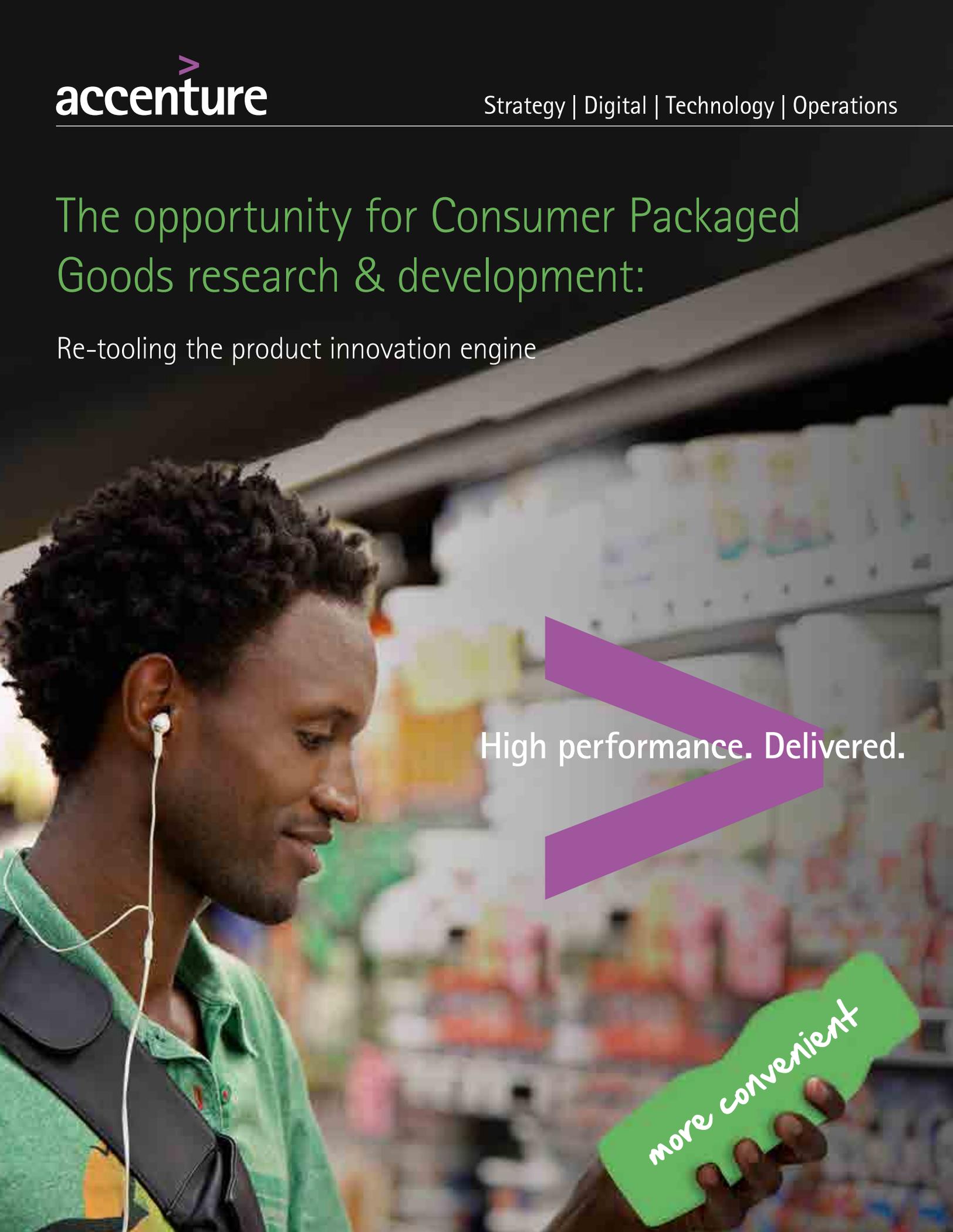


The opportunity for Consumer Packaged Goods research & development:

Re-tooling the product innovation engine



High performance. Delivered.

more convenient

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greener

Innovation under pressure: Globalization, regulation, product proliferation

Supercharging innovation is rightly considered mission-critical for all manner of businesses. For consumer packaged goods (CPG) companies, however, a unique set of circumstances is making this ever more challenging. Lifecycles have become increasingly compressed as new products become obsolete ever faster. Behind this is the phenomenon of digitally savvy and sophisticated consumers demanding greener, more functional, more cost-effective, and more personalized products.

One of the root causes of the challenge is CPG companies' inexorable expansion into new geographic markets. Succeeding in these areas has required companies to start developing or revising products for local consumer preferences and price points. According to a new study from Accenture, consumers in key emerging markets actually perceive more product innovation on the shelves than those in developed markets such as Western Europe¹. About seven in ten (71 percent) consumer survey respondents polled in Brazil, for example, perceived that home and personal care manufacturers are always or often developing radically "new" products, as opposed to product extensions. By contrast, only 33 percent of Swedish consumer survey respondents felt the same. This is despite the fact that most innovation today is directed toward developed markets.

As they expand globally, CPG companies face another hurdle: increasing amounts of regulation and consumer protection. As just one example, new European Union rules governing the labelling of food products will come into force in December 2014, specifying detailed requirements for information on allergens, nutrition and other product attributes – as well as for text size.

In many countries around the world, consumer demand for environmentally sustainable products is matched by regulators' efforts to mandate more sustainable product standards².

Thanks to all this complexity, product portfolios are continuing to expand. In recent years, companies across industry segments have reported accelerated growth in their numbers of stock-keeping units (SKUs)³. In turn, having larger product portfolios means more renovation and maintenance activity for their research and development (R&D) teams, driving up costs and time to market. This leads to reduced capacity for genuine new product development, while the insufficient phase-out of products can further reduce already tight margins.

Product and process innovations that reduce unit costs and increase operating efficiency are critical. For most companies today, the R&D function remains the primary engine for these types of innovation, but there are worrying signs that, in many companies, the engine is sputtering.

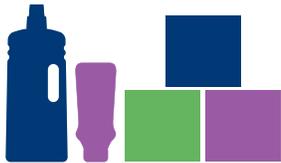
1. Accenture, "CPG Innovation Consumer Pulse Survey", 2014

2. One recent example is California's "Green Chemistry" regulations. See "Landmark Green Chemistry Regulations Take Effect in California," Environmental Leader, October 8, 2013.

3. For a recent example from the beverage industry, see "Warehouses Turning to Automation for Storage Needs," Beverage Industry, February 14, 2014. For a broader discussion of the impact of SKU growth, see "SKU Proliferation: Is There a Cure for the Disease?," SupplyChainBrain, October 28, 2013.

Figure 1: Industry forces impacting CPG R&D

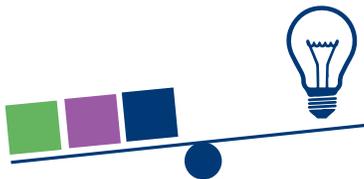
R&D Challenges



Portfolio & Product Complexity
As CPG companies expand globally and as consumers increasingly seek customized product experiences, product and portfolio complexity increase exponentially.



Increasing Regulatory Pressure and Scrutiny
R&D needs to abide by increasing regulations created by different regulatory bodies in each country and region.



Renovation over Innovation
In recent years, new product development increasingly characterized by line extensions and renovations and few breakthrough innovations.



Suboptimal Resource Efficiency
R&D resources typically spend - 50% on non-value added activity (e.g. admin work, re-keying of data search, redundant activities, etc).



Sustainable Design and Manufacturing
R&D is constantly challenged to develop more sustainable products (lower carbon footprint, weight, waste) at lower cost.



Aging R&D Workforce
R&D of several leading CPG companies that possess the "secret sauce" of innovation are retiring within the next 7-10 years.

Renovation over innovation?

Innovations that introduce game-changing new products to consumer markets, such as Unilever's compressed deodorant cans or Danone's new "KISS" pot (Keep It Simple and Safe) yoghurt packaging, are naturally important in keeping companies ahead of the competition.

For this reason, CPG companies typically allocate between 1 and 3 percent of their annual revenue to R&D. However, anecdotal evidence suggests that upwards of 60 to 80 percent of R&D spend actually goes toward renovation and maintenance of existing product lines, rather than the development of genuinely new products. We believe this is a problem, and it appears that consumers are also taking notice. In our consumer pulse survey, for example, just 43 percent of developed market respondents felt that food and beverage companies frequently develop radically new products to address their needs, as opposed to simply extending product lines. The proportion was even lower for fashion and luxury brands (35 percent) and alcoholic beverages (27 percent). Clearly, for many in the industry, there is more work to be done in managing a product pipeline that drives incremental growth instead of just sustaining market share.

Operational inefficiency

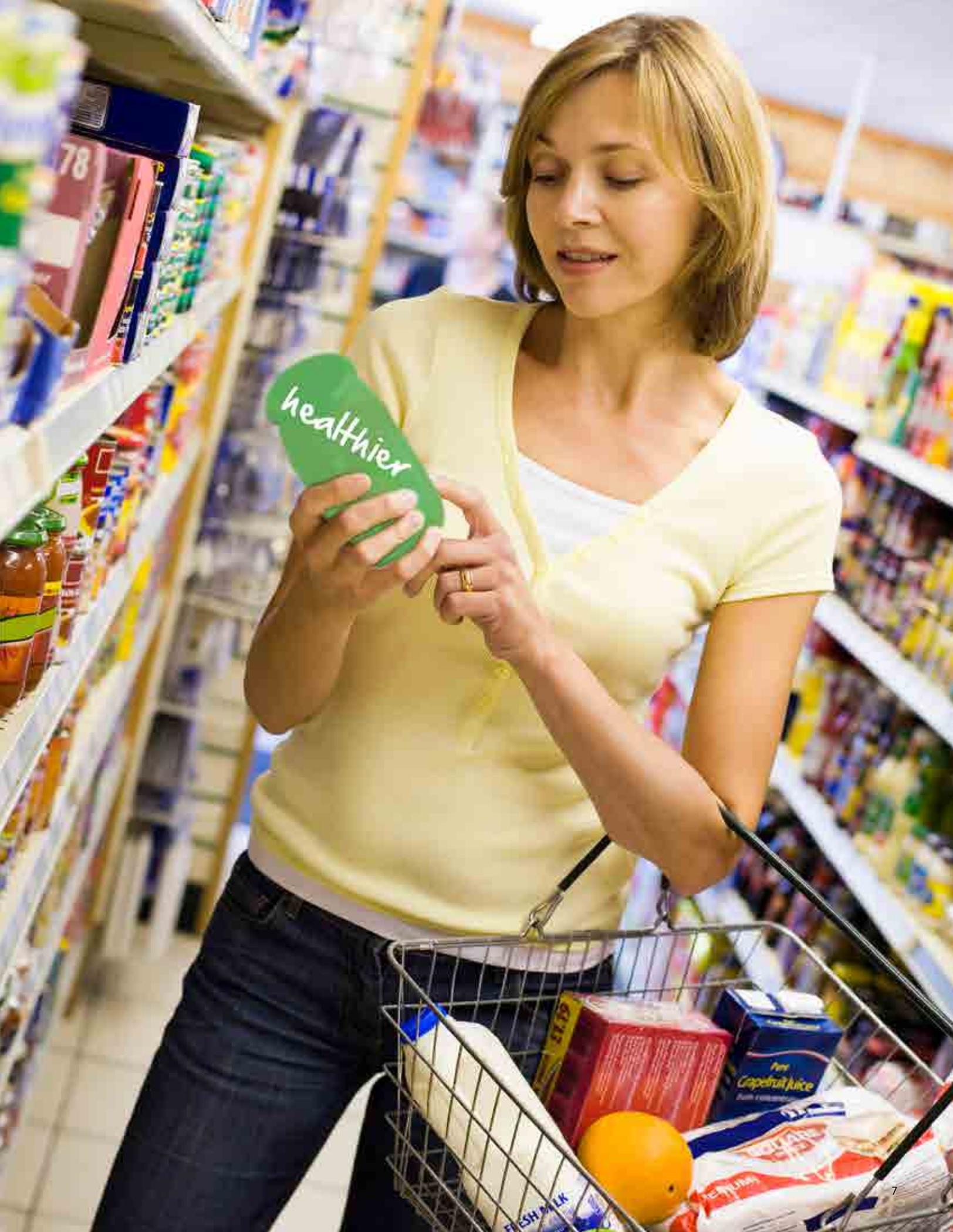
Accenture's work suggests that development and commercialization staff in a CPG R&D function can spend upwards of 50 percent of their time on low or non-value add activities. Unnecessary iterations in development, redundant testing and administrative tasks, such as re-keying data, form the non-working R&D expense. This is not surprising since these functions often have poorly-defined business processes, are lacking measurement and do not have an environment that fosters continuous improvement. At the heart of the issue is culture. How do we create a culture in R&D that balances creativity with sufficient discipline?

Data and information is not highly valued

Putting data to work more effectively would contribute to better, faster and more cost-effective product design. Despite this, little more than one-third of CPG respondents to a 2013 survey on volatility and agility said they were investing in analytical capabilities and tools to a great extent, a considerably lower share than respondents from most other industries⁴. For many in the industry, information has not been effectively managed for decades. This has contributed to a situation in which vital knowledge resides with individuals who will eventually retire and take that knowledge with them.

At the same time, poor quality data and information is a common pain point, which inhibits greater design re-use and product modularization that could lift margins. In our experience, few companies are able to assess information quality, and the degree to which it meets standards, quickly enough. Companies need to hire and train a new breed of data specialists, but this is proving difficult for firms across industries. In addition, few CPG companies have undertaken the structural and process change that would make their operations truly data-driven. As a result, poor quality information continues to impede R&D efficiency and obstructs efforts to improve margins.

4. Accenture, "Volatility & Agility Research Study: Summary of Industry Findings", October/November 2013.



healthier

Making it fit for purpose

Transformation should create an R&D function that is highly consumer- and category-centric and incorporates new talent profiles for an increasingly digital world. Furthermore, we believe that R&D operations will need to evolve in a manner that is similar to other business functions where greater attention is paid to both core and non-core activities. Doing so will not only build a more efficient and cost-effective R&D operation, but it will also free up scarce funds and capacity that can be reinvested in game-changing product and digital innovations.

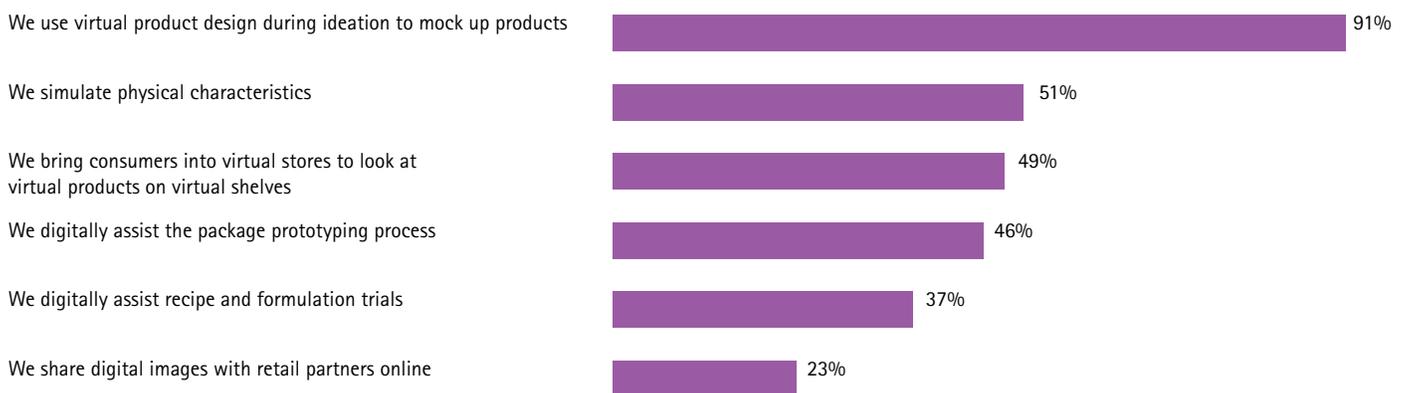
The digital innovations may take the form of smart packaging, improved devices, smart in-home technologies, virtual stores in public places and enhanced personalization. Succeeding in this new digital model requires significantly new capabilities that should be either brought within the organization or achieved through partnerships.

Although digital innovation presents many opportunities, much work remains to be done on embedding digital technologies into the innovation process. Recent research conducted by Forrester Consulting, Inc., commissioned by Accenture, revealed that the adoption of digital R&D capabilities varies widely, depending on the innovation process in question (see chart)⁵. There is, however, clear recognition of the importance of digital technologies.

The same research highlighted that 89 percent of marketing leaders surveyed felt that direct-to consumer digital engagement – enabling brands to directly facilitate purchasing and introduce or retire product lines more quickly – would increase the rate of innovation. Furthermore, three-quarters (74 percent) expected to use digital store simulations to test the impact of new products on consumers, while more than two-thirds (69 percent) expected to accelerate new packaging development with digital technologies, reducing innovation risk and increasing the likelihood of a successful introduction.

Figure 2: Limited digitization of current new product introduction processes

How much of the ideation-to-launch process is digitized today?



Base: 35 marketing decision-makers at global CPG organizations

Source: A commissioned study conducted by Forrester Consulting on behalf of Accenture, May 2014

Source: CPG Marketers Plan to Seize the Digital Disruption Opportunity, A Commissioned Study from Forrester Consulting, Inc. on behalf of Accenture, May 2014

5. A Commissioned Study conducted by Forrester Consulting on behalf of Accenture, "CPG Marketers Plan to Seize the Digital Disruption Opportunity", May 2014

R&D transformation is likely to involve four related sets of imperatives:

1. Moving to a global/multi-local operating model

CPG companies can use virtual global R&D networks thanks to the wealth of digital collaboration technologies. This will help balance global best practices with tailored approaches that support specific market and product strategies.

Like other parts of the business, R&D can benefit from global project management to help ensure process consistency and efficiency across locations while reducing costs. Similarly, central data analytics teams ("centers of excellence") can serve R&D operations at regional or local levels. The distributed teams can continue to monitor changes in preferences and adapt products accordingly, while enriching the global knowledge base with these insights and experiences.

2. Digital product lifecycle management (PLM)

Digital technologies will exercise a major role across the product lifecycle, from capturing market/consumer insights to developing formulations and packaging to commercializing new products. Leveraging these and other digital tools will enable PLM teams in CPG companies to become:

- More rapid, through faster concept development and design-prototype-test iterations
- More scalable, thanks to improved global product development efficiency which manages complexity
- More intelligent, with analytics-generating insights to improve product development based on consumer feedback, and enable design that meets cost, manufacturing and sustainability requirements
- More connected, thanks to greater visibility across the product lifecycle and value chain.

Coupled with improved information, these tools will help CPG companies not only define their effective portfolios for growth, but also design products right the first time, helping them achieve far greater levels of effectiveness and efficiency for every dollar spent.

Examples of how digital PLM can work in practice are manifold. A company may, for instance, leverage analytics to assess the value of a new product offering against multiple variables and risk scenarios. Another company might combine simulation techniques with mechatronics

and software in the engineering process to accelerate development cycles. Some may adopt 3D printing to reduce development and production prototype time and even boost spare parts provisioning. These and other examples are just the tip of the digital iceberg that CPG companies can dig into to transform the heart of the innovation engine.

3. Operational excellence

R&D operations can achieve greater speed, quality and efficiency through continuous and relentless process improvement. By applying "Lean" and "Six Sigma" principles to the organization as a whole, companies can identify the R&D activities that – when interlinked with those of other functions – create connected value streams that directly support realization of the organization's strategic outcomes.

For CPG companies, whose R&D operations are burdened by the complexity of over-large product portfolios, portfolio optimization is an important dimension of continuous improvement. In the same way that "Lean" programs identify the greatest value-generating activities in the organization, portfolio optimization will help R&D teams in CPG companies to focus their innovation efforts on those products that deliver the greatest value for the company. This is vital: independent research shows that 75 percent of new CPG products launched in 2012 failed to capture \$10 million or more in year-one sales⁶. Furthermore, we believe there is still considerable opportunity in standardizing the building blocks of the product (e.g. raw materials, ingredients, and packaging) to reduce direct material costs.

6. IRI, "New Product Pacesetters. Pacesetters 100: The Fuel to Accelerate Growth", 2012

4. Shared services for R&D

Companies will drive greater specialization of tasks through the use of shared services and outsourcing, which should serve to help reduce costs as well as improve cost structure flexibility. However, many companies simply push to blindly reduce headcount, while not doing so in a strategic manner. As such, they often end up cutting the key skills needed to deliver innovation. This can create other adverse impacts, related to product safety and quality for example, which would expose the company to liability issues.

Instead, the R&D function can be restructured in smarter ways that help to contain costs while removing less vital tasks from key scientists and specialists. For example, the product support and administrative tasks that weigh down R&D experts can often be performed by shared services facilities employing the types of people best suited to the tasks. This provides the dual benefit of reducing the cost of performing those tasks and affording the R&D specialists the time to focus on genuine innovation. To get there, however, companies need to explore a smarter, more strategic approach.

Figure 3: Emerging imperatives for R&D transformation

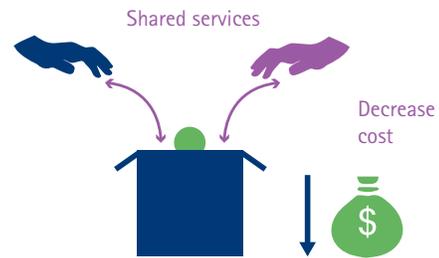
Structural Changes

Global-Local Operating Models



Evolve to a Global-multi-local Operating Model where virtual global R&D networks are leveraged to support specific market and product strategies.

Disaggregation of R&D



Companies will drive greater specialization of task with shared services/ outsourcing to decrease cost, as well as improve cost structure flexibility (variable from operational cost).

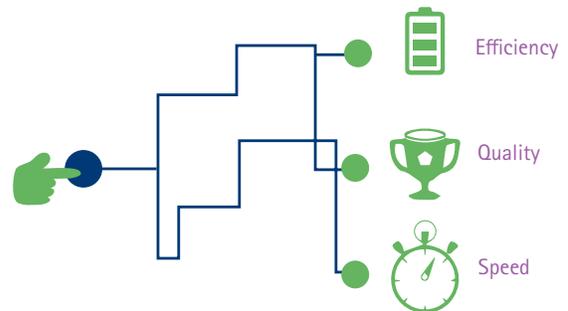
Capability Changes

Digital R&D



Emergency of next generation R&D technologies improves company's ability to meet consumer and customer needs with speed, quality, and efficiency.

Operational Excellence



As R&D expands its role in the value chain it increases focus on operational excellence as with other functions characterized by improving Speed, Quality, and Efficiency.

Conclusion

The opportunities facing CPG companies' research and development initiatives are manifold. And the four imperatives for R&D transformation should enable these companies to ensure their operations are fit to meet the enormous complexity of a global portfolio and shifting consumer needs and expectations, all while managing margins.

In most companies, traditional support functions have come under great pressure in recent years to become more aligned with the business strategy; in some cases they are even being asked to drive revenue growth. R&D will not remain immune in the drive for greater value. In addition to increasing innovation, it will need to continue to evolve to ensure that ROI is maximized on every dollar spent. The competitiveness of CPG companies depends on it.

Consumer Goods Industry

Our Consumer Goods industry professionals around the world work with companies in the food, beverages, agribusiness, home and personal care, consumer health, fashion and luxury, and tobacco segments. With decades of experience working with the world's most successful companies, we help clients manage scale and complexity, transform global operating models to effectively serve emerging and mature markets, and drive growth through evolving market conditions. We provide end-to-end business services as well as individual consulting, technology and outsourcing projects in the commercial and supply chain areas, enterprise solutions and integrated business services. To read our proprietary industry research and insights, visit www.accenture.com/ConsumerGoods

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For more information contact:

Brian Doyle
Managing Director,
Consumer Goods & Services,
Innovation & Product Development
+1 (917) 452-4394
brian.c.doyle@accenture.com

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