

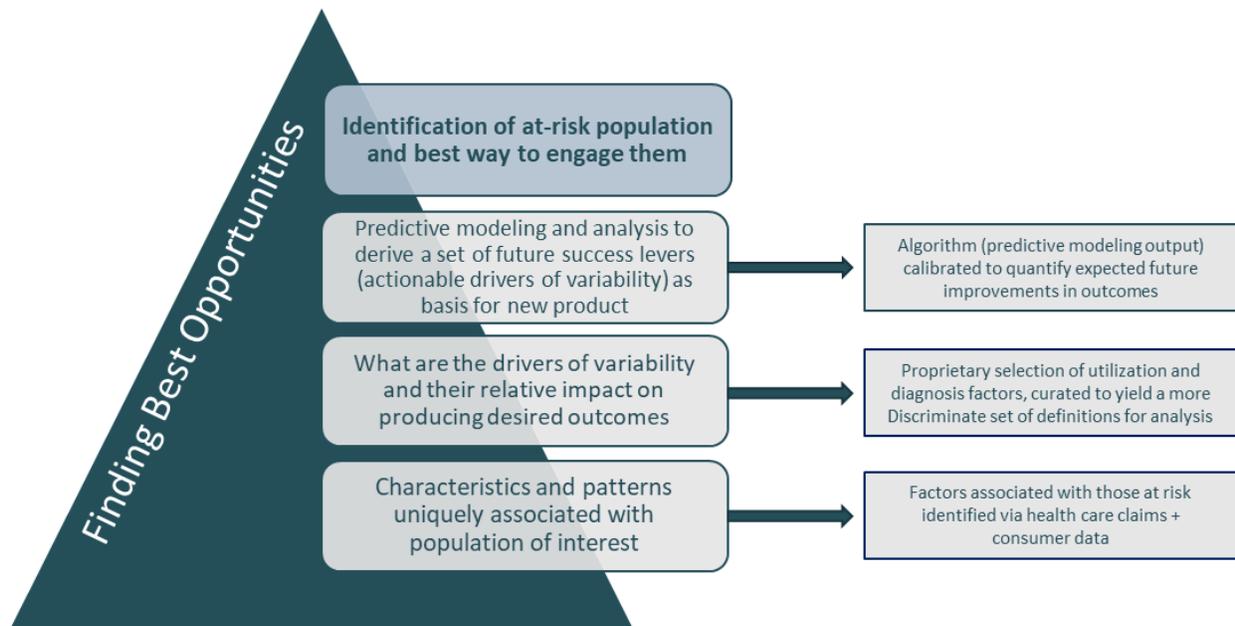


Overview

As our economy begins to open and we start to emerge from the current COVID–19 pandemic, there will be a lot of opportunity to build upon all the innovation that has occurred to deal with the current crisis. This innovation is occurring at an astonishing speed, and now is a great time for businesses to evaluate existing product portfolios and offerings considering all the change that has occurred. This is especially true for health care providers and companies, where both gaps and opportunities for improvement have been most evident during this current crisis.

Pathway to Data-Driven Innovation

Successful health care product innovations are more than high end engineering and design. They require a clear understanding of the best “fit” between a market (at risk population) need and the external (drivers of variability) and internal (capabilities, what is actionable) factors that, when taken together, reveal promising avenues for innovation. Identifying data and metrics to codify this understanding helps product teams move past solely relying on measurement of past and current performance (“what is”) toward creating the vision for what should come next (“what could be”). Predictive modeling plays a central role in unlocking the most promising opportunities to create something truly new and innovative.



The concept of building something, continuing to gain feedback and then adjusting accordingly is exactly what innovation is all about. Agile approaches leveraging data are perfectly suited to deliver quick, effective outcomes when the end state “product” is still unknown.

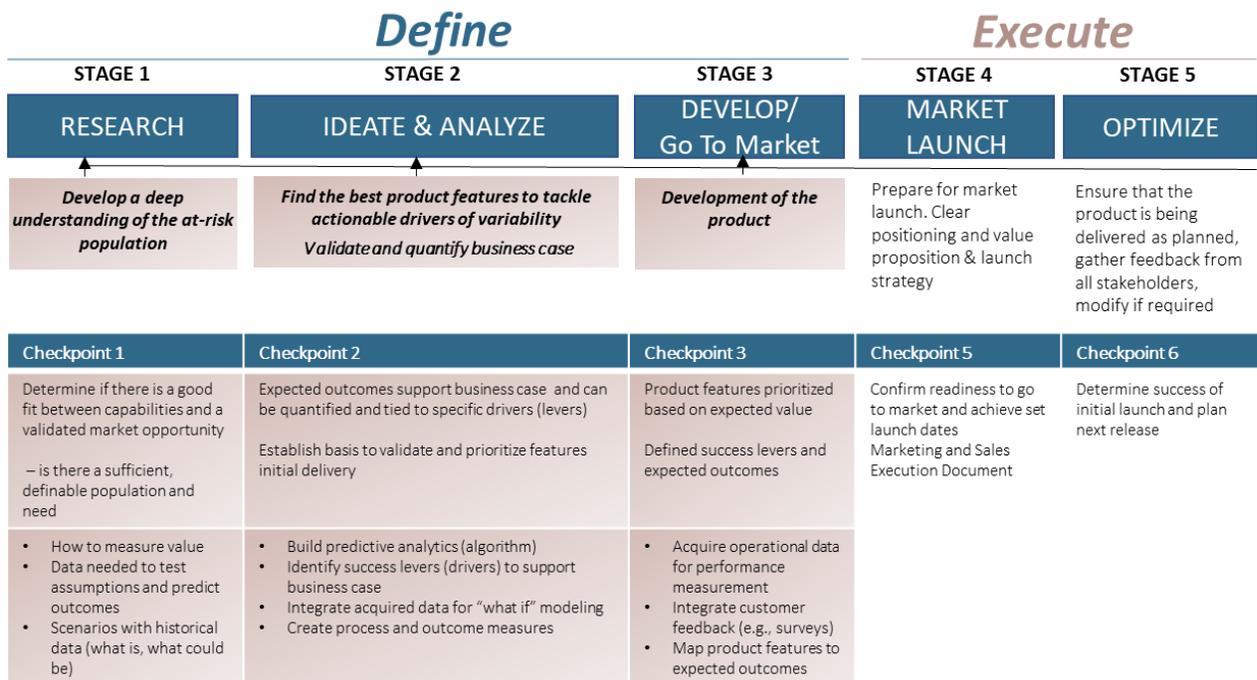
Presented here is a data-driven approach to product innovation, well suited for health care and health care “products”. It enables ability to quickly bring to market, and subsequently modify products to adapt to changing consumer needs and preferences.

- Designed to be flexible (meet business needs across a wide spectrum, including where businesses are in the development cycle and what their specific objectives are).
- Positioned as an agile, iterative process coupled with critical checkpoints along a sequential series of steps. Data gathered and ‘stored’ at each checkpoint sets the stage for next steps.
- Takes advantage of an integrated platform to house data and information assembled to establish the business case, along with operational and performance indicators to evaluate success once product is launched.

A hallmark of this approach is the ability to do a “temperature check” at the conclusion of each development “sprint” (stage) to make sure product is still on track to deliver the results (value) needed for success. At each checkpoint, being able to ask the questions “*how much is it going to cost, and how long will it take to develop*” can be assessed relative to the measures of customer value articulated within the business case. This ensures that the expected result measures up to best estimate of what a “minimally value product” (MVP) is. If not, modifications can be made accordingly.

Concentrating on the most important success levers (metrics) identified throughout the discovery and development process not only gets products to market quicker, it clarifies and focuses decision making and establishes the basis for frequent iterations to improve performance and monitor progress.

The Product Stages provide a blueprint of the key activities and checkpoints needed to bring value and data driven products to market



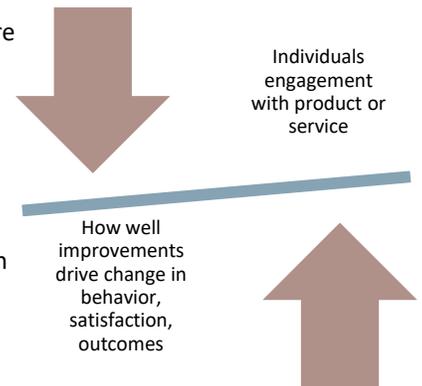
Why This Matters Today

In today’s health care environment, there is an even greater role for data and analytics to serve as the basis for quantifying and qualifying product opportunities, creating scenarios (use cases based on data), testing hypotheses (assumptions), and identifying performance levers and metrics to provide focus and measure success. The data imperative is more evident of late as markets are evolving quickly, due in no small part, to the ubiquity of digital information. This is setting barriers to entry low for businesses that can become nimble in the use of data for translation of innovative ideas and concepts into new products and services.

Increasingly, there is a narrow corridor that sets apart those products that win from those that lose. In this environment, anything that can help systematically speed up and improve product development make the critical difference. Product developers that have access to and are most expert at using data both strategically and tactically as part of the development process have a decided competitive advantage over those that do not.

Today we can track every interaction between a consumer (patient) and a health care product or service. We can identify which of those interactions are successful (achieve the desired outcome), we can learn about motivations and satisfaction, model how changes to a product alter behavior or outcomes and monitor how this varies by different cohorts of individuals, at different steps in their journey.

Let's take a closer look at the “Define and Develop” phases of product development (stages 1-3), and how data and analytics set the stage for proceeding in a forward looking way with focus and clarity of purpose.



Define and Develop

	Upfront Research	Ideate & Analyze	Develop “Go to Market”
Goal/ Objectives	<ul style="list-style-type: none"> Deep understanding of the target population, their issues and what they value Review of the market (customers) and competitive land space 	<ul style="list-style-type: none"> Ideate to find best solution(s) to address needs (deliver value) Determine if product idea has market value vs. competitors (product defined at this stage) 	<ul style="list-style-type: none"> Development of the product – process, operations (delivery), technology, customer and user experience, make/buy determination “Go to Market” strategy and plan ready to execute
Checkpoint	<ul style="list-style-type: none"> Is there a “fit” between capabilities (concept) and a validated market opportunity Identification of potential success levers to guide the next steps (hypotheses to be tested) 	<ul style="list-style-type: none"> Translate best fit solution(s) into detailed concept, including capabilities and expected outcomes Determine product relative market positioning (overall, competitive) Is it feasible? (operations, financial, regulatory, timing) 	<ul style="list-style-type: none"> Market ready product – confirmed “Go to Market” planning complete – milestones, market messaging, value story, sales approach and goals, launch timeframes and KPIs Readiness and integration partner (if applicable) – roles, responsibilities Data and Technology architecture as required – ready to execute
Deliverables	<ul style="list-style-type: none"> Market Research Report SWOT Analysis Market Requirements Document Opportunity Assessment Preliminary Data Map 	<ul style="list-style-type: none"> Product Charter Product Value/Positioning Market Segmentation/Sizing Detailed product requirements Pricing/Sales Strategy Timing/Speed to Market Technology, Regulatory and Legal assessment 	<ul style="list-style-type: none"> Product and Data Roadmap Operations and Sales Readiness Checklist Data and Measurement Plan Marketing and Sales Plan Value Story (and proof points)
Data/ Analytics	<ul style="list-style-type: none"> How to measure “value” delivered What will be required to deliver (capabilities, processes, data) Capabilities mapped to success levers (focus and prioritize) Data and information needed to test assumptions and “predict” outcomes (surveys, health cost/use), operations (performance, engagement, data) Population identification (as applicable) Exploratory analysis – existing market, performance, ID and refine opportunity 	<ul style="list-style-type: none"> Business Case and ROI modeling Predictive modeling (test assumptions) with acquired or existing data Economic (financial Impact assessment (client, customers) Process and outcomes measures based on identified population and success levers Internal and external research and hypothesis testing to refine population and proof points 	<ul style="list-style-type: none"> Validation/link key product features to Value Story Refined analytics data model and proof points Applied analytics and statistics to provide initial measures KPIs and baseline Acquisition, organization, and establishment of data (existing and acquired) – documented in detailed data and technology map Reports template(s) built Client and consumer (user) experience journey mapping
Applications	<ul style="list-style-type: none"> Brand new product/service (existing market) Expand existing product to new market (solve different problem) Improve current product or address some known or perceived gap/missed opportunity Looking to solidify value story (existing product) 	<ul style="list-style-type: none"> Brand new product (as defined) Expansion to new market Existing product delivered in a new way (incremental value) Product Additions (enhancements) - new insights, untapped opportunity, new method to measure value/outcomes 	<ul style="list-style-type: none"> Brand new product/service Existing product expansion

Stage 1: Research

Stage 1 will always be the first step when introducing either a brand new (undefined) product to an existing market, or expansion of an existing product to a 'new' market. May also apply in situations where the goal is to make improvements to a current product aimed at addressing some perceived "gap" or missed opportunity.

To clarify and size opportunity, analysis will focus on:

- Establishing definition(s) for the target population,
- The specific use case(s) and
- The value drivers for creating competitive differentiation.

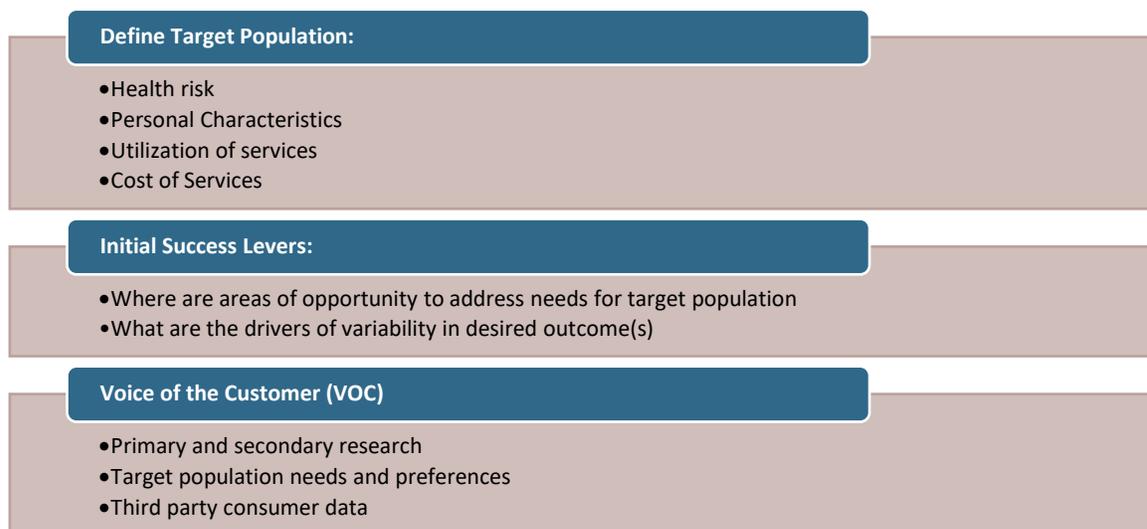
Emphasis should be placed on data and information needed to test assumptions and "predict" outcomes; and how to measure "value" delivered. Some initial work will take place to identify and map capabilities to success levers. This will provide the basis in subsequent stages for prioritizing development efforts.

While it may seem counterintuitive to focus a lot of effort on the front end of the development process (starting with a solid research foundation), it has been widely demonstrated that making such upfront investments enables "product" concepts that are more likely to meet market requirements at the outset and allow for a successful, timely launch. It also helps generate an effective product roadmap, and ability to anticipate the next version so that once product hits the market, version 2.0 is already in the wings for a "go to development" decision.

Data and information collected, analyzed, and developed during **Stage 1 Research** creates the metrics (measurement) basis, supporting "go to development" and "go to market" decision making for specific product features. Organizations will be armed with a quantifiable set of performance expectations to adjust accordingly.

Examples of metrics and measurement developed during Stage 1 include the following:

Metrics/Measurement:



Stage 2 Ideate & Analyze

Data and measures related to target population and potential success levers for evaluating new product concept(s) has been established in **Stage 1 Research**. In **Stage 2 Ideate and Analyze** focus is on additional analysis to identify the universe of features the new product might include. During this stage, it may be good to continue to "ideate" (discover as many potential features as possible). This will avoid a "rush to judgement" that may preclude ideas

and features that could be attractive (or even game changers) but might otherwise not make the initial cut due to timing, and other real or perceived barriers and preconceived notions. The goal is to then pinpoint those features that seem to be the best fit with what customers are likely to perceive as providing immediate value and prompt a buying decision. Those features can be assembled as the first version of the product, while additional features might be delegated to later phases of introduction (as part of the product roadmap).

Areas of focus during **Stage 2 Ideate & Analyze** include:

- Ideate and discover the best fit product features to solve problem(s) or address patient needs in a different, value added way.
- Establish business case and evaluate ROI (cost/resources to deliver), considering overall company goals and/or competing priorities.
- Determine if product has market value compared to what others offer in the market.
- Determine if product makes sense financially, is feasible (operations, technology, resources) and timing is right (is there a sufficient window of opportunity for a successful launch – new offering).

Insights and information gathered during **Stage 1 Research** are used as guardrails for defining the actual product and establishing the business case for all subsequent development efforts.

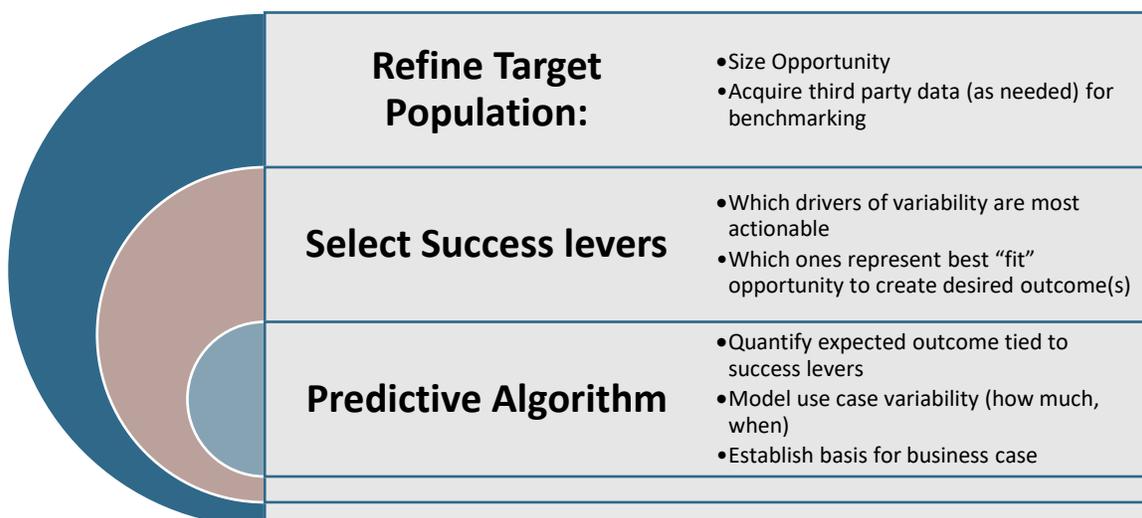
Data modeling during **Stage 2 Ideate & Analyze** uncovers the universe of features for new product and which ones are best fit (optimal intersection of capabilities and market (customer) needs). This results in:

- Refinement of target population and sizing of opportunity
- Inputs for business case and ROI
- Most actionable success levers, including process and outcome measures
- Optional testing of assumptions with existing or acquired data
- Algorithm development for predictive modeling (“what could be”)

It is at **Stage 2 Ideate & Analyze** that the insights and information gathered during **Stage 1 (Research)** are used to begin to define the actual product and establish the “business case” for all remaining development efforts and priorities.

Examples of data and analysis attributes developed during Stage 2 Ideate & Analyze include:

Data and Analysis Attributes:



Stage 3: Develop “Go to Market”

Stage 3 Develop “Go to Market” is all about development of the product and completion of “go to market” planning - including definition, creation and establishment of milestones leading to successful launch.

Prior to embarking on **Stage 3 Develop “Go to Market”**, both the business case and “do-ability” for the development effort has been established. This has occurred and been solidified at “checkpoints” during **Stage 1 Research** and **Stage 2 Ideate & Analyze**.

That is, patient needs and “wish lists” of desired features have been quantified and translated into a technically and economically feasible solution.

Basing prioritization of product features for initial and subsequent product iterations on data and analytics forces the product team to be crystal clear about what value is expected to be delivered. It positions the team to be able to quantify what a given set of product features are expected to achieve and thus more effectively prioritize development of one set of features over others.

Metrics based on up front data analytics and predictive modeling provide indisputable criteria for measuring success once initial product is launched. It takes a lot of the guesswork out of what is otherwise often more of an intuitive process. However, instead of hampering creativity and intuition, it allows for the possibility of a more expansive product roadmap. Rather than prematurely tossing out innovative ideas, it provides a basis for their potential introduction during a later product iteration, as market and customer conditions change, and their relative merit (value) can be measured against success criteria developed at the outset.

Data and Analytics Supporting Business Case Development

Stages 1 (Research) and 2 (Ideate & Analyze)	Stage 3 (Develop “Go to Market”)
<ul style="list-style-type: none"> • Establish the basis for business case – including an initial product definition and project justification • Collection and analysis of data, modeling the optimal product-market fit, and target population • Creation of success levers and metrics tied to product features (desired or expected outcome) • Algorithm to model and predict expected results 	<ul style="list-style-type: none"> • Prioritize those product features believed to drive incremental value • Assemble inputs (metrics based on data analytics), and acquire any source data needed to support performance assessment • Development methodology for integration of operational and direct customer feedback data into performance measurement

Organizing for Success

Integrated Platform for Business Case Development and Performance Assessment

As described in this article, effective, data-driven product teams follow a prescribed “blueprint” for measuring potential impact and how the product overall and/or individual features are expected to produce the desired

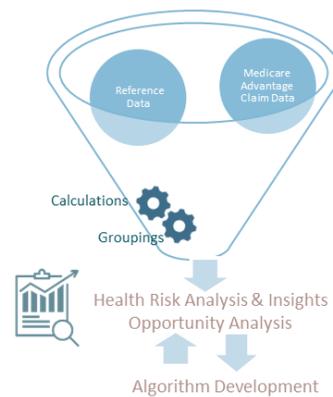
results. This evaluation is based upon the data inputs and metrics developed during creation of the business case (characteristics of target population, identification of specific success levers) and leverages operational (performance) data in addition to direct customer feedback to compare what was expected versus what the actual results are once product is launched.

This data-driven development effort usually begins with claims data and can be enriched with additional (acquired) source data. Examples include consumer data purchased via a third-party vendor, customer surveys, broader population specific databases for benchmarking results and outcomes, and licensed grouping software.

Thus, in addition to a prescribed innovation development blueprint emphasizing measurement, having an integrated and flexible platform for housing, and managing data greatly enhances effectiveness - both for business case development and ongoing performance assessment.

An ideal platform will embody enough structure to support common methods for discovering opportunities via identification of levers (such as cost and utilization) associated with producing desired outcomes. However, it should also allow for flexibility to test new elements, assumptions and hypotheses, incorporating other “non-production” data to expand upon dimensions of variability that will further reveal the less obvious drivers of success specifically tailored to the unique characteristics of the “at risk” population. It is this mix of “art and science” combined with the experience and expertise needed to understand what is truly impactful that creates a winning combination for success.

Phase 1 & 2
Business Case Development
Explore Data, Test Ideas, Firm Up Requirements



DecisionLAB

To assist our clients in their product development and innovation efforts, we have developed DecisionLAB - a data integration environment that allows clients to quickly test business case (product) ideas and prototypes with very little ramp up, using both internal and licensed industry datasets. Our industry experts are available to assist with customizing and testing business case(s), delivering ready to run analyses based on established analytic models combined with industry insights. This on-demand service comes with prebuilt reports customized with specific business model considerations.