

# ***It's About Time***

New Product Development Innovation  
the Dietary Supplement Industry

**Vitature**<sup>™</sup>  
*It's about time*

## Executive Summary

Over the last 15 years, we've seen a dramatic shift in the health and wellness landscape. Over 75% of consumers are engaged in preventative health and wellness, according to Hartman Research. We realize that foods, medicines, supplements, over-the-counter products, and exercise link directly to health and well-being. The nutritional supplement industry, more broadly known as Vitamins, Minerals, and Supplements, or VMS, is a direct beneficiary of this consumer trend and thus one of the fastest growing industries in the world.

However, the industry faces the challenge of falling consumer confidence. Recent actions taken by New York's Attorney General, negative press and social media, coupled with the widely publicized behavior of irresponsible marketers leave the industry at a crossroad. Additionally, consumers have more and deeper information and communication channels at their fingertips. While this can provide opportunities for companies pursuing responsible innovation in their product development and management, it can also mean further eroding consumer trust if the industry doesn't move to practices of greater transparency and data flow management within the product lifecycle.

Healthnotes believes in transformation through process, technology, and information. Technology integrates disparate processes and information to maintain scientific product foundations while pursuing new ways to meet consumer needs.



**Vitature™** represents the latest dietary supplement industry technology offering from Healthnotes®. Vitature is a cloud-based software solution where relevant product, regulatory, competitive, ingredient, supplier, and scientific data are centralized and accessible across the VMS supply chain to support product development.

## VMS New Product Development

### The Benefits of Innovation

Over twenty years after DSHEA redefined dietary supplements, the VMS industry is pressed to determine it's identity. Consumers demand greater transparency and visibility into the supply chain and scientific data that underpins formulation decisions. This transparency has huge implications for the industry and is non-trivial. Not only does it require exposing testing and cGMP process throughout the supply chain, but it also requires demonstrably efficacious use, quality science, and expert formulation.

To provide these types of products, companies are re-thinking every aspect of the product development process. The objective is to balance process with consumer-oriented innovation.

The benefits of innovation are obvious. Product innovation differentiates and enhances brand recognition. Brand recognition increases market share and revenue. When launching innovative products, the investment is much higher; therefore, innovative products must generate a higher perceived value to translate that investment into increased profitability.

The indirect benefits of innovation are even more impactful to an organization's economic success. These organizations enjoy spikes in human creativity and productivity across programs, sustaining the innovation cycle. The authors of *Beyond Productivity: Information, Technology, Innovation, and Creativity* state:

*“...the products of creative science, scholarship, engineering, art, and design...can bring immense benefits to society, as well as provide deep satisfaction to their originators. So respect is accorded to creative individuals and institutions, and society is often willing to invest in projects and programs that plausibly promise (though can never quite guarantee) creative results.”*<sup>1</sup>

In the recently published book, *Bold: How to Go Big, Create Wealth and Impact the World*, Peter H. Diamandis and Steven Kotler describe a chain reaction of technological progression, a road map of rapid development that always leads to enormous upheaval and opportunity.<sup>2</sup>



**Companies are re-thinking every aspect of the product development process.**

1. William J. Mitchell, Alan S. Iouye, and Marjory S. Blumenthal, Editors, Committee on Information Technology and Creativity, National Research Council, *Beyond Productivity: Information, Technology, Innovation, and Creativity*, National Academies Press, April 2003
2. Peter H. Diamandis and Steven Kotler, *Bold: How to Go Big, Create Wealth and Impact the World*, Simon & Schuster, February 2015

In their framework, the first step is digitization. This idea starts with the fact that culture makes progress cumulative. Innovation occurs as humans share and exchange ideas: I build on your idea; you build on mine. Today, anything that can be digitized can spread at the speed of the Internet. What follows digitization is deception, a period during which exponential growth goes mostly unnoticed. This happens because the doubling of small numbers produces results so minuscule they are often mistaken for the plodder’s progress of linear growth. It is at this stage that exponential growth, initially deceptive, starts becoming visibly, perhaps conspicuously disruptive and, to some, threatening. As a result of the digitization and deception, disruption occurs.



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A disruptive technology is any innovation that creates a new market and disrupts an existing one. We live in an exponential era. Either disrupt yourself or be disrupted by someone else. Ultimately, this process leads to democratization. It is what happens when physical objects are turned into bits and then hosted on a digital platform in such high volume that their price approaches zero.

However you define innovation and creativity, the benefits to an organization’s business and to the dietary supplement consumer are immense. Fostering an environment of innovation and creative production requires evolution in organizational behavior, around process, information, and technology. This is attainable and radical change is not a requirement. Since DSHEA was passed, the VMS industry has built credibility through dietary supplements that are safe, effective, and responsible. As an information and technology provider to the industry, Healthnotes advocates for credibility and supports this aspiration through product design.



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### Safe, Effective, Responsible

How does the industry restore consumer confidence? Credibility is achieved through fastidious attention to quality coupled with science-based innovation. This path is a great responsibility as well as a significant opportunity. All the components to achieve it are available to us today. These include ingredient and formulation innovation, scientific research, rigorous adherence to quality control and cGMP, and compliant product delivery.

Healthnotes believes a safe, effective, and responsible foundation for the VMS market can be enhanced when based on advanced applied technology.

Safety, as defined by DSHEA, is a product that does not “present a significant or unreasonable risk of illness or injury.” Science and research must be the standard for formulating safe and effective dietary supplement products. To survive and thrive, the industry must rid itself of charlatans and hucksters, adulterated and misbranded ingredients and products, and inadequate formulations. It is not possible to guarantee to the consuming public safe product innovation without product scientists and regulatory experts having access to an easily searchable and up-to-date comprehensive database of peer-reviewed ingredient and formulation science research.

Dietary supplement innovation is a very broad topic. The simplest definition for responsible supplement innovation might be:

*Offering consumers safe and effective products that are transparent, clearly documented, with scientifically supported health claims. The key to innovation is clear and transparent access to the source of all ingredients, market and science data, combined with process consistency.*

## VMS Innovation Challenges and Roadblocks

### Ineffective Market Research

Ideation is not best done by “throwing spaghetti against the wall.” Yet, launching multiple new products without market insight to know what “sticks” is frequently employed. The result can be costly launches of badly targeted, poorly differentiated, and incorrectly priced products. Too many low or medium confidence ideas generate high overhead with low return. The resulting value is too low or the cost too high to build sustainable and defensible market share. The use of inadequate tools leads to inefficient market research, a common occurrence across the VMS industry. How does your organization conduct its innovation and market research? Do brainstorming sessions consist of team trips to the dietary supplement aisle for competitive product photo and purchase events?



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Do you find your marketing teams spending too many hours scouring the internet entering label information into spreadsheets to find positively trending products? You deserve a better process.

### Costly Formulation and Claims Oversight

The VMS industry depends on medical science. Supplement consumers desire innovation and they trust that marketed products are also safe and effective. The VMS industry’s success depends on highly efficient processes of science research. Inefficient or haphazard methods of scientific and ingredient data gathering can be an extremely wasteful use of your organization’s most critical resources—science research and development. Do you find that new product development lead-times are continually hampered by ingredient review and formulation delays? Does the process of ingredient research and review take way too many hours to complete? Is there excessive back-and-forth between the science teams and claims oversight committee regarding regulatory compliance? Does senior management have wild knee-jerk reactions every time a politician grand stands regarding safety issues in the dietary supplement industry?



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### Inconsistent Project and Process Management

Predictable, repeatable new product development and innovation is a process, not an event. Focusing heavily on ideation, brainstorming, and off-sites as the basis for innovation is ineffective and lacks process discipline. Although this approach produces a great amount of action and energy, there is often not much return. Is there a weekly scramble to pull together a program status report on active projects that is already out-of-date once printed? Does your organization struggle to achieve the expected market objectives and success rate for new products market launches? Is your innovation throughput (i.e., the number of new products released) inconsistent and unpredictable with regards to process, time-to-market, and resource investment? How well can you report on your innovation ROI, the contribution of the products in your portfolio, typically measured in terms of projected present value, efficient use of capital, revenue, EBITDA, and other KPIs?



**Does your organization struggle to achieve the expected market objectives and success rate for new products market launches?**

### Lacking Collaboration and Communication

The biggest collaboration roadblock for new product development is the lack of relevant information at critical times in the innovation process. This is often due to a lack of communication and knowledge sharing during ideation, ingredient research, science review, supply sourcing, formulation, and manufacturing. Challenges are created when marketers and researchers are unable to easily share market trends and unmet consumer demand with manufacturing teams. Do you find that your marketing, R&D, formulation, and manufacturing teams are working in isolation? Are your collaboration tools mainly shared document folders, email sorting, and weekly conference calls?

### Poor Quality Sources of Ingredients

Second to your human brain trust, a quality supply of competitively priced ingredients is critically important to your new product development success. Lack of supplier integration into your research and development process results in costly time-to-market delays, inconsistent formulation, and reduced product quality. Lacking visibility into suppliers' newly released ingredients, science, and formulations, places you behind the market in terms of trends and innovation. Do you treat ingredient suppliers as vendors, rather than partners? Do you allow procurement to work as your gatekeeper for supplier communicated science breakthroughs that might offer significant competitive advantage? As a supplier, are you completely confident that your products will sell if you just had the chance to be integrated earlier into the brand marketer's innovation cycle?



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### Rudimentary Manufacturing Integration

All companies in the VMS supply chain are streamlining their supply chains. The goals are to cut costs, become leaner, and expand capabilities. Many companies have outsourced processes outside of their core competency, including product development and manufacturing. Although there is an initial cost savings to outsourcing, if poorly implemented, there is a risk of long-term impact on oversight and quality. During hand-offs to manufacturing, procurement, and quality teams, whether they are internal, in a separate division, or contracted, the integration of data and process is often inefficient and ineffective.

Inadequate formulation version control, delays in critical specifications exchange, and lack of supplier data integration, create time-to-market delays and diminish the quality of the final product. Is there confusion between your formulation and manufacturing teams regarding the current version of the product recipe? Are delays commonplace and due to muddled communication hand-offs among formulation, procurement, and suppliers? Is the visibility of quality data lacking throughout the new product development teams and their processes?

### Resulting Impact

The impacts are wasteful, expensive, and time-consuming market research; hours of inefficient ingredient and scientific data gathering; poorly differentiated products; coordination hiccups and inadequate version control; intensifying regulatory oversight, approval delays and slow time-to-market resulting in rising costs and sluggish and slow innovation cycles.

## Process, Information, and Technology

As many other industries have learned, high-quality, process-oriented, reproducible, and cost-effective product development cannot be done without a sophisticated software and data management platform. An industry-specific solution to these challenges would provide integrated industry data and give companies significant product development and cost advantages. For innovation to happen, an organization's creative processes must be established and adhered to. The leading practice components of the VMS industry innovation include process, technology, and information. Therefore, to establish an environment of innovation, an organization must strive to align these three currently disparate and disconnected elements—process, technology, and information—to achieve the greatest benefit.

Aligning these elements empowers your teams both inside your organization and within your supply chain. In the age of social media, aligning process, technology, and information enables collaboration with customers and partners, creating a unified team for innovation success.



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## Process

Innovation and new product development time-to-market is strictly governed by process efficiency. Consumer dietary supplement buying trends change rapidly, as do the number of competitors and products in the marketplace. To achieve your organization's objectives involving new product safety, efficacy, quality, throughput, and return on investment, your product-development processes must be optimized and continuously improving. The more you optimize your product development process the more control and predictability you will have for new product time-to-market.



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Business process optimization is facilitated through process control and measurement. The first step to gain control is documenting a structured and repeatable process for each of the business teams involved in new product development. Once the process is identified, a work-breakdown structure is defined detailing measurable tasks and action owners. If the tasks are properly defined, they will be measurable and allow for efficient project management, status visibility, and control. Implementation of workflow automation tools will facilitate program management and oversight and provide senior management with dashboard visibility of process and program status, project-by-project.

Learning from lean manufacturing and software development best practices, once process tasks are defined and under control, the associated process times for those activities become predictable. Predictability of process timelines provides for consistent new product development schedules. Confidence in schedules and timelines facilitates visibility and control, allowing program management to ensure launch dates and key deliverables are met on-time and on-budget.

## Information

The dietary supplement industry is rich with data. Marketing and sales data is available from multiple sources organized by market segment, selling channel, merchandizing category, and UPC code. Raw material and ingredient science data is sourced from government entities, suppliers, academia, third-parties, and internally within larger VMS companies. Further scientific studies augment the ingredient science as research

breakthroughs identify new formulations and compounds. Regulatory agencies, social, and mass media offer a completely different universe of data that must be mined and processed to determine what requires compliance and strategic investment.

The collective dietary supplement data generated by the global scientific community, regulatory entities, and media is seemingly endless. Yet, what is critical about the enormous amount of available data is the recent appearance of high value information and meta-data made available through human- and algorithm-based data transformation processes. That transformed actionable data is what, in the 21st century, ignites human decision making and creates high-value consumer products and services. Properly structured information supported by intuitive tools for access, more rapidly identifies new business opportunities that improve products and promote new lines of business. For the VMS industry, these new lines of product offerings include both new innovative products and improvements to established portfolios. By optimizing the information acquisition processes, an organization achieves a limitless potential for economic gain from innovation, operations efficiency, increased profitability, brand growth, and consumer confidence and loyalty.



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Most importantly, the end consumer receives the greatest gains from the transformation of data into information. Effective market research identifies a consumer's value profile for a specific health need. Science research ensures safety and efficacy and allows for formulation and manufacturing to deliver the highest quality of products at the most cost-effective price.

### Technology

Unlike most other industries, the VMS category is a significant technology laggard. The most undervalued component of innovation in the dietary supplement industry is technology and its attendant software services. Although people and teamwork are required to optimize a new development process, technology provides the tools to automate, measure, status, and collaborate for sustained continuous improvement. Since big data is the largest by-product of science and technology, it is technology that is most able to mine and transform data into information. Properly designed technology tools



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effectively integrated into a new development process will simplify team collaboration and promote the exchange of ideas and information. Technology-based collaboration and shared knowledge is the foundation for action and efficiency. The goal of technology is more than just automating a current process. Well-designed and integrated software will transform and optimize the fundamental way critical work is done.

## Conclusion: It's About Time

The VMS market is evolving rapidly. Successful companies will effectively provide and support consumer confidence and need for product transparency while maintaining product innovation. Best in class companies are optimizing innovation and new product development through significant investment in process, information, and technology. The benefit for these companies is a predictable and accelerated time-to-market, increased innovation throughput, and reduced costs through process consistency. Ultimately, these companies will also benefit from exhibiting their quality processes and information to retailers and consumers. Companies who are either ignoring or slowly maturing their processes around information access and technology are challenged with wasteful, expensive, and time-consuming market research; hours of inefficient ingredient and scientific data gathering; poorly differentiated products; coordination hiccups and inadequate version control; intensifying regulatory oversight; approval delays and slow time-to-market resulting in rising costs and sluggish and slow innovation cycles.

Today, the Healthnotes data platform includes comprehensive scientific, clinical, regulatory, product, ingredient, supplier, manufacturer, brand and process data. It delivers responsive experiences across mobile, kiosk and desktop through unique Healthnotes software services. The combination of information and software tools promote effective, safe and responsible decisions for Healthnotes customers.

It's about time to leverage the benefits of efficient innovation. Time to greatly improve brand recognition. Time to increase market share, revenue, margins, and profitably. Time to harness the strategic value achieved through human creativity and productivity. Time to take your company's delivery of innovative, safe, effective, and responsible dietary supplements into the future.



***Vitature™** from Healthnotes is the first software solution that leverages leading practices to help companies create more innovative and profitable products by providing tools for safe, effective, and responsible product development.*