

Opportunity Genesis: Identifying the Path to BioPharma Market Success

Client: Entrepreneurial advanced technology venture within a *Global 1000* diversified technology company, a world leader in advanced medical systems.

Challenge: The client had acquired advanced diagnostic technology from the Massachusetts General Hospital. This technology holds great promises, long-term, as a new imaging and diagnostic modality for numerous clinical applications. Unfortunately, the investment time horizon of the parent corporation demanded a path to profitability in a much shorter timeframe than was anticipated for regulatory approval for human *in vivo* applications of the technology.

Diagnosis: The client needed a shorter path to market for the advanced technology. This path needed to not only generate near-term revenue and profits, but also needed to be consistent with, and reinforcing of, the longer-term goals for *in vivo* diagnostic and imaging applications.

The client also needed the near-term market for the technology to serve as initial technical validation for the ultimate *in vivo* diagnostic applications. The best near-term markets would not only prove the capabilities of the technology, they would also point directly to early high value clinical applications for commercialization.

Methodology: The Opportunity Genesis process started with a thorough review of the client's technology, and the capabilities demonstrated to date (primarily by the researchers at MGH). Interviews were conducted with the research scientists to go beyond the published data, and understand the underlying performance characteristics and technology readiness for use in potential commercial applications. Breadboard systems used in the research studies were reviewed, and observed in operation. Several different research study sponsors were also interviewed to gain an understanding of their interest in the technology.

The interviews at MGH provided hints to potential early adopter users for the technology in the biopharma research community. These suppositions were validated with follow-on interviews of leading researchers at MIT

and other major research centers. Background secondary research into the core technology and parallel technologies already deployed in biopharma research led to the identification of trends and drivers underlying the potential application opportunities. Basic characteristics of the latent and emerging biopharma opportunity were characterized, and matched to the readiness and characteristics of the technology. Hypotheses were formulated that could be tested with potential lead-users and thought leaders within industry.

Using connectivity to biopharma industry thought leaders and potential lead users through the research connections at MGH and MIT, validation interviews were conducted to test the underlying conditions and drivers pointing to the biopharma opportunities. In cases where confidentiality could be secured, potential lead users were probed further for a more in-depth understanding of the user requirements and potential product characteristics for a successful biopharma system. Observational research of the use of parallel systems in the research environment was also conducted.

The validation research, and subsequent market opportunity modeling and business case development, resulted in the selection of an attractive biopharma application, and the development of initial product systems for use in pre-clinical drug-discovery research.

Results: The Opportunity Genesis approach identified a near-term market opportunity for an advanced technology that was believed to be years away from commercialization. Through the application of trend mining, lead-user and Voice-of-the-Customer methods, an immediate market application was identified that not only achieved the clients financial objectives for near-term revenue and profits, it also provided a clear roadmap to the ultimate *in vivo* diagnostic application.

An innovative aspect of the path to market is that the biopharma use of the initial drug-discovery systems helps directly pull the technology through into targeted human clinical applications.

The initial pre-clinical research systems have been successfully introduced, and have found immediate traction in major biopharma drug-discovery facilities around the world.

