



Computer Gaming: The Future of Decision- Making for Life Sciences?

**How Decisions Will Be Made in
Life Sciences 20 Years from Now**



Today's business eco-system is complex, and this is especially true for the life sciences industry. Stakeholders include not just the end consumer but those who pay, those who diagnose and those who treat. All these groups have different and changing needs. The life-cycle of a product is intricate and there is a high level of competition among brands and franchises for a slice of the market.

All this inevitably has an impact on decision-making. How can life science brands identify winning strategic decisions when there are so many variables to consider? This paper examines how life science brands are increasingly looking for smarter ways of making decisions and managing risks, by 'road-testing' their decisions ahead of sign-off under computer game simulated conditions.

The Challenge of Data Integration

Life science brands and franchises work to understand their market through a wide variety of means:

- They may pay to acquire huge quantities of data on drug prescription trends and patterns
- Experts may be hired from competitor companies or from adjacent market and therapeutic areas
- Specialised external agencies may be recruited to make recommendations
- Scenario planning workshops may be organised

Alongside all this, is the institutional knowledge belonging to members of an organisation based on their historical experience.

The information that results from these and other channels can be vast and fragmented, from an array of different sources (payers, patients, prescribers, competitors) and in a wide variety of different forms (Excel, PowerPoint, social media, free-form narratives). As a result, organising and integrating the data into one common logical language to form a cohesive picture of the environment can be an enormous challenge.

Mapping the Commercial Impact of Decisions

Integrating market intelligence data is not the only challenge faced by life science brands looking to make the best strategic decision. There is also a need to predict the likely impact of potential decisions on commercial performance. By mapping out how the profit and loss of an organisation will change under different market or competitor circumstances, the brand can prioritise problems and identify the tactics on which to focus time and budget.

Mapping the potential commercial impact of decisions requires a way of identifying true causal relationships within the business environment. “Ascertaining true patterns of causality between commercial performance and market events or an organisation’s own activities is a crucial part of effective decision-making,” explains Claudio D’Ambrosio, CEO of Deallus Consulting, a global life science consultancy specialising in market intelligence and strategy. “But often these causal patterns are not fully quantified or tested, meaning that decision-makers have to rely on assumptions and ‘fly blind’ in the decision-making process.”

So what’s the solution? How can decision-makers in the life sciences obtain, in D’Ambrosio’s words, an ‘aggregated bird’s eye view’ of the marketplace, from which to make the best strategic decisions for a brand?

‘Road-testing’ Business Decisions in a Simulated World

One answer to the challenges of decision-making in today’s complex life sciences environment is to create a ‘customised simulated business world’ – a computer gaming tool that reproduces historical and current market events with precision to re-create a specific brand or franchise eco-system. This offers life science brands the opportunity to ‘road-test’ decisions before they are signed off, in a risk-free environment in which all the variables have been mapped and considered.

“Nobody would board an aircraft unless the pilot had gone through a sophisticated training process using a flight simulator,” explains D’Ambrosio. “The pilot must have practised and refined their technique and decision-making skills in a virtual environment that is ‘almost the real thing’. Yet, life science brands often make expensive and often irreversible decisions without undertaking similarly thorough tests.”



Figure 1. Like flight simulation, computer games can simulate a market eco-system and provide businesses with a virtual world in which to test their decisions before taking action in the real world.

While computer games are often used in top MBA programmes as a means of helping students understand general business dynamics, in industry they tend to be used sporadically and are often not customised to an individual company’s market environment.

‘Gaming’ in the form of scenario planning and role play exercises, has long been used by life science brands to better understand their market and design strategies and tactics to out-play their competitors. Computer gaming tools are a development of this concept, integrating a brand’s existing market intelligence data in all its forms to re-create a virtual world that is fully customised to a client’s individual market environment.

This supports decision-makers in addressing highly specific market issues, such as how to switch customers from an old-generation to a next-generation product without bleeding customers or losing out to the competition, or how to counter generic or biosimilar market entrants.

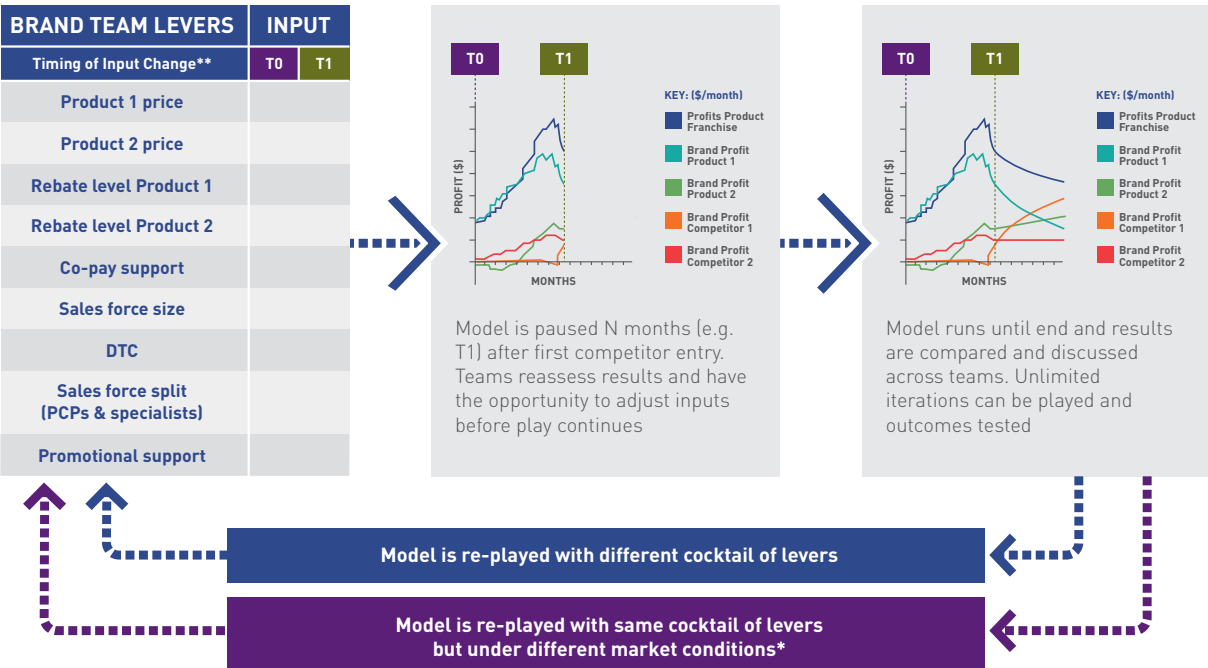


Figure 2.

*Market conditions can be programmed into the game (unlimited number). Market conditions represent any market dynamics other than the levers the Brand Team disposes of (Competitors, Payers, Prescribers, Patients). Examples of market conditions: change in consumer preference/loyalty profile; change in prescription behavior; change in competitor drug price or reimbursement position or sales force effectiveness; change in competitor timing of market entry; change in payer account moving from parity to restrictive for a class of therapy.

**Timing of input change. Players can change strategy as frequently as they wish, for example make changes to strategic policies every quarter or every six months.

An illustration of the importance of mapping the potential commercial impact of decisions before these are made is shown in Figure 3 below.

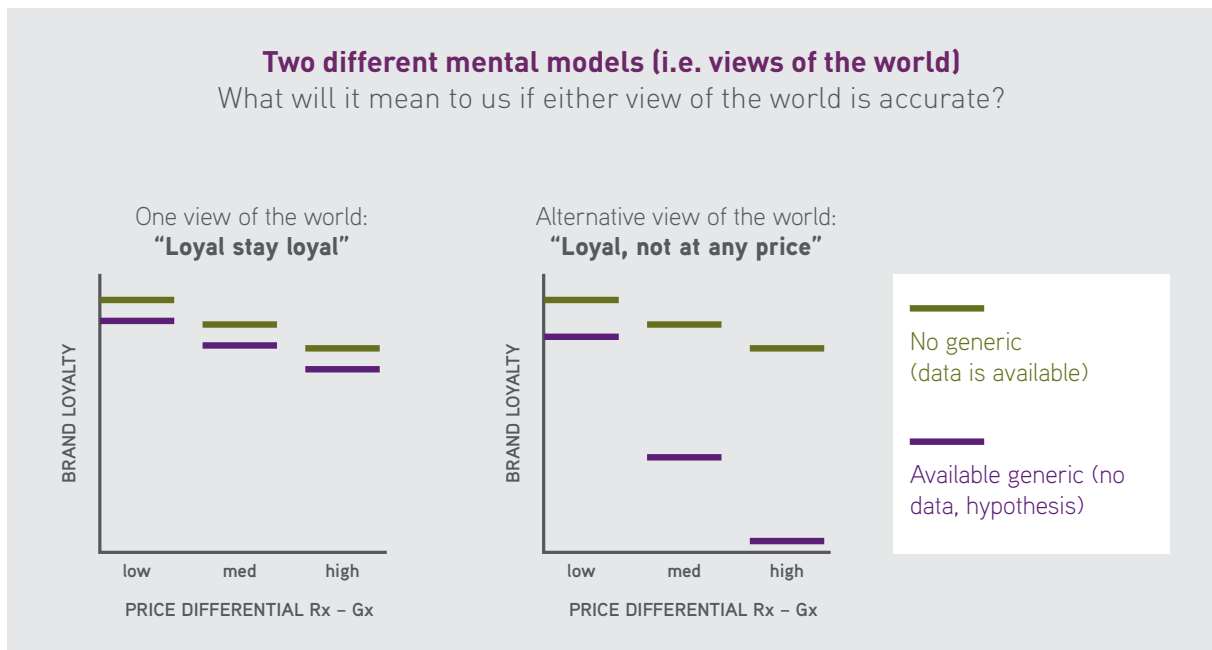


Figure 3. Computer gaming tools can help team debate by substituting intuition or assumptions with testing and map the potential impact of decisions before they are made – for example, the impact of a generic market entrant on brand loyalty in the context of three different pricing regimes.

A view of the world (assumption) would be that customers will remain loyal to the branded product regardless of the price of a generic entering the market. An alternative view of the world assumes that loyalty would sharply dissolve if cheaper generic forms were introduced in the market. In fact, there are many scenarios that fall in between these two extremes that should be tested. What is the appropriate way to re-size the sales force in either future? What level of co-pay assistance will constitute a tipping point for potential switchers in either future? Simply 'sitting and talking about it' will not give the answers we need to these questions.

The Evolution of Technology-Assisted Decision-Making

While using computer games to make decisions in business may seem to some like a radical move, D'Ambrosio argues that technology-assisted decision-making is already an established part of our lives. "Today's machines are in our pockets and we don't make many day-to-day decisions without technology of some form," explains D'Ambrosio. "How will decision-makers in business make decisions 20 years from now? Surely the process will be more sophisticated than them sitting down with some market research data and talking about their options."

In the context of the ever-changing business landscape, and particularly in the complex life sciences space where there are no easy formulas for success, computer gaming tools may well provide a glimpse of what the future looks like for business strategy design.

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- Deallus Consulting is an innovative global life science consultancy with offices in London, New York, New Jersey, Los Angeles and Singapore
- We support the strategy development process by harnessing objective external perspectives with in-depth market knowledge and rigorous analytical capability
- This enables us to deliver comprehensive market landscape analysis, insight generation and to provide clear guidance and recommendations
- Our unique approach, provides an effective platform upon which our customers can define winning strategies with minimum risk and maximum confidence
- For further information please visit www.deallusconsulting.com