1) we presented an overview of DuPont’s Business Initiative Process (BIP)—one of a number of frameworks DuPont has developed and implemented to structure/organize both the NBD decision making of the business leadership team and the work of development teams driving specific NBD projects. This process was built on the foundation of DuPont’s existing corporate best practice for product/process development—(PACE, for Product And Cycle-time Excellence (2)—but expanded on it to incorporate a broad array of NBD best practice tools and frameworks. BIP has been used with more than two dozen venture projects, including more than 10 in China (an area of major NBD activity for DuPont).

In this article we present a more comprehensive view of the work that an NBD team must complete as it executes a project using BIP. In particular, we describe the key “steps” (blocks of work) that a project team completes as it moves through the five phases of BIP (see Figure 1) and we describe some of the tools that facilitate the team’s work. This work has been detailed in the BIP Guideline Manual and a number of task-specific guides, templates and procedures that are available to DuPont’s

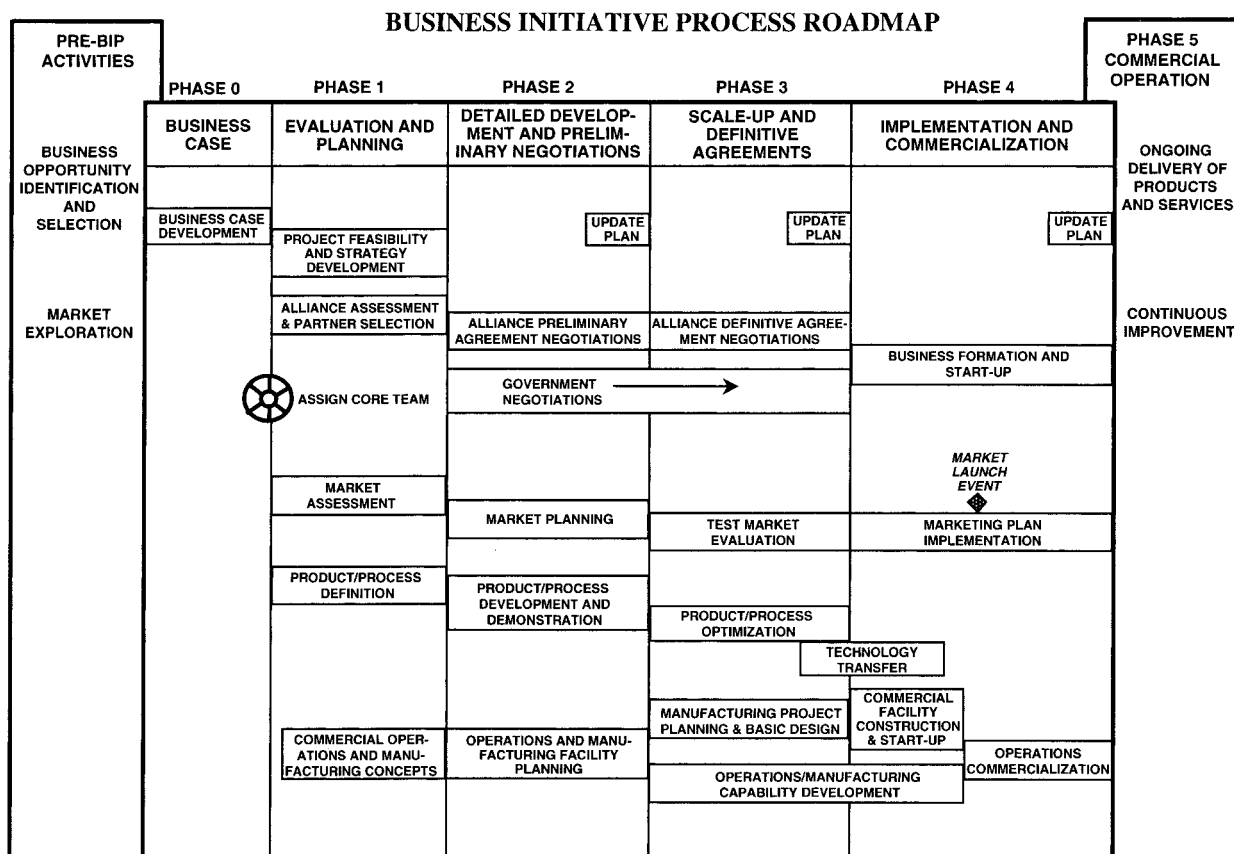


Figure 1.—DuPont's Business Initiative Process has a detailed "roadmap" to guide project teams as they move their initiatives through the five phases of the development process.

NBD teams. Our purpose in this article is to provide a picture of "what a team does" as it follows the process.

Business Case Phase

The first step in launching an NBD initiative (once an opportunity has been identified) is to build the business case. The NBD project team must define potential strategies and assess their fit with the overall strategic direction of the business. At this point, the NBD team develops options for what the new business venture might look like when fully commercialized and develops a preliminary plan of how the organization will reach that point. The flow of work to develop a business case is shown in Figure 2.

Key questions that the team needs to explore (and *options identified*) include:

- *Target Customers*—Who are the organizations/individuals you are targeting to purchase your product/service? *Identify the end-user and the people who control the direct buy decision for your product/service: assess the entire value chain down to the end user.*
- *Value Proposition*—What is the "value" you are offering your target customers that they will be willing

and eager to pay for? *Capture what differentiates your offering from your competitors: what is it that customers are "buying" from you that they cannot get elsewhere?*

- *Program Objectives and Criteria for Success*—What are the goals/targets for the program in terms of scale, market penetration, growth rate, competitive position, etc?
- *Business Model*—How do you plan to organize/structure the pieces of the enterprise to *develop—produce—support—deliver* your value proposition to your target customers?
- *Business Strategies*—Identify potential business strategies; explore, as appropriate, technology protection, country issues, infrastructure, entry barriers, legal restrictions, etc.
- *Development Plan*—Show a high-level view of the work required to build/establish an ongoing business based on an assessment of the capabilities currently in place vs. capabilities required to win in the marketplace ("strategic gaps analysis," next page).

The NPD team must define potential strategies and assess their fit with the overall business direction.

- **Business Case**—Describe how the business will “make money” with this NBD initiative. This should capture both the payoff for the customer and the payoff for your business.

At the end of the Business Case stage, the venture team is required to capture all of this information in a formal “Project Proposal” document, whose table of contents is shown in Figure 3. This document is the focus for the discussion of the project that takes place at the Business Case phase review with the business’ Program Approval Committee, described in Part I.

At this phase of the venture life cycle, many of the pieces of the vision for the enterprise and the preliminary plan to get there will be fuzzy and incomplete. These will be based on a high-level view of customer needs and marketplace dynamics. The likelihood is great that a number of elements will change significantly over time as new insights are developed about the marketplace and the technology. And in fact, some of these initial pieces may be just plain wrong. But by creating this picture and plan early, the development team can begin to identify the issues that need clarification and will validate their vision of the future and their path to meeting the business goals. The Project Proposal document becomes the framework for an Integrated Project Plan (completed during the next phase) that captures the learnings from the work done along the way and will be used as the primary communication tool between the team and the rest of the organization throughout the life of the project.

Evaluation and Planning

The primary objectives of this phase of BIP are to fully assess the opportunity, evaluate alternatives, select the preferred business strategy, and validate the essential

feasibility of the project. The focus of the development team is to gather data and develop detailed plans based on an in-depth analysis of that data. This phase is all about developing—and putting in writing—all the key information needed to guide the team once it moves to act in the outside world.

Project Feasibility and Strategy Development

The purpose of this step is to define the new business opportunity, using a feasibility study and strategic gaps analysis as key inputs. The gaps analysis (see Figure 5) and the discussion in Part I compare DuPont’s current capabilities with what it takes to be successful and prioritize key strategic needs. The feasibility study is a rigorous data/information-oriented analysis that includes market opportunity and market dynamics, value chain status and needs, technology options, financial analysis, etc. From this analysis, the team develops a recommended business strategy and a prioritized list of alternative strategies.

Market Assessment and Preliminary Market Planning

Effective new business development always begins with a rich understanding of the marketplace. During this stage of the NBD venture life cycle, the team completes a comprehensive assessment of the key marketplace dynamics that will impact their project. DuPont has developed in-house capability in a variety of quantitative and qualitative market analysis tools that business teams tap to support their projects, including: market segmentation, industry structure analysis, competitor benchmarking, and competitive position assessment.

The wide-ranging marketplace information generated here provides a firm foundation for setting strategy and developing a preliminary marketing plan. In addition, as new data emerge in later stages, the team will use that new data to revise and update the market assessment.

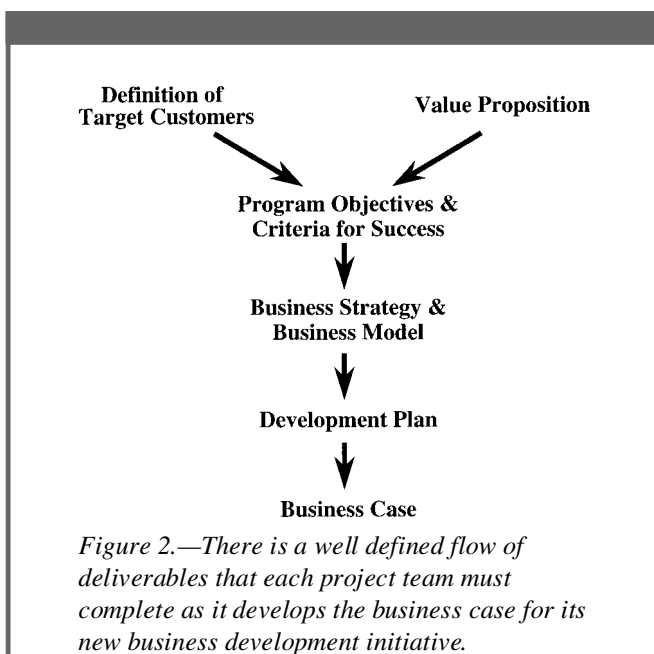


Table of Contents - Project Proposal

- I. EXECUTIVE SUMMARY
- II. OPPORTUNITY AND BUSINESS DEVELOPMENT STRATEGY
 - includes partnering concepts/options
- III. MARKET DEFINITION AND MARKETING APPROACH
- IV. TECHNOLOGY APPROACH
- V. COMMERCIAL MANUFACTURING AND OPERATIONS DESCRIPTION
 - includes overview of full range of business processes/systems
 - describes facilities needed and planned design/construction activities
- VI. SUPPLY CHAIN STRATEGY
- VII. SAFETY HEALTH AND ENVIRONMENTAL IMPACT/STRATEGY
 - includes definition of appropriate community outreach effort
- VIII. LEGAL AND REGULATORY REQUIREMENTS
 - includes governmental approval process
- IX. PROGRAM ORGANIZATION, RESOURCES, PLAN AND SCHEDULE
- X. FINANCIAL PROJECTIONS
- XI. MAJOR ISSUES, RISKS AND ASSUMPTIONS

Figure 3.—The project proposal for a specific new business initiative is the final deliverable from the “Business Case” stage of BIP. This document captures the key information needed by the Program Approval Committee to make a “Go/No-Go” decision.

Alliance Assessment and Partner Selection

One of the most common approaches to closing capability gaps is to form an alliance with another organization that has the missing pieces. NBD by its very nature takes a business into new areas, and the time and resources to fill all gaps internally is often perceived as prohibitive. Partnering then becomes the only viable option and at this point the critical issue becomes selecting the right alliance option and the “best” partner.

In DuPont, we first challenge teams to explore the full alliance landscape (Figure 4) before finalizing a strategy and selecting a preferred partner. Too often a team will start with the assumption that one particular partnering framework—frequently an equity joint venture—is the “only way to go” and won’t look at alternatives. We have often found that a less complex alternative can be effectively structured to meet the needs.

After an alliance option is selected, the development team is facilitated through a partner identification and evaluation process we have dubbed “strategic due diligence.” The goal is to identify potential partners and develop sufficient information about their strengths/weaknesses and competitive position to allow the team to

complete the “option evaluation worksheet” shown in Figure 5. In addition, this data gathering effort should provide key information on the “3 Cs”—compatibility, commitment and complementary capabilities—which must be a good fit for a partnership to be successful. After sufficient data has been gathered and evaluated, the team will select the preferred partner(s) *and* viable alternatives for the next phase.

Product and Process Definition

Concurrent with partner evaluation/selection, the team will fully “define” the products/services to be provided and the manufacturing processes that will produce them. This work is guided by the standard PACE guidelines established for product/process development. The extensive PACE manuals and templates available in DuPont provide specific guidance on all the tasks and deliverables required. The objective is to give clarity—to bring hard specifications—to the outlines provided in the “value proposition” work in the Business Case.

Conceptualizing Commercial Operations

This work is also done concurrently with product/process definition and partner selection. The output from this step is an integrated broad-brush picture of how the

only a fuzzy, incomplete picture of what should go in each. Developing a conceptual but comprehensive picture of how the new business will function—where products will be manufactured, who will handle distribution, how the operation will be staffed, etc.—is a critical early task and should be done with lot of external input.

Integrated Project Plan (IPP)

The IPP rolls up all of the key information gathered and shows the detailed implementation plan that the team will use to take the NBD project to full commercialization. This document expands and enriches the original Project Proposal. The IPP becomes the primary vehicle for guiding the work of the team and communicating information about the project to the organization.

Detailed Development and Preliminary Negotiations

This phase takes the plans and concepts built during Evaluation and Planning and begins putting them into action both externally and internally. While the first two phases were essentially “paper exercises” for the core team, this phase requires them to do work “on the ground.” Specific tasks include launching and completing the preliminary negotiations with preferred partner(s), developing/testing prototypes, and validating/finalizing product and process specifications and the marketing plan. The overall objective is to validate/upgrade the underlying fundamentals of the project through prototyping and external testing, and to develop confidence that the basic assumptions behind the project are valid.

Negotiating Preliminary Agreements

After senior management has approved moving to this phase, the core team can begin negotiations with potential alliance partners. The first step is to establish a formal negotiating team (which is distinct from the core team) to develop and execute the negotiating strategy. The DuPont M&A Partnership (DuPont Finance, Legal and Corporate Plans) has identified and formalized a number of best practices on how to structure and manage this team. Key points include:

- Select a leader and build a negotiating team that is broad-based, multifunctional and has players experienced in negotiating as well as in the business.
- Clearly define the “negotiating box” up front.
- Create a small senior management “Direction Team” to provide ongoing direction (and rapid response) to the negotiating team and to review/approve general terms of preliminary agreements.
- Hold structured negotiating team planning meetings before and after each negotiating session.

- Develop a written negotiating strategy that is revisited before and after each negotiation session.

The goal in this stage of negotiations is to reach agreement on the general plan for the joint project and formalize that agreement (e.g., a letter of intent or memorandum of understanding). The LOI/MOU could include such items as percentage ownership, makeup of equity contributions, technology to be transferred, management control, project scope, etc. This agreement provides the foundation for negotiating final binding agreements, which will spell out the details of the alliance and the implementation plan for the joint effort.

Government Negotiations

Many of DuPont’s NBD initiatives are established in countries (e.g., China) where local and/or national government agencies are critical “partners” in any NBD project. The government’s participation can be through its regulatory/approval role (e.g., China’s Ministry of Foreign Trade and Economic Cooperation) or as “owners” of the specific company DuPont is working with (e.g., China’s petrochemical entity SINOPEC). In either case, effective negotiations with these bodies are critical to success and require specific negotiating tools that have been included in the BIP.

Operations and Facility Planning

This step takes the conceptual framework developed earlier and begins a detailed build-out of the designs/plans for the facilities and operational capabilities needed to support full commercialization. These designs/plans are broken down into specific areas to cover the full range of supporting infrastructure needed, including manufacturing and distribution facilities, supply chain support, logistics support, information systems, and operational staffing. In addition, the team begins to decide how the supply of these pieces needs to be allocated among DuPont, partners and contract suppliers. The goal of this step to provide overall requirements for the design, operation and maintenance of all the facilities and operational capabilities of the full business. The outputs include cost estimates, identified suppliers, and development and operations/manufacturing plans.

Product and Process Development and Demonstration

This step is aimed at demonstrating the preferred product and manufacturing process using prototype or full-scale production equipment. This will provide both key data and prototype products to help finalize product and process specifications. In addition, this step will provide process flow diagrams and the final basic data for designing full-scale manufacturing facilities.

Market Planning

The preliminary market plan developed in the previous phase is also built-out here. Information is gained through direct interactions with the marketplace via preliminary market testing of prototype products with potential customers—both DuPont’s direct customers (e.g., carpet mills) and end-users (e.g., developers/builders of commercial buildings). In addition, more in-depth third-party market research can be carried out to augment the earlier internal market assessment effort. The goal is to develop sufficient information to enable the team to complete a final marketing plan that contains all of the elements listed in Figure 6.

Scale-up and Definitive Agreements

This phase is devoted to completing all of the critical design and ground-laying elements of the project in preparation for full implementation. At the end of this phase, everything should be in place—final agreements with partners, critical facilities and equipment layout/design, key staffing, etc.—so that facilities construction and the other elements of project implementation go smoothly. This is typically the last opportunity to “tune” the business model, modify basic plant design or stop the project before binding commitments to partners and major capital expenditures are made.

Definitive Agreements

The negotiating team needs to converge on specific agreements with the partner(s) that will govern their ongoing relationship. The definitive agreements should spell out in appropriate detail (relative to the complexity of the alliance) the responsibilities, roles, contributions, and ownership of all parties. In addition, a divorce clause must be part of the package to ensure that DuPont’s interests are protected if/when the alliance folds. These “definitive agreements” can be quite comprehensive and in a number of situations require multiple stand-alone agreements.

An additional task here is for the partners to agree on a transition plan—i.e., a step-by-step plan to create a business that will be in a position to operate profitably (including a plan to keep the affected ongoing operations running while the transition takes place). This is particularly important for joint ventures where a brand new legal entity is created. This process is detailed and unglamorous (the excitement being all in “doing the deal”) and often short-changed, but it is critically important and can make or break an NBD effort.

Due Diligence

This activity, like transition planning, is often seen as unglamorous, overly detailed and even tedious. But like

Table of Contents - Final Marketing Plan

- **Product/offering description**
- **Product/offering positioning**
- **Target market segments**
- **Target customers (direct and indirect)**
- **Customer advantages for new product/offering**
- **Competitive position**
- **Preliminary marketing communications plan**
- **Pricing strategy**
- **Price and volume forecast**
- **Product/offering launch and ramp-up plan**
- **Marketing resource requirements**
- **Financial analysis**

Figure 6.—The final marketing plan is a critical deliverable of the “Scale-up and Definitive Agreement” stage because it captures the key components of how the initiative will impact the marketplace.

transition planning it can make or break a project, particularly a major equity joint venture that merges assets and resources. Due diligence is aimed at validating the credibility of the data provided by the partner upon which the value of the business was determined. Dedicated due diligence teams use detailed checklists covering areas like facilities, human resources, supply chain, technology, safety/health/environment, information systems, and management structure. Once completed, this due diligence effort will help the project team understand in depth the assets, people, culture, and working processes that the partner(s) will bring to the alliance. These are key data for finalizing agreements and the transition plan.

Test Market Evaluation

Key pieces of the detailed marketing plan that was developed in the previous phase are put into action here. Marketing communications materials are developed and tested and the market launch communications plan is finalized. There are full-scale test market evaluations of prototype materials to confirm the planned positioning and pricing of the product. Product/offering information packages are assembled, as are sales training programs. In addition, the detailed marketing plan is upgraded and finalized based on data/information gathered here. By the end of this step, the project team is fully prepared to implement the marketing plan and launch the project with the target customers.

Product and Process Optimization

The goal in this step is to define the optimum product specifications and manufacturing process conditions using test market data, pilot facilities and prototype materials. Process limits are defined to be passed on to the engineering organization doing facilities design. In addition, data packages required for technology transfer are begun to support full technology implementation.

Technology Transfer

This is one of the most critical steps for many DuPont initiatives as DuPont is a science and technology company and the commercialization of new technologies is often at the heart of a DuPont NBD project. This transfer could be “into,” “out-of” or “within” the company but it must be effectively managed in any of these cases. Planning for this activity has been ongoing since the early stages of the project and a formal technology transfer agreement is routinely one of the components of the definitive agreement with partners. However, its successful execution is often more complicated than anticipated and can have a major detrimental impact on project timing if it slows down design and con-

struction of new equipment and facilities. Some key pieces that must be in place include:

- Technology plan—a schedule was prepared earlier and performance vs. schedule must be tracked against overall project plan.
- Design documents, specifications, technology manuals, etc.—teams routinely underestimate the amount and detail of documentation required.
- Communications process—because technology is never effectively transferred through documents alone, face-to-face meetings, conference calls, etc., are a must.
- Field follow-up process—this will ensure that technology implementation is happening successfully.

Manufacturing Project Planning

Many of DuPont’s major NBD initiatives require the construction or modification of manufacturing facilities, frequently at partners’ sites. These manufacturing projects often require capital investment in the tens to hundreds of millions of dollars. DuPont developed the “DuPont Engineering Guide to Project Implementation” to improve the company’s performance with capital projects, and these guidelines have been incorporated into BIP.

This document gives the BIP core team a roadmap they can customize to scope, design and execute capital projects and, especially, to complete the detailed planning for implementation that takes place in the Project Ramp-up and Definitive Agreement phase. More than 120 specific activities have been defined for this phase, covering selection of engineering contractors, design/construction document development, environmental permitting, equipment and facility specifications, process hazards reviews, and detailed design and construction scheduling, among others.

Operations Capability Development

In conjunction with facilities design and specifications, the BIP core team must lay out the detailed design and specifications for all supporting operational systems and processes, ranging from operational staffing to supply chain support to financial management systems to customer service frameworks. The goal is to have these defined fully (and suppliers identified) so that at the next phase full implementation can go forward rapidly and smoothly.

Implementation and Commercialization

This phase is the culmination of all the development work that has gone on before. At the start of this phase, the decision is made to go (or not to go) to full commercialization and definitive/binding agreements are signed.

Launch of a new product/service is almost always more difficult than the development team or senior management expect.

Significant money is committed for facilities, initial inventory, and operational staffing, with more than 70 percent of all project spending typically taking place in this phase. The team is driving to effectively start-up the new business and successfully launch its products/offerings into the marketplace. All the testing and design work carried out in previous phases needs to have been done right to ensure the project is ready for this phase.

Business Formation and Start-up

During this step, the new business entity is formally created (which may be a new legal entity as well) and the management team is named. The transition plan is implemented and all legal requirements (business licenses, etc.) are completed. One of the critical perspectives about NBD is that the team is building a new business and not simply constructing a plant. As we discuss below, the construction and start-up of major facilities is often the most complex and expensive part of an NBD project and can come to dominate the team's attention. But this can be a costly mistake if it distracts the team from thinking about forming and starting the business.

Marketing Plan Implementation

The team now fully implements the detailed marketing plan that was completed at the end of the last phase. This includes full market launch and ongoing marketplace support of the offering. The team must continually monitor performance in the marketplace and be ready to make quick course corrections in response to the flood of marketplace input that will follow widespread rollout of the offering.

Facilities Construction and Start-up

Typically for DuPont, this is the largest, most costly and most time consuming workstream. Many DuPont facilities cost more than \$50–100 million and can require several years or more to construct and fully run-in. DuPont has extensive experience in building major facilities, including how to integrate production engineering/design, construction, check-out, and start-up. This experience has been captured in the “DuPont Engineering Guide to Project Implementation” (mentioned earlier) and the “Readiness to Operate (RTO) Guide” and includes detailed checklists, task descriptions, work flow diagrams, and a host of other tools. The Business Initiative Process has been structured to incorporate these guidelines and to effectively integrate these tasks with the other ongoing workstreams.

Market Launch

The launch of a new product/service into the marketplace is almost always more difficult than the development team or senior management expect. This is particularly true for NBD projects where the level of newness to the

organization is high. Effective launch requires a thoughtful plan and a structured approach to early validation/feedback on product performance and customer response in high-volume applications. In addition, the timing of market communications (e.g., newspaper advertising and press releases) must be aligned with the chosen approach to market introduction (e.g., high profile vs. “under the radar screen”). BIP provides the team with checklists, guidelines and templates to address many of these issues (e.g., formal “launch partnership” guidelines for early customers) to ensure that no key items are omitted as products enter the market and the business ramps-up to unrestricted sale.

Full Operations Commercialization

This is the last step in BIP and is simply the full implementation (and follow-up) of the multiple plans (staffing, support services, outsourcing, customer support, etc.) that have been developed earlier. A multitude of tasks must be completed to ensure that a fully commercialized business with all key capabilities is in place. This step is all about handling the *details* to ramp the business up to operation at planned output rates to meet the targeted customer/market requirements in a sustained fashion. The objectives are to ensure that:

- Manufacturing/operations can make the product at the cost, quality and delivery positions defined in the Integrated Project Plan.
- The technology is proven and can be readily used by both customers and manufacturing/operations.
- Customers are delighted by the new product/offering.
- The project meets the strategic and financial objectives defined in the IPP.

Summing Up

The BIP phase-by-phase work guidelines and the supporting task-specific guides and procedures we have described have proven effective in helping a number of DuPont teams successfully navigate the difficult waters of new business development. Their comprehensive/holistic structure, combined with a disciplined approach to planning, has been particularly effective at leading these teams to do “the right things at the right time.” Many teams would have postponed critical tasks (or skipped them entirely) had the BIP guidelines not pointed out the need to complete them—e.g., developing a detailed Business Case early-on or completing a detailed customer feedback assessment prior to unrestricted release of the product.

But the availability of a set of guidelines has, in the end, *not* been the real determinant of competitive advantage or business success at DuPont. That success has come from individual businesses *tailoring/customizing* these guidelines to meet their unique marketplace and business dynamics and then *implementing* a structured framework to put them to work (*I*). The BIP guidelines provide a baseline to bring discipline, rigor and accountability to the NBD process, but they are only guidelines. They are meant to provide a comprehensive framework for NBD teams to follow but in no way can they hope to cover every eventuality and every detail. There is simply no substitute for sound judgment to go along with rapid response based on new marketplace/development information. The goal of BIP is to give teams and business

Many teams would have postponed or skipped critical tasks had the BIP guidelines not pointed out the need to complete them.

leadership frameworks/tools to support the application of judgment and the development of a true learning approach to their NBD project. ☉

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2. M. E. McGrath, M. T. Anthony and A. R. Shapiro. *Product Development: Success Through Product And Cycle-time Excellence*, Butterworth-Heinemann, 1992. PACE—Product and Cycle-time Excellence—is a registered service mark of Pittiglio, Robin, Todd and McGrath.

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