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Capturing Value from the Smart Packaging Revolution

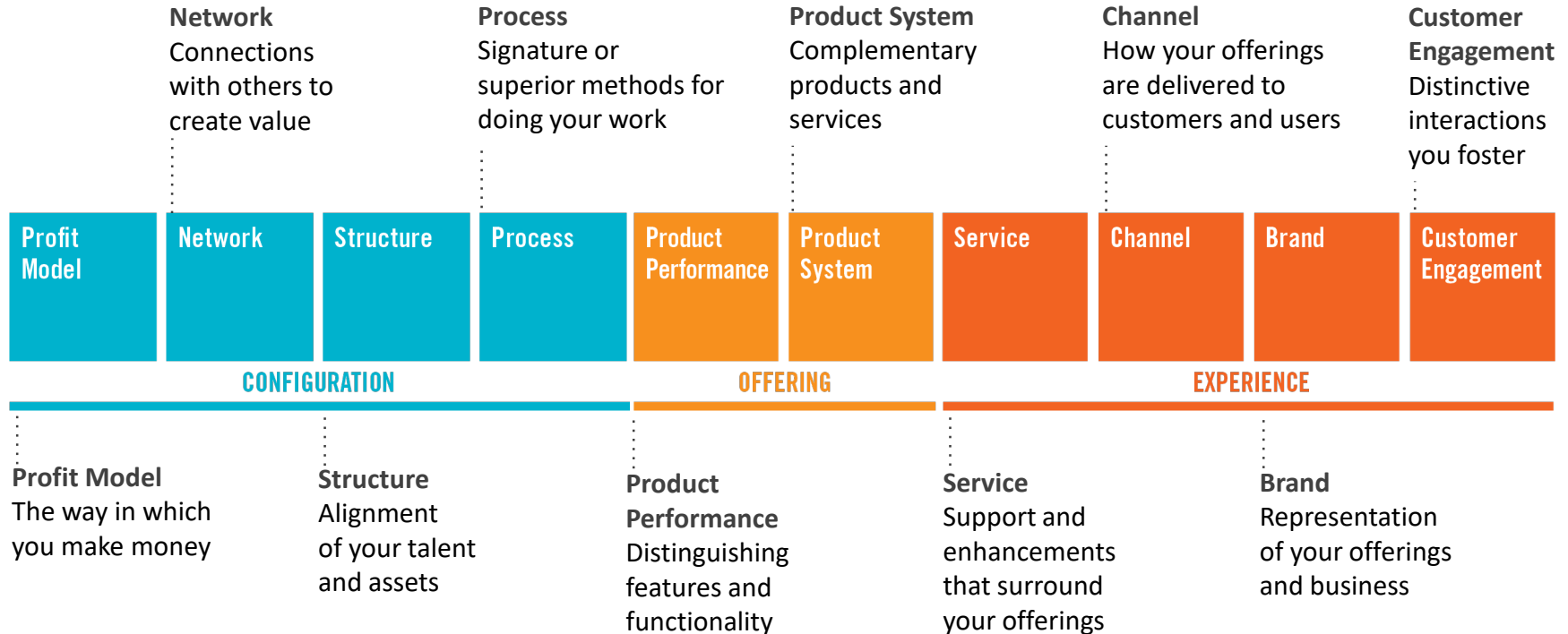
OCTOBER 22ND 2019



**Innovation is different
than you think...**

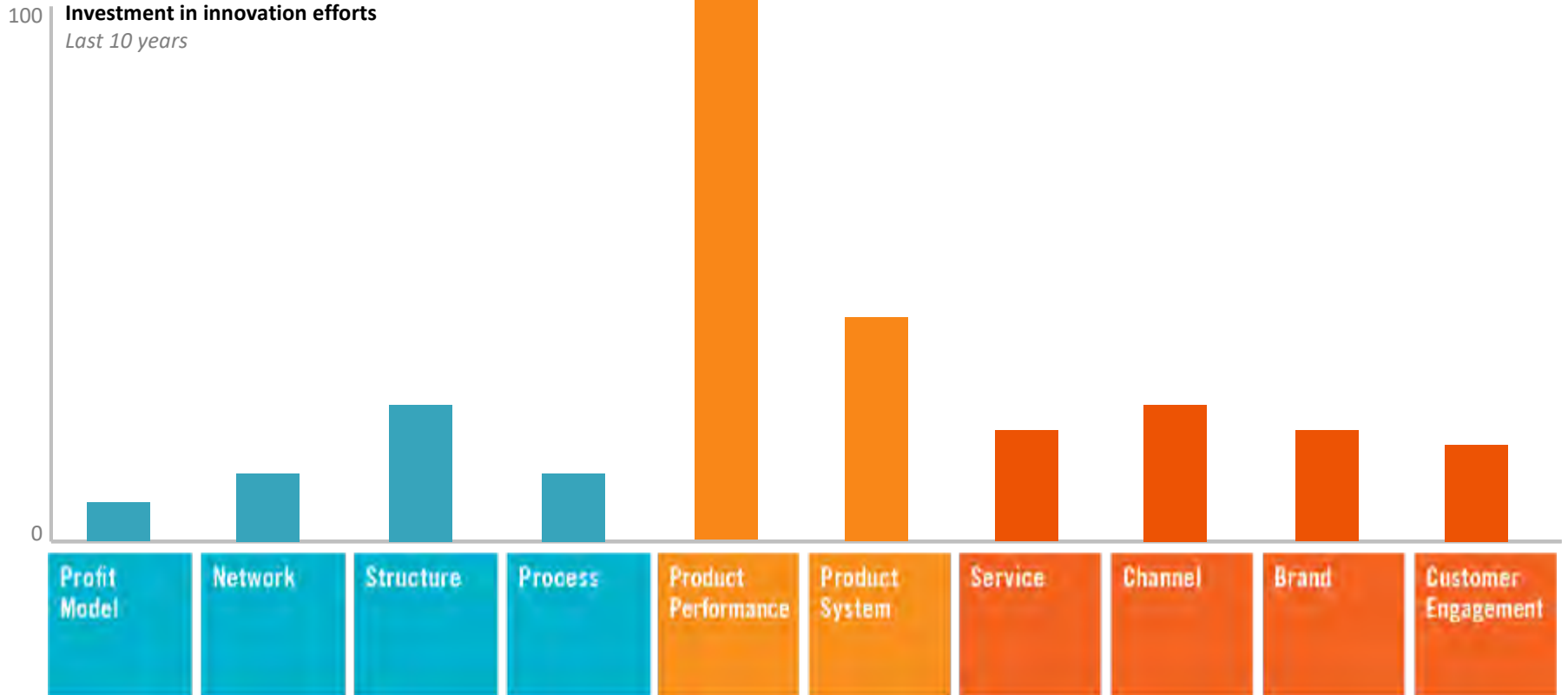


Successful innovators integrate 5 or more Types in their new breakthrough businesses



TEN TYPES OF INNOVATION

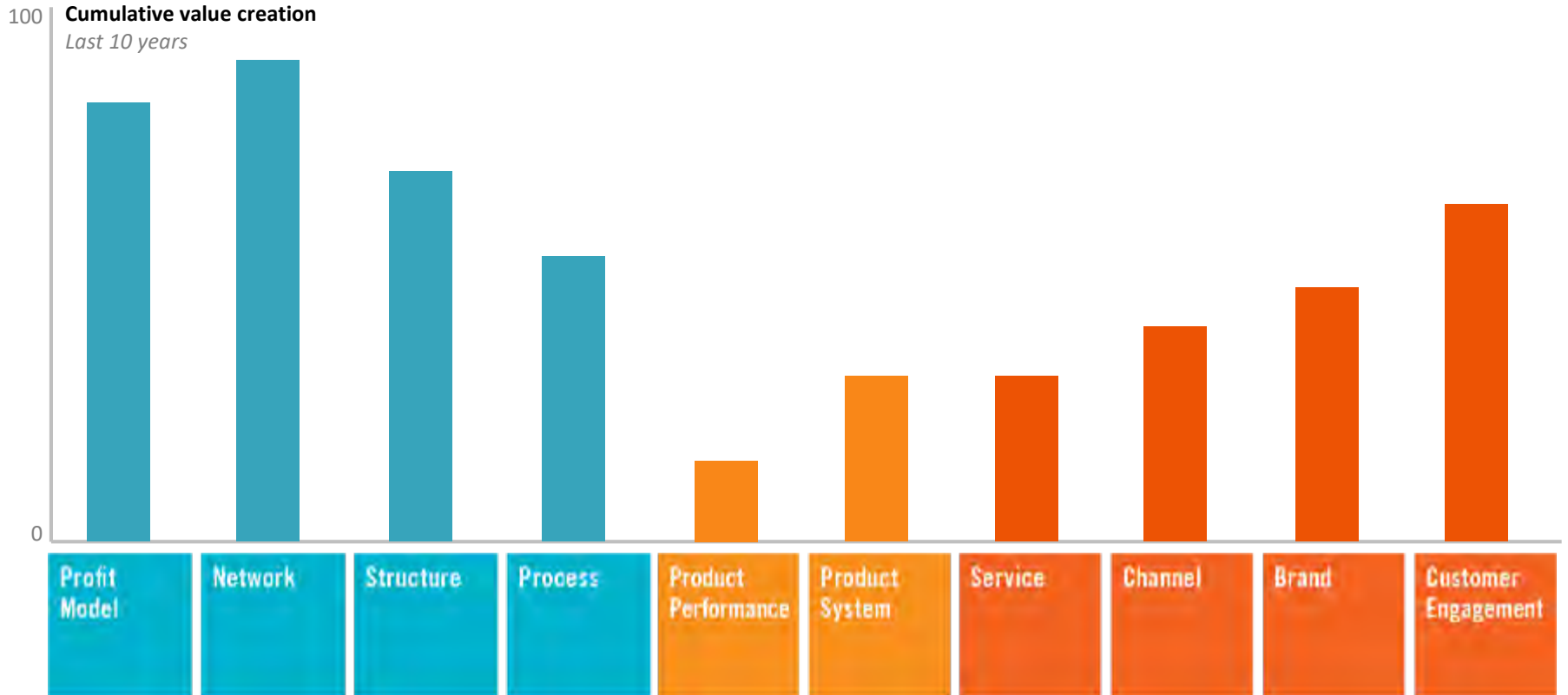
While companies tend to over - index on products...



SOURCE: Doblin research based on analysis of 2,000+ innovations

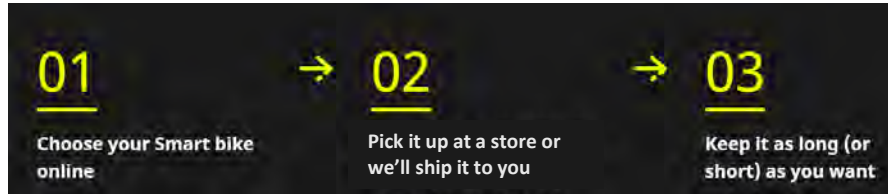
TEN TYPES OF INNOVATION

...most value is realized outside of product innovation

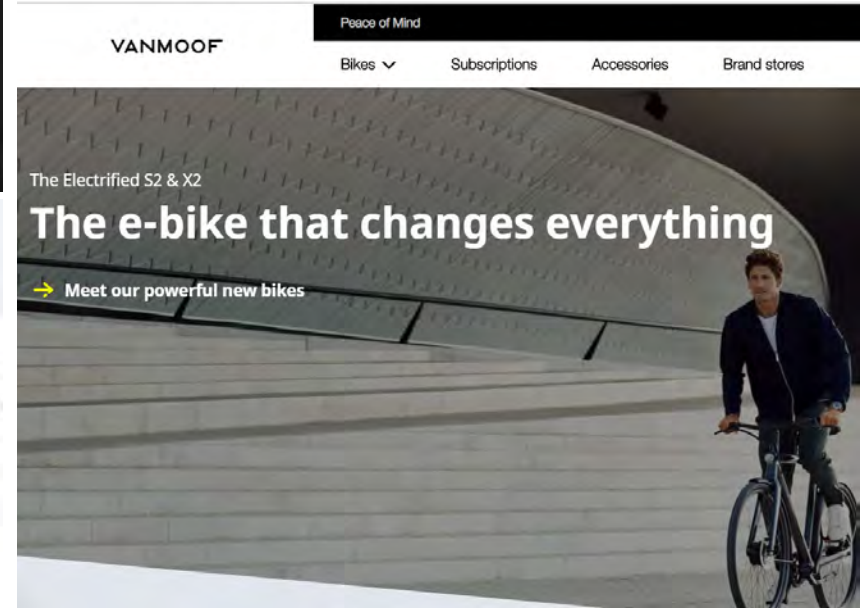


SOURCE: Doblin research based on analysis of 2,000+ innovations

A smart, electric bike on a subscription model



8 TYPES





E-bikes **delivery damages** have **reduced by 70 to 80 per cent** since *VanMoof* started masking them as flat-screen televisions

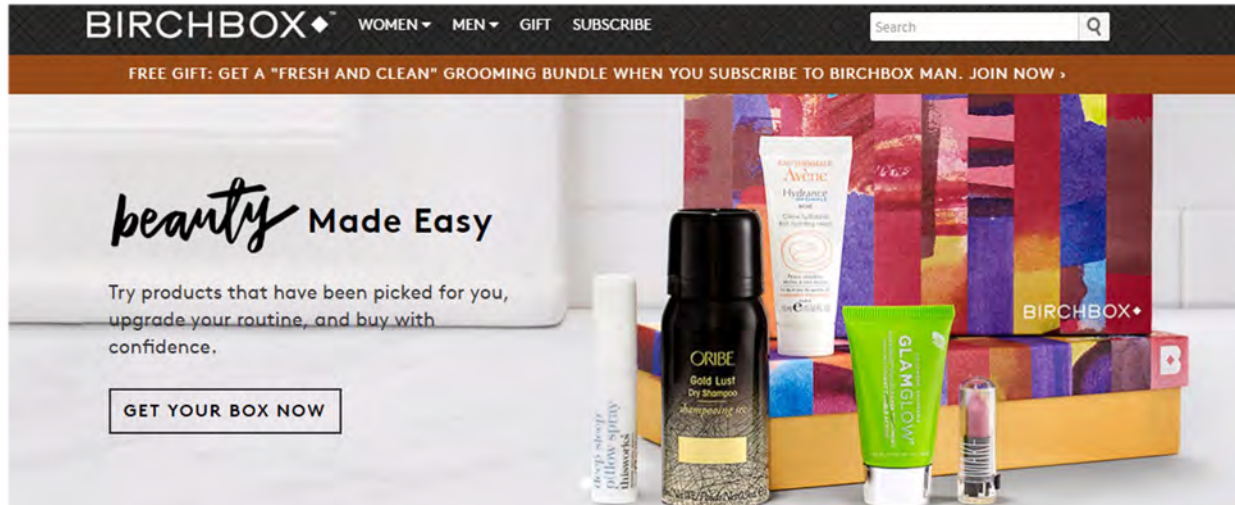
Converting dead time into active buying behavior while flipping an industry orthodoxy: a grocery store without stores!



4 TYPES:



Turning a boring brown box into an object of desire



5 TYPES:

subscription beauty products in colorful cardboard



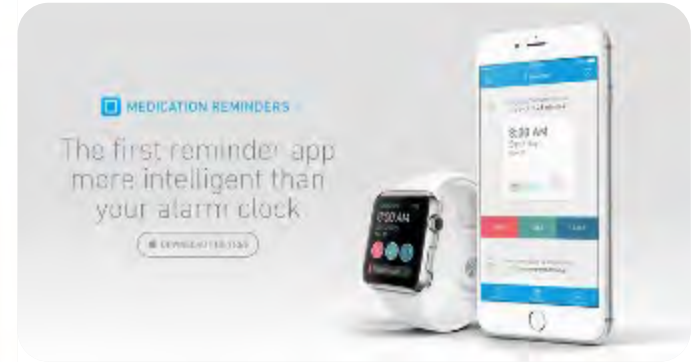
Driving medication adherence by making super easy for the user, while upending the traditional pharmacy model



6 TYPES:



 PillPack



PILLPACK VALUATION

June 27, 2018: Amazon Buys PillPack for 1B€

AMZN ↑ 2.1% +14B€

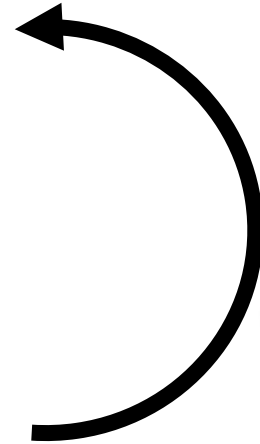
WBA ↓ 10% -5B€

CVS ↓ 7% -4B€

RAD ↓ 11% -3B€

CAH ↓ 3.4% -1B€

ABC ↓ 13% -1B€



14B€

1B€



Better building blocks: *Innovation tactics*

Profit Model	Network	Structure	Process	Product Performance	Product System	Service	Channel	Brand	Customer Engagement
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Premium	Merger/Acquisition	Organizational	Process	Superior Product	Complements	Try Before You Buy	Diversification	Co-Branding	Process Automation
Cost Leadership	Consolidation	Design	Standardization	Ease of Use	Extensions/Plug-ins	Guarantee	Flagship Store	Brand Leverage	Experience
Scaled Transactions	Open Innovation	Incentive Systems	Localization	Engaging	Product Bundling	Loyalty Programs	Go Direct	Private Label	Simplification
Microtransactions	Secondary Markets	IT Integration	Process Efficiency	Functionality	Modular Systems	Added Value	Non-Traditional	Brand Extension	Curation
Forced Scarcity	Supply Chain	Competency Center	Flexible	Safety	Product/Service	Concierge	Channels	Component	Experience Enabling



Role of leaders in driving innovation

- 1. Research your customers and end users, deeply, and with empathy**

- 2. Challenge orthodoxies and learn from out-of-industry innovators**

- 3. Innovate across multiple types**

- 4. Identify ecosystem partners to move faster in the space**

- 5. Inspire new way of thinking, help set the right ambition**



Smart Packaging Primer



**With increasing ecommerce
and a global growing middle
class, packaging has recently
been **under scrutiny**...**

**...can we (re-)brand smart packaging as a
solution to some increasingly big problems?**

Flipping the packaging orthodoxies

From



To

- Package is cost, and it just contains the product; the more we minimize it the better
 - Consumers are not asking for smart packaging; they won't use it and won't pay for it
 - Smart packaging is just technology
- Package is value, and it does more than containment – i.e.
 - ✓ senses the environment,
 - ✓ provides valuable usage or spoilage data,
 - ✓ fosters distinctive interactions
 - ✓ ...
 - Smart packaging as a solution to big newsworthy problems

Counterfeit products...

408B€

*Counterfeit and pirated
global trade*

127B€

*Projected global anti-
counterfeit packaging
market (2020)*





130B€

*Annual value of
food wasted farm
to fork (US)*

7-10%

*Perishable product
loss by retailer*

Food waste...

Temperature Assurance...

13B€

Annual pharmaceutical losses due to temperature breaches

20-40%

Margin projection for a temperature assurance smart packaging solution



Walmart

18%

Population growth rate of younger consumers in and around cities, compared to -4% from 2000-2009



Millennials diversified

A diverse, splintered, and heterogeneous consumer base with a much broader and varied set of demands and needs



Changing consumer preferences...

Three focus areas and nine specific applications, to create value

INVENTORY & LIFECYCLE MANAGEMENT

Tracking product location in production and distribution cycles, *optimizing supply chain processes*, while *reducing environmental footprint* via sustainable material disposal or reuse

TRACEABILITY

AGILITY

SUSTAINABILITY

PRODUCT INTEGRITY

Ensuring product origin and authenticity, while *defending against theft or misappropriation*, and *monitoring the environment to identify and prevent spoilage*

AUTHENTICITY

SECURITY

QUALITY & SAFETY

USER EXPERIENCE

Delivering different kinds of consumer interactions, providing relevant *information on product usage and characteristics*, while assisting with *ordering, replenishing and returns*

INTERACTION & SATISFACTION

USAGE

ACCESS

Digitalizing business via packaging to bring agility throughout the supply chain



Stora Enso's Smart VMI is an RFID-enabled system that **identifies and reports inbound-outbound movements of stock and automates the re-ordering, invoicing, and stock-taking processes**. Smart VMI can be built as a shelf, cabinet, or room



Impact

Connected packaging with IoT applications that allows packagers to respond with agility and enable predictive planning for the future

Using smart packaging for dynamic pricing and inventory management for the retailer

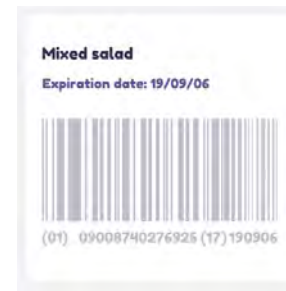


Impact

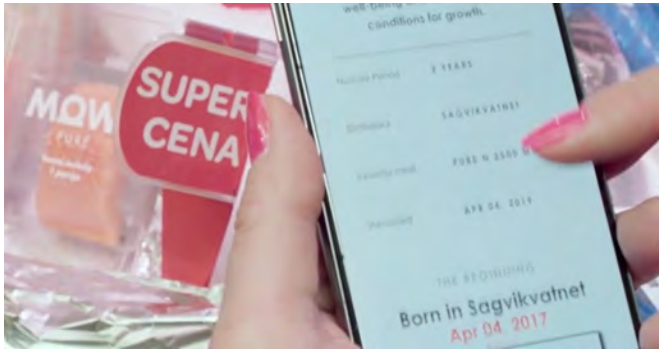
A 33% decrease in waste, 6.3% increase in sales, and 40% decrease in out-of-stock items

A dynamic pricing solution for supermarkets based on product expiration date. It includes real-time monitoring for retailers to offer customers dynamic prices based on expiration dates

The technology is flexible and scalable, based on a software platform able to be integrated with the cash point and to activate the algorithm, that is based on the reading of the GS1 Databarlabels



Bringing transparency, traceability and authenticity to consumers



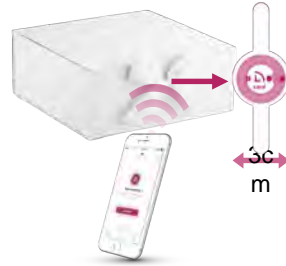
Mowi launches **first end-to-end food traceability platform for seafood industry**, powered by EVRYTHNG

This solution allows the brand to bring 100% transparency to its consumers, powering food traceability and provenance for its product lines. Now, consumers can trace the full lifecycle of the salmon they're about to purchase. With this transparency, Mowi is projected to increase sales through brand loyalty.

Impact

Elevating the brand by highlighting superior quality and providing transparency. And capture valuable insights from widespread consumer engagement

Enhancing product authenticity protection to reduce tampering and counterfeiting



ThinFilm aims at preventing fraud through its smart label, which extends over the bottle opening, and, **when broken, stores the information** – consumers can scan and access this data to easily detect tampering

Impact

Ensures the customer knows the product is exactly what was promised, from where and from whom it was promised

Access apps and microservice custom designed on top of your packaging

Seal offers digitally sealed packages mounted with tamper-proof chips. Anyone can **tap the seal with a phone and verify the authenticity**, handovers being registered on the blockchain. Micro services built on top of the seal also enhance user experience.

Securikett provides multiple solutions against counterfeiting. Tamper proof etiquettes, seals and tapes **allow the customer to make sure no one has opened their package.**

Analyzing and improving quality of food to reduce waste



Insignia provides food with labels that change color as time goes by or as the levels of CO2 change. This allows a **better visibility on products that should be consumed first.**

It's Fresh create discrete thin strips that captures ethylene gas from inside packaging. Without (or with less) Ethylene gas, **fruit decay is slowed down immensely** allowing longer lasting fresh products.



Impact

Provide a quick estimate on life time of food and allow prioritization for consumption

Increasing lifetime of fruits and vegetables, avoiding throwing them away too soon

Using smart packaging to create a novel, engaging and exciting fan experience



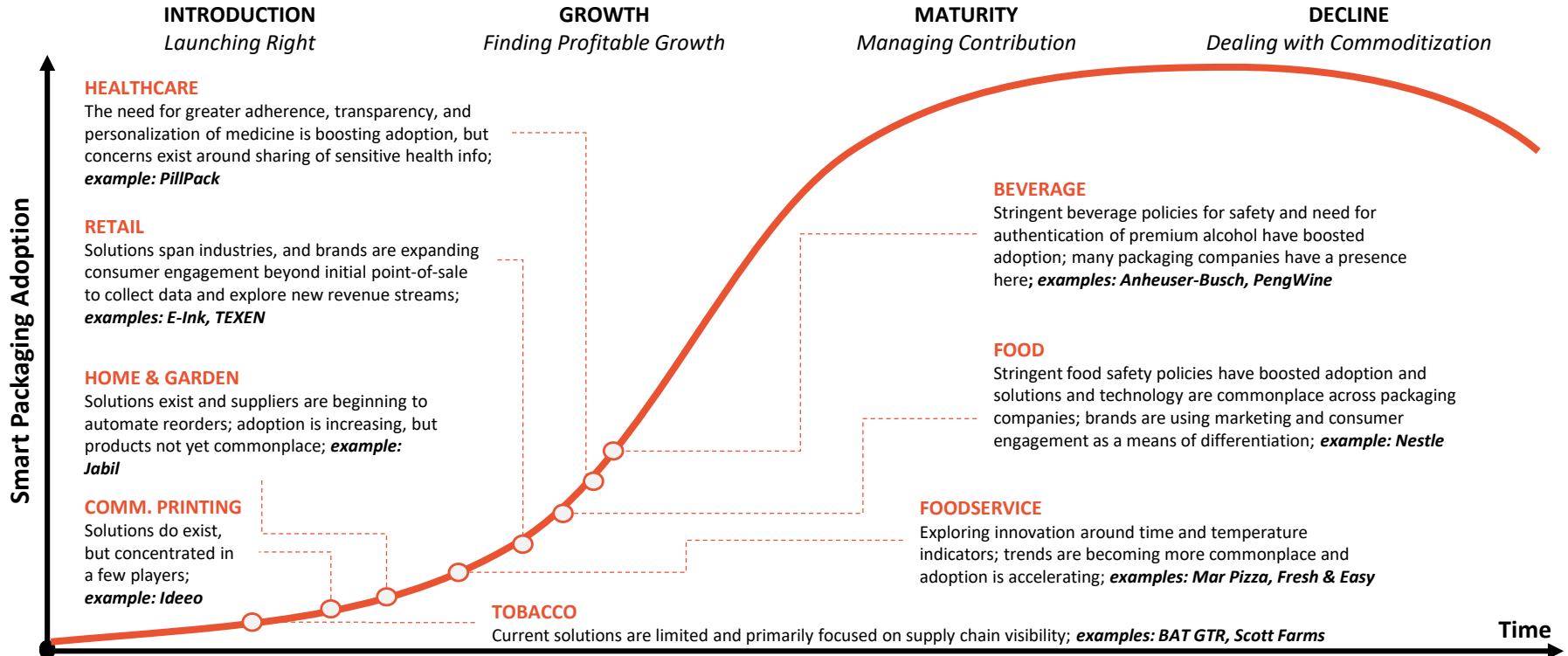
Impact

Applauded as the “**biggest marketing campaign in Budweiser history**”

Budweiser distributed collectible branded cups at the 2018 FIFA World Cup and invited fans to “Light Up the World Cup”

LED lights coupled with smart technology **lit up the cups**, and the stadium in turn, **in response to crowd noise levels**

A market still in it's infancy... but with a potential for exponential growth

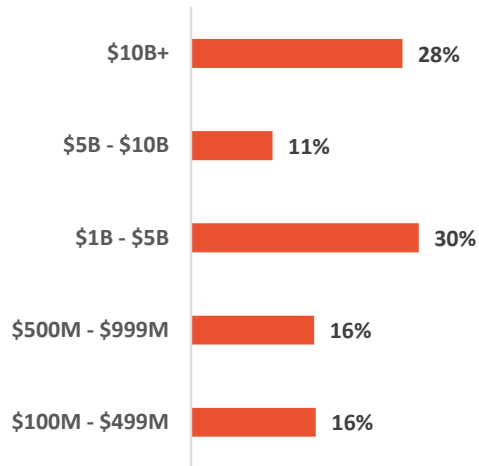




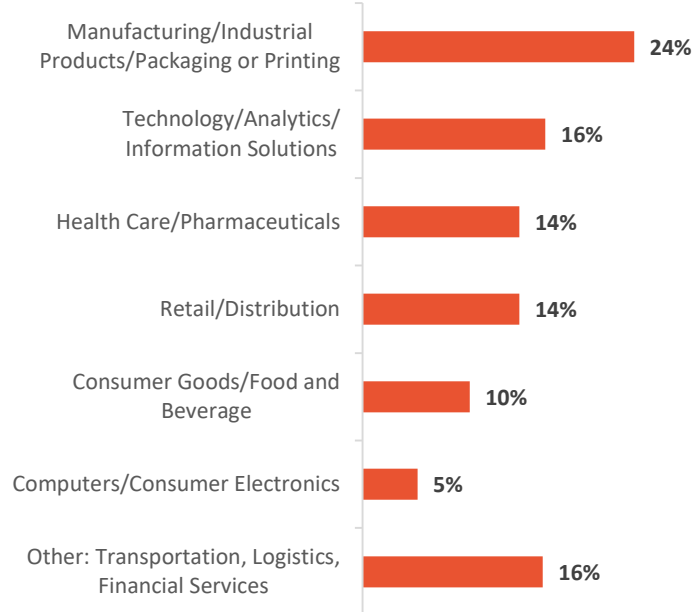
Smart Packaging Executive Survey

We launched a survey to 400+ major executives to clearly understand where in the market there were opportunities to create and capture value with Smart Packaging

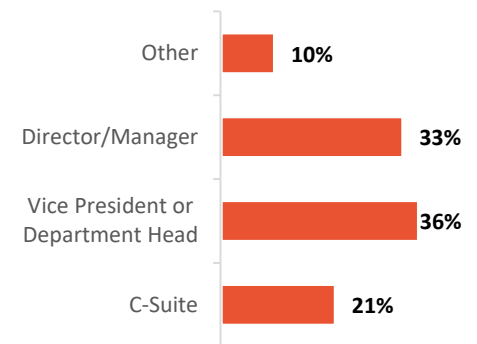
COMPANY SIZE



INDUSTRY



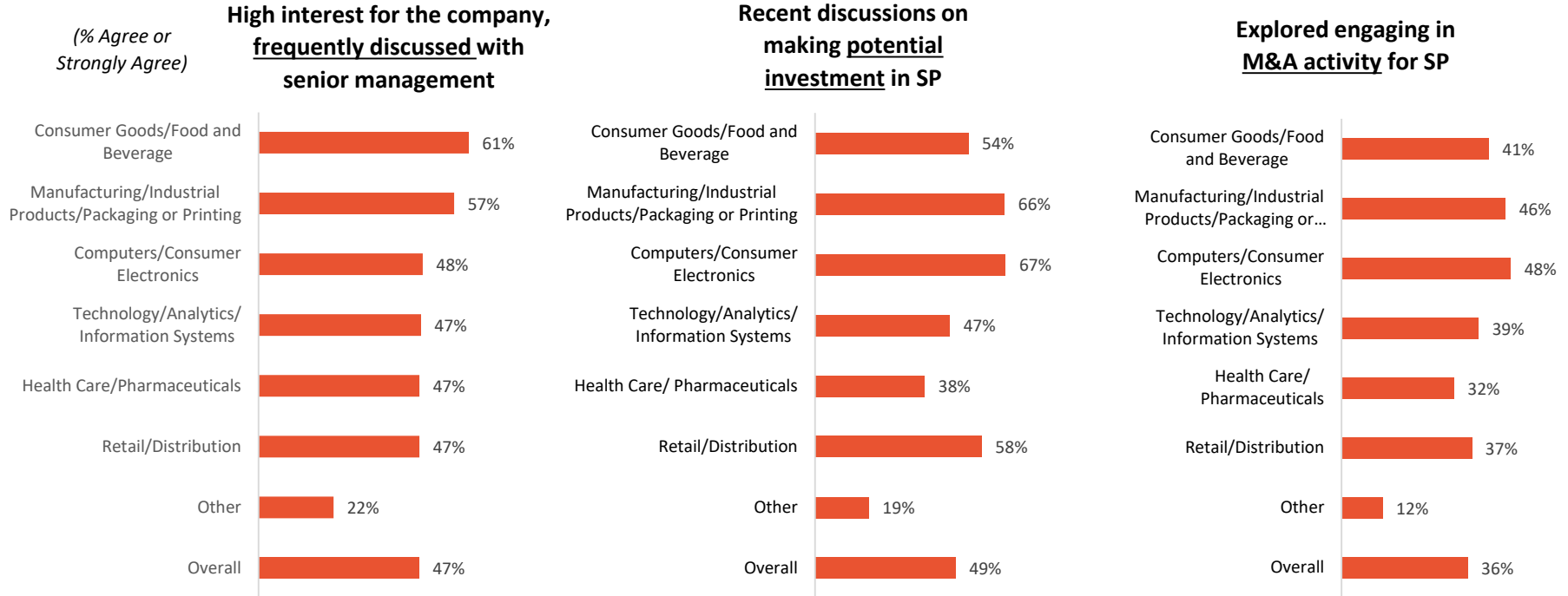
SENIORITY



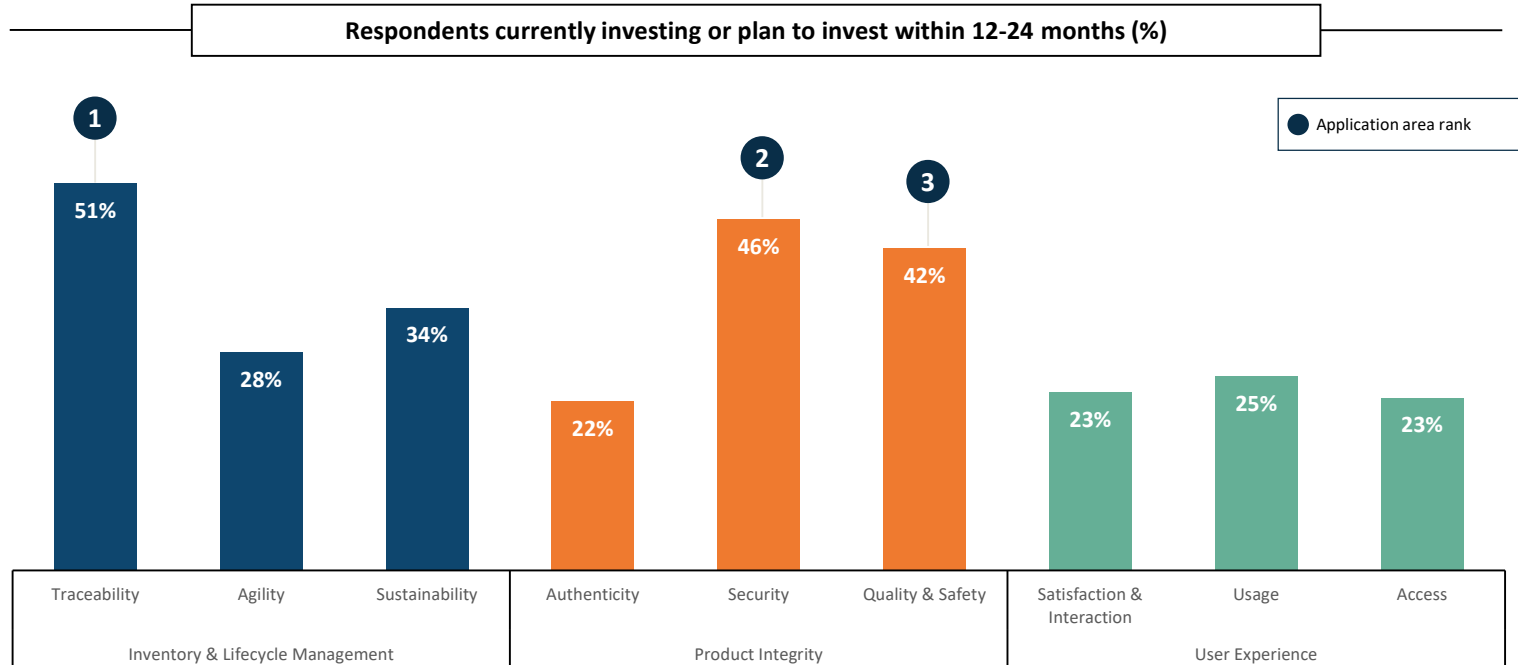
N = 425

Deloitte Center for Industry Insights

Smart Packaging is a front-of-mind issue for the majority of respondents

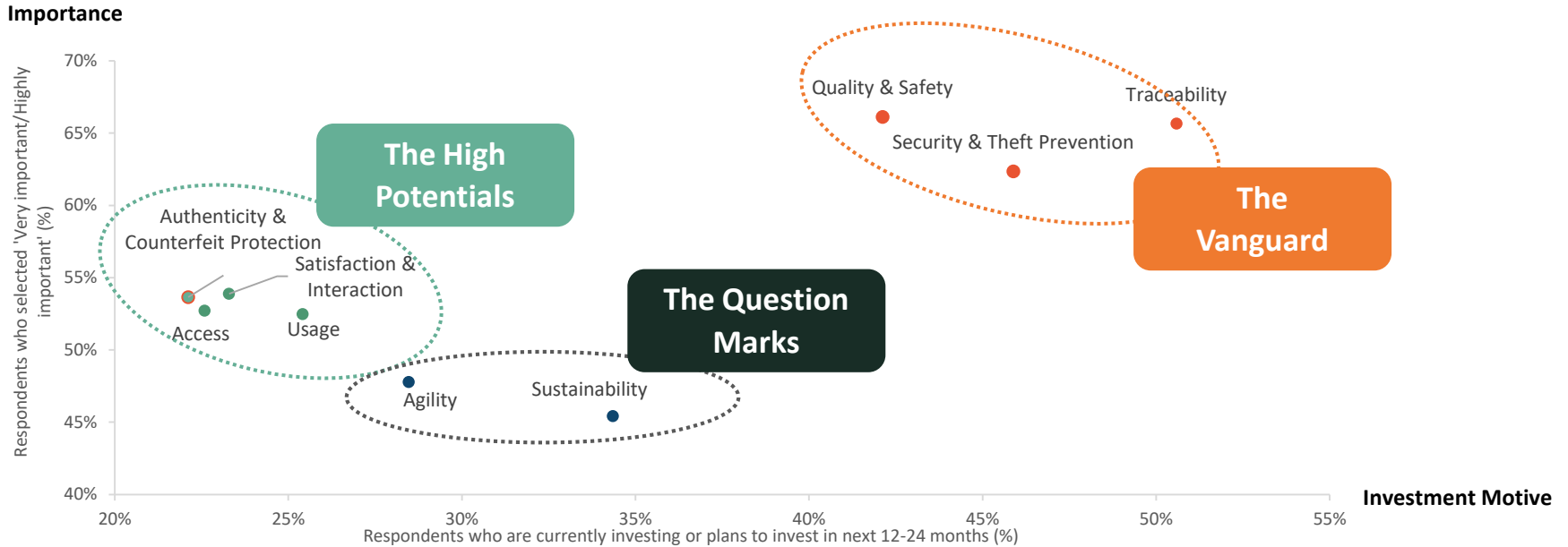


Product traceability, security, quality & safety and sustainability rank highest overall among 9 business applications.

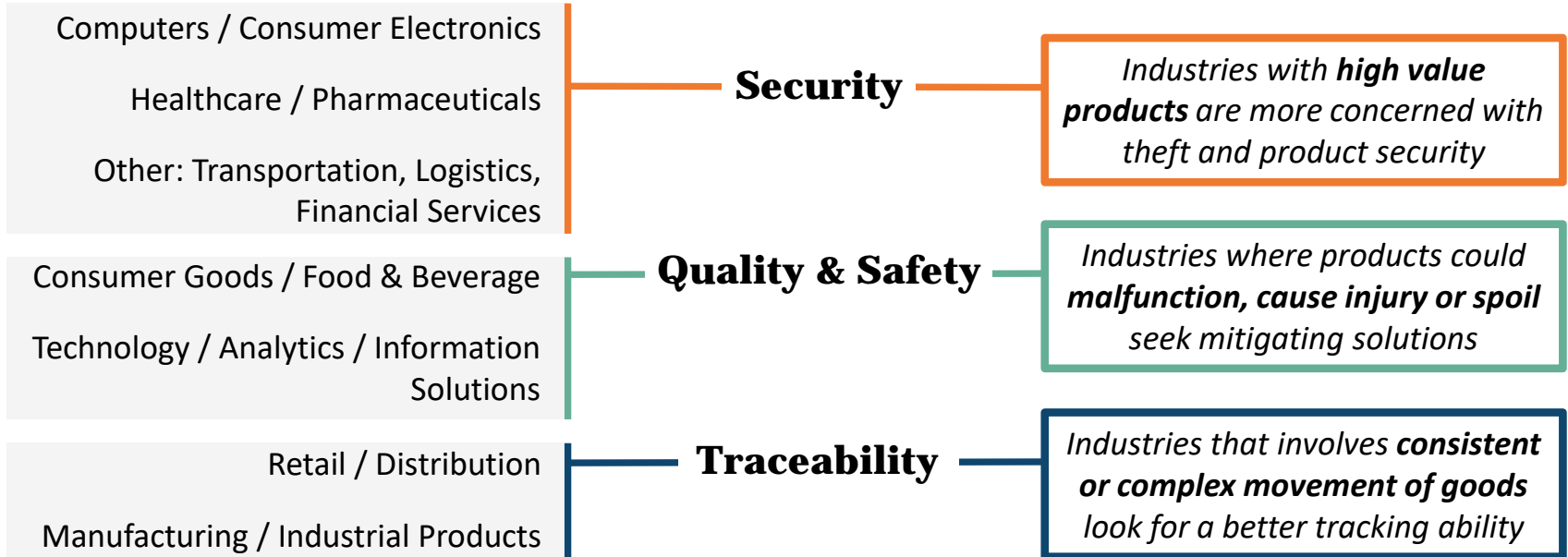


Q9. In which of these Smart Packaging areas is your company currently investing or plans to invest in the next 12-24 months? [Select all that apply]

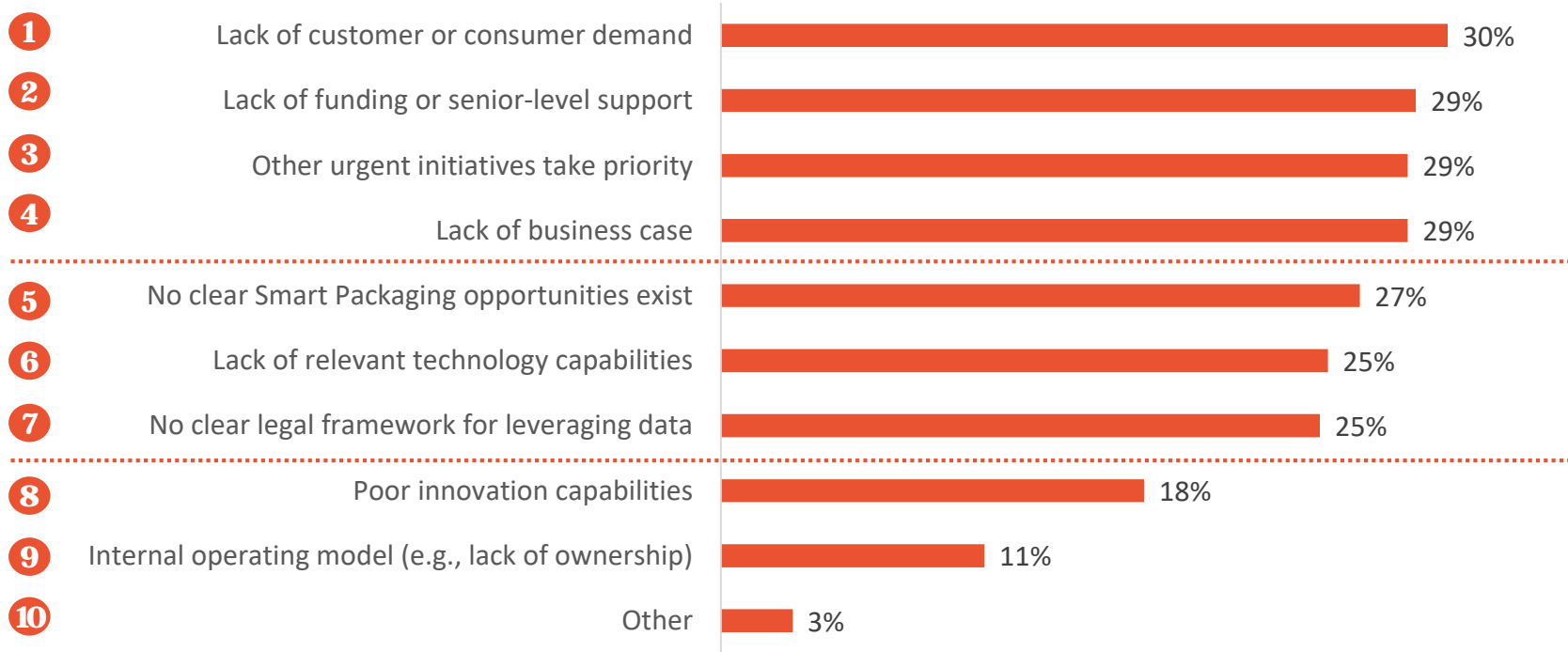
Strategic importance of smart packaging applications and intention to invest – three different groups with different needs



Industries prioritize application areas differently... a peak inside



Companies are facing a range of different challenges with launching their Smart Packaging offerings



Winning in Smart Packaging

- 1** Frame clearly the “**theory of value**” – what is the value to be unlocked

- 2** Identify **your own differentiated contribution** to the solution, and design a profit model that gives you a fair share (i.e. risk-share, co-invest)

- 3** **Assign clear responsibilities** for the smart packaging agenda, while maintaining **cross functional participation** at the table

- 4** Invest in your **partnering capabilities**, be flexible to engage in **different types of alliances** to get access to critical assets and expertise

- 5** **Be agile**: rapidly form multifunctional teams; develop quick and dirty prototypes; test for market desirability, not only technological feasibility

Want to learn more? www2.deloitte.com/insights

The image consists of two overlapping circular graphics on a dark red background. The top-left circle shows a 3D cutaway of a retail store with people shopping. The bottom-right circle shows a similar scene but with a focus on a person sitting at a desk with a laptop, suggesting a digital or data-driven aspect of the shopping experience. Both circles feature the Deloitte Insights logo in the top left corner.

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Capturing value from smart packaging rev

Untapped Potential: Using Connected Packaging to Enhance User Experience

A circular graphic on a dark blue background, composed of many small, colorful geometric shapes. The shapes contain various icons related to technology, business, and consumer behavior, such as laptops, charts, people, and shopping carts. A central target icon is prominent. The Deloitte Insights logo is in the top left corner.

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The consumer is changing, but perhaps not how you think

Thank you!



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