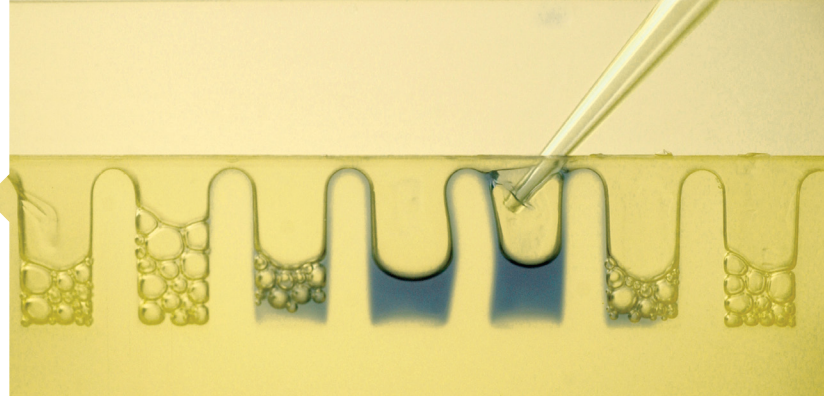


# A Blueprint for Clinical/Commercial Convergence

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## Constructing a New Development Model with Market Access Insights

### Executive Summary

The development model for biopharmaceutical companies must shift from two divergent paths based on clinical-medical and commercial information, to one convergent path that combines clinical and commercial resources with market access strategy, information and capabilities.

Traditionally, clinical development of new medicinal products has been driven by the clinical-medical leads in a biopharma development organization. In the New Health landscape (Quintiles' description of the fast-morphing world of biopharma, where companies are under relentless pressure to drive innovation and add value to drug development while continuing to enhance safety, ethics and stewardship), biopharma must converge the clinical-medical foundation with a fact-based understanding of the new constellation of stakeholders who control access to today's markets – policy-makers, more empowered regulatory entities, payers and provider groups. The post-reform market will demand deep understanding of the root interests, networks and decision drivers of each of these stakeholders. And dramatic benefits will be realized by companies who develop a differentiated understanding around the confluence of stakeholder needs early in the development phase and then continuously use this data throughout the lifecycle.

This paper examines the obstacles to achieving the convergence of clinical development and commercialization, and offers suggestions on how to develop and deploy a “Clinical-Commercial Product Blueprint” to compete in the New Health.

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## Introduction

Success is no longer judged exclusively at regulatory approval. Indeed, in today's New Health environment, market authorization is merely the first gate in a long journey toward optimizing the value of a biopharmaceutical product. Amidst the various risk factors contributing to the rapidly changing landscape of drug development, the growing demands of an increasingly powerful set of market stakeholders will have long-lasting effects on the future success of the industry. With physicians demanding further evidence of a new product's effectiveness, patients demanding more assurance regarding a drug's safety, payers demanding demonstrable proof of a therapy's value, and policy-makers demanding confirmation of a product's real-world risk-benefit in large populations, understanding *what* information to communicate to each group will be a significant challenge for drug developers. Each of these stakeholder groups has a different requirement of evidence. Appraising their needs and designing trials that will provide data to address them must be a critical component in biopharma research and development.

Before embarking down the expensive path of clinical development, developers must now, more than ever, understand the potential market realities, and incorporate commercial knowledge into the early stages of a product's lifecycle. According to data from the Tufts Center for the Study of Drug Development, 32 percent of drug candidates are pulled prior to regulatory approval for economic and marketing conditions, and this trend is increasing. This figure compares to 20 percent of products failing to reach regulatory approval for safety concerns (a figure that has remained the same for decades), and 38 percent for efficacy reasons.<sup>1</sup>

Today, market access realities, such as health technology assessments, must be an integral component of the clinical development plan for any potential drug candidate. To achieve this, a major overhaul is required in both the thinking and structure of most biopharma companies.

## Four Obstacles to Achieving Convergence

The theoretical concept of clinical and commercial convergence is not entirely new, yet the application remains elusive. Many biopharmaceutical companies have opened their clinical development operations to commercial collaboration in order to ensure the early preparation for payer needs, such as pricing and reimbursement planning.<sup>2,3</sup> A recent Quintiles study revealed that 77 percent of biopharma executives believe that a convergence between clinical development and commercial operations will have a positive effect on their firms, and 70 percent feel that a move toward convergence will have a positive effect on healthcare in general.<sup>4</sup> However, there are no clear processes or best-practice guidelines for biopharma companies to follow that address divergent stakeholder needs in an effective and efficient manner while providing the right data to the right stakeholder at the right time in the drug's lifecycle. Furthermore, the traditional silo structure of most large biopharmaceutical companies is not conducive to a convergent approach to development.

Based on the experience of the Consulting Group at Quintiles, there are four main reasons why most biopharmaceutical companies either converge the clinical and commercial functions too late

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in the drug development lifecycle or, at best, just scratch the surface of building truly collaborative product development teams:

### **1. Access to Specialized Skill Sets for Healthcare Systems Analysis**

The healthcare system is complex and comprised of increasingly sophisticated stakeholders who interact among and across groups. Typically, the skill sets required to appraise and address myriad healthcare system “components” are not represented on product development teams. This challenge can be overcome by connecting and leveraging skills already existing in many market access and market research functions or effectively sourcing externally.

### **2. Legacy Thinking on Stakeholder Importance and Development Priorities**

Many companies are still mired in thinking of regulatory agencies as the paramount external stakeholder in the healthcare landscape. Notwithstanding the regulatory gating responsibility, other stakeholders modulate the adoption and use of biopharma products. As more commercial insights are made available throughout the clinical development process, it will become increasingly evident that the singular focus on regulatory approval needs to change. In fact, today’s more innovative companies acknowledge the advantages of injecting and embedding commercial stakeholder-based strategy into clinical development plans. They have initiated these critical changes with the goal of increasing value to the stakeholder earlier and with more targeted outreach.

### **3. Functional “Turf Wars”**

Clinical development has long been the provenance of well organized teams centered on scientists, physicians and regulatory experts. Throughout the last decade, commercial expertise has been added incrementally into the mix of product development teams. But motivated by events in the past few years, in addition to future projections and the rapid evolution of the global healthcare environment, there is now a compelling need to rapidly add market access and advanced commercial experts into the product development process as early as possible in the lifecycle. Paramount to the success of the shift to a convergence model is the effort being championed by both leaders in clinical and commercial organizations.

### **4. Funding Mismatch**

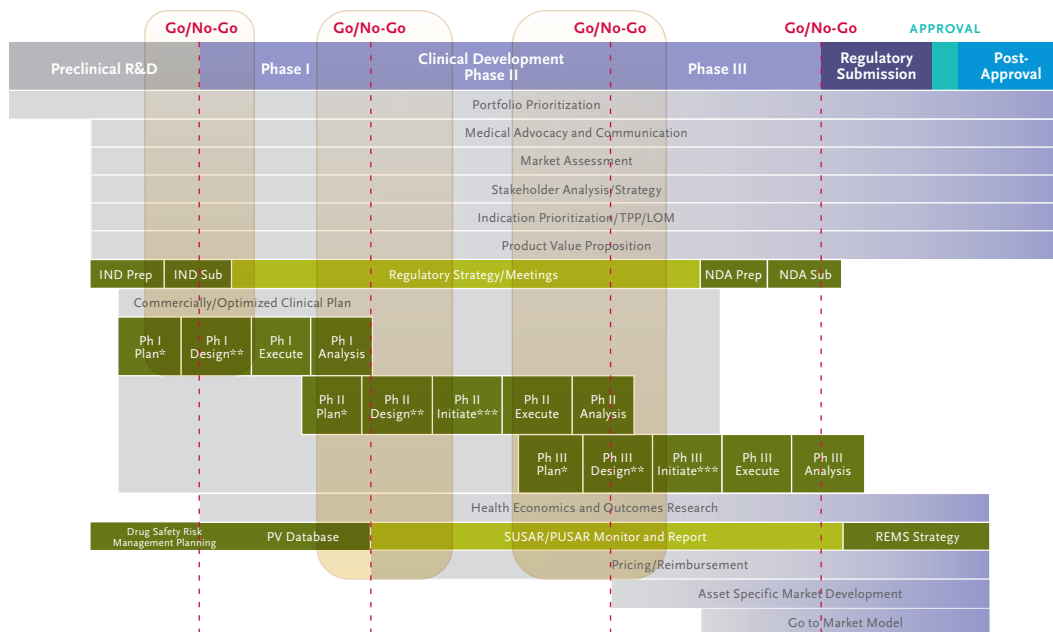
Many biopharmaceutical companies have established dedicated commercial functions to provide input into product development – typically market research and market access departments. However, most of these groups struggle for a voice because they are under-resourced and often do not have the experience or the credibility necessary to significantly impact strategic clinical decisions with commercial data. As a result of the legacy focus on obtaining regulatory approval, biopharmaceutical companies are generally minimalists when it comes to development investment outside the scope of clinical research. Therefore, increased funding of commercial functions to support, test and develop a convergent approach to development is critical and should be based on calculable returns on investment. Similar to the manner in which current business cases are developed across development portfolios, the necessary information is available by using existing stakeholders as the targets, then determining the required additional expertise.

## **A Clinical-Commercial Product Blueprint**

The movement of payers, policy makers and regulators toward real-world data to support claims<sup>5,6,7</sup> immediately post-launch is one of the most visible stakeholder needs for which biopharmaceutical

companies must be prepared. Biopharma companies are now deliberating inclusion/exclusion criteria, comparators, endpoints and trial size, scope and duration with market stakeholders. This ad hoc practice should be standardized in order to enhance the meaningful benefit of a drug from standard confirmatory hypothesis testing into an improved approach that will reveal the greatest potential for applying the results.

The convergence of clinical and commercial expertise, capabilities and mindset is the driving force behind implementing the more sophisticated joint model with possible impacts to development timelines as well as the optimization of resources and processes.



To work toward this ideal state of convergence by deploying a model such as the “Clinical-Commercial Product Blueprint,” biopharmaceutical companies must take the following three major actions, which are discussed in detail, below:

1. **Build a new leadership and capability model** to enable convergence.
2. **Develop a differentiated perspective** on the universe of stakeholder needs operating within a connected system in order to focus priorities and investment, such as: demands, underlying needs and decision-making processes.
3. **Define a new converged clinical/commercial stage-gate process**, inclusive of appropriate standard operating procedures, connected workstreams and tools to analyze and develop solutions.

### 1. Build a New Leadership Model

Although most major biopharmaceutical companies have commercial representation on their product development teams – in some cases even very early in the development lifecycle – the composition of the commercial sub-team is typically only sufficient to provide insights into competitors, markets and

Capabilities required to develop a “Clinical-Commercial Product Blueprint” include individuals with skills and experience in health economics, outcomes research, market research, pricing, reimbursement, policy analysis, managed markets, marketing and commercial strategy.

patient disease states. But in shifting toward the joint model and the changing stakeholder value perception of topics such as promotional activity and patient-centric evidence, relevant commercial representation beyond strategic marketing and market research is required.

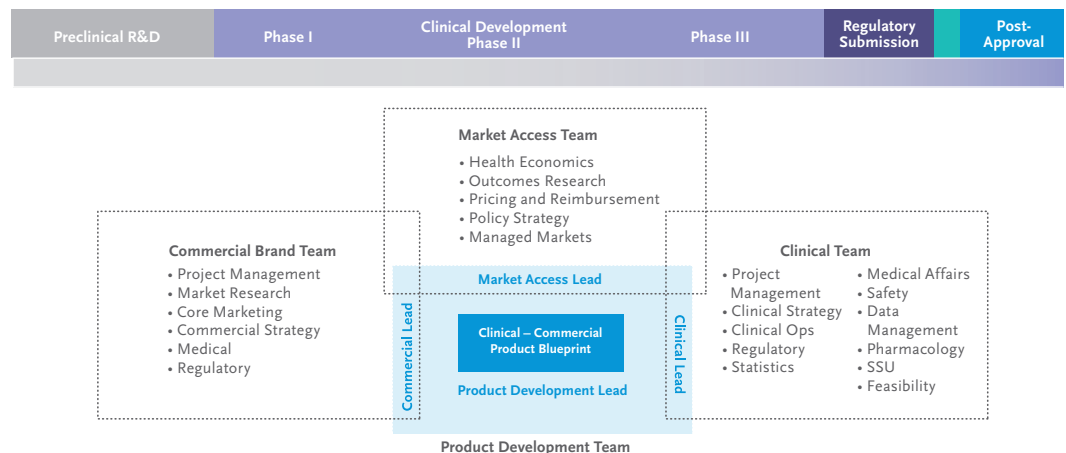
Representation must connect key commercial, evidence-generating groups such as health economics, outcomes research, and market access. This integration will not only be effective for driving tactics such as a payer liaison strategy, a cost effectiveness strategy or a patient-reported outcomes strategy, but will also be useful for establishing and embedding these steps as part of the drug development process. These strategies, in turn, must be aligned and focused on developing data through the utilization of the target product profile and clinical study plans, which will be critical to addressing key stakeholders’ expectations.

Integration of these sub-teams, their strategies and their insights requires strong cross-functional leadership and a team leader who fully understands the drivers of decisions across the clinical development spectrum. This leader must be experienced enough to have credibility across all functions of the team and must be empowered to drive truly cross-functional decision making. Ultimately, and finally, the success of the team will depend on stable and aligned support from the organizational leadership. Without this level of leadership, neither the functional leaders nor the team leader will be able to provide full dedication to the needs of the asset being developed.

### Deploy Relevant Capabilities

Required capabilities generally encompass a combination of skilled people with requisite tools necessary to solve a problem. In this case, the relevant capabilities required to develop a “Clinical-Commercial Product Blueprint” include individuals with skills and experience in health economics, outcomes research, market research, pricing, reimbursement, policy analysis, managed markets, marketing and commercial strategy. These critical capabilities provide structure and build efficiencies throughout the development of value-based data to fulfil stakeholder needs and offer various communication mechanisms for internal and external distribution. Required capabilities must be applied to generate the appropriate data not just for regulatory stakeholders, but increasingly for payers (both public and private), physicians, patients and policy-makers as well. In the end, the team must take a healthcare system view of the market and assimilate the various stakeholder needs inside the system in order to determine where the product fits best.

Figure 2: Clinical-Commercial Convergence: Capabilities and Leadership Model



Bringing these capabilities to bear on the product development team requires each of the functional sub-team representatives to be empowered to represent their function, but obligated to meet the common needs of the asset at hand. These representatives must possess strong leadership capabilities and cross-functional experience to enable successful participation in product discussion, strategy integration and decision making. Here, the interface between identifying and bringing the right capabilities to bear on a product team – and providing the right framework and leadership – is critical (Figure 2).

## 2. Develop a Differentiated Perspective

To effectively build the joint “Clinical-Commercial Product Blueprint,” relevant capabilities of the product development team must be applied to understanding stakeholder needs and decision-making processes which are categorized by type of stakeholder and market sector. Additionally, the underlying logic drivers for determining, evaluating and summarizing the findings must align with three key parameters that drive their decisions:

1. *Economic factors*
2. *Social factors*
3. *Political factors*

Each of these parameters will have unique impacts upon stakeholder perception. The significance of the analysis is to uncover the differences and similarities across stakeholders and then clarify the details and conclusions based on previous experience, research or a combination of both. Doing so enables the development team shape and designs the relevant data-driven strategies that will ensure success of the drug throughout the lifecycle.

This type of analysis – when applied consistently in the early stages of development – can potentially drive significant commercial value in terms of an accelerated development timeline and a better and broader stakeholder strategy to maximize revenue potential.

Translating the stakeholder analysis from value perception into meaningful data-driven outcomes requires the application of specific tactics that, when integrated into the “Clinical-Commercial Product Blueprint,” will deliver on satisfying the stakeholder needs. These tactics can be very straightforward and powerful if the product development teams are equipped and prepared to conduct and deliver them when the opportunities present. For example, comparative effectiveness research requirements for certain drugs in certain markets will require the analysis of real-world competitor experience. This might entail a retrospective mining for existing competitors and/or analog real-world performance data, which will then be used to shape commercial strategic input into the clinical development plan. There are various tactics to derive and deliver the most applicable data to satisfy stakeholder requirements based on rigorous and iterative analysis. Other important factors to consider are drug lifecycle stages and environmental changes or barriers that could potentially limit market access.

*The changing needs and value perception of stakeholders must be addressed by employing the most effective and efficient tactics to mine real-world data.*

### 3. Define a New Stage-Gate Process

In order to ensure that the synergies between cross-functional capability sets and analyses (e.g., stakeholder, competitor, and health economic analyses) are optimally realized, it is important to focus on integrating processes, data and tools throughout the progressive development “stages.” One of the most straightforward coordination starting points is building a common project planning framework that clearly defines responsibilities and time lines to bring the skills to bear in the most effective manner. This facilitates critical cross-functional development and management of integrated deliverables – aiding touch points, communication, information sharing and shared decision making.

Additionally, as a team works toward the same, understood “Clinical-Commercial Product Blueprint” they will benefit from leveraging a common information platform, data sharing environment and a shared set of tools. This includes ensuring that data sets are in common formats/standards, and relevant information is transparently available and even pushed as various team-members need access. Tools must include analytic tools for identifying key stakeholders, assessing stakeholder needs, determining tactics and strategies to meet stakeholder needs, generating the relevant data and methods for communicating that information to all stakeholders.

Finally, as key integration “gates” are approached, processes for bringing teams together for productive cross-functional discussions will be critical. In addition to ensuring that either face-to-face or virtual conversations are productive, a robust team facilitation process will help to ensure that all cross-functional view-points are brought to bear on the final decisions and outputs. Given the various viewpoints brought from clinical, commercial and market access colleagues, providing an environment with an overt cross-functional framework and stage-gate processes will be crucial to realizing key synergies and insights.

### Foundation for Success

In the evolving landscape of the New Health, the changing needs and value perception of stakeholders must be addressed by employing the most effective and efficient tactics to mine real-world data. Rigorous analysis of all available data is essential to drive commercially relevant strategies that will be the foundation of a successful joint “Clinical-Commercial Product Blueprint.” This tested approach to deliver data-driven answers to key stakeholders will concomitantly deliver and demonstrate value to the healthcare system by providing access to better medicines, projected cost savings<sup>8,9,10,11</sup> and projected lives saved and/or prolonged. Together with more strategic information and targeted planning to satisfy stakeholders, biopharmaceutical companies will be better positioned to deliver on the promise of innovative, safe and effective medicines.

To achieve this optimal market state, biopharmaceutical companies must fundamentally change the manner in which their organizations are structured, and place more emphasis on early-phase convergence and collaboration among the clinical and commercial functions. This clinical development paradigm shift requires people, process and technology solutions to ensure sustainable change that will drive a product’s value post-launch.

### Conclusion

Innovative approaches to clinical trial and design, such as partnering with advocacy groups or personalized medicine, can help guide drug discovery and development. The use of biomarkers in measuring the safety and efficacy of new drugs in preclinical and clinical stages has helped Gleevec, Herceptin and Restasis achieve market and clinical success. Complementing a clinical program with health economic and outcomes research evidence development can help ensure success by establishing value platform for a successful launch.

## Case Study – ROI of personalized medicine: the case of biomarkers of response

### Background

As the scientific community continues to make advances in genetic and molecular diagnostics, personalized medicine – the use of an individual's genetic markers to achieve optimum health outcomes – is emerging as a promising strategy to shape clinical trials and achieve more cost-effective treatment regimens. Biological markers, biomarkers, are measurements that provide information regarding a disease state or biological state that can be instrumental in disease management and the drug discovery and development process. There are five categories of biomarkers: response, efficacy, toxicity, dosing, and screening/prognostic. The examples presented illustrate cases where biomarkers of response were used to change conventional therapy and achieve more efficacious and cost effective treatments.

### Clinical Case Studies

**Gleevec** (imatinib; Novartis), a molecularly targeted drug used to treat gastrointestinal stromal tumor (GIST) patients with chronic myeloid leukaemia (CML) by inhibiting a protein produced by the Philadelphia chromosome. Gleevec was approved for treatment in 2001 and GIST in 2003 and was considered revolutionary – one of the first targeted therapies to seek out and destroy only cancer cells, leaving surrounding healthy tissue unscathed. It had sales of US\$3.9 billion in 2009<sup>12</sup> and has successfully prevented the progression of CML and thus the future treatment costs of the disease which can range from US\$988 to US\$1,433 per day.

**Herceptin** (trastuzumab; Roche/Genentech) is a drug used to treat breast cancer, targeting patients that over-express the human epidermal growth factor receptor 2 (Her 2). Genentech partnered with breast cancer advocacy groups during the clinical trial phases of drug development to enhance patient recruitment and solicit patient feedback and participation. This tactic helped Herceptin secure a patient base as well as garner the support from a well-known association within the patient population. Herceptin was approved in 1998 and has generated sales of almost US\$4.7 billion in 2009.<sup>13</sup>

Allergan's **Restasis** is a product indicated for the treatment of dry eye. Prior to the launch of this innovative treatment, Allergan researched and published data on the burden of disease. By conclusively demonstrating the quality-of-life impact and healthcare systems costs in a comparative manner to other well understood ophthalmologic conditions, they set the stage for Restasis's value proposition. Launched in April 2003, Restasis has grown to be the second largest eye care product in the United States with global sales of \$523 million.<sup>14</sup>

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