



Consumer Systems and Home Automation: A Disruptive End to Silo Thinking

June 2021

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The data included in this report are accurate according to Euromonitor International's market research database, at time of publication: June 2021

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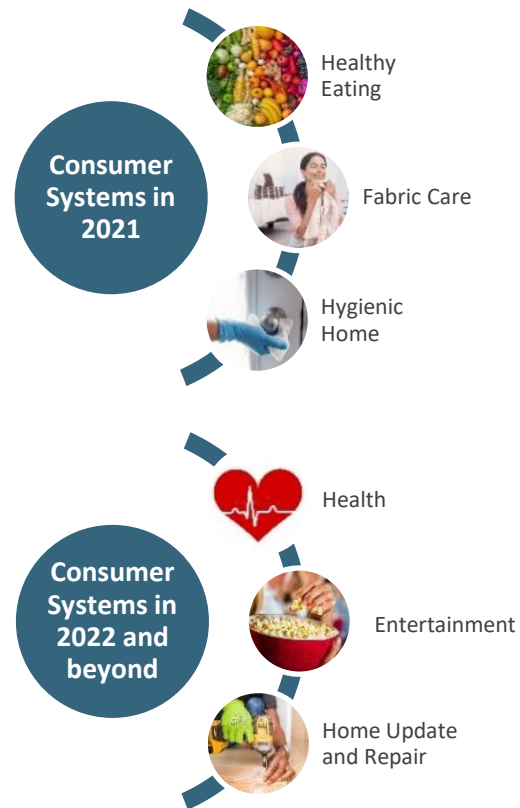


Introduction



The evolution of consumer systems

In a world that now seems more about disruption than stability, it is always better to be the disruptor than the disrupted – and that means pushing horizons outwards. Strategy needs to be built as part of a wider consumer system rather than on product silo level, looking at in-home use and the surrounding context. Consumer systems are about breaking down walls instead of building them, creating incremental profit opportunities and preparing for disruptive threats that can come from any direction across the system.



Examining Consumer Systems



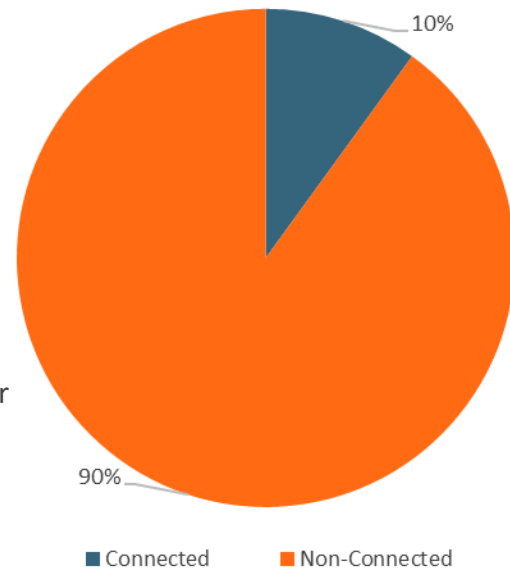
Exploring consumer systems

Consumer systems represent a junction between smart infrastructure, changing strategic thinking and new business models.

In contemporary market analysis, the term disruption is regularly used and commonly misapplied to describe events that by definition would at best classify as innovation. This, however, does not apply to consumer systems. Consumer systems is about smart technology, coupled with a shift in the way leading brands in this field have started to think and act based on a holistic understanding of consumer journeys and what is required to unlock additional value through technology. Disruption is achieved through partnership and by connecting the dots across user scenarios and industries.

The term disruption, when used in the context of consumer systems, represents fundamental and irredeemable change. Deciding to stick to the old ways could prove costly, if not fatal, in the future. Smart disruption is happening now. There is a window of opportunity for brands to future-proof their operations and to profit from disruption, but this requires a fundamental shift in strategic thinking.

% Connectivity of appliances sold in 2020



Note: This graphic covers Dishwashers, Automatic Washer Dryers, Automatic Washing Machines, Ovens, Microwaves and Fridge Freezers across a selection of 46 countries globally and relates to total unit sales of these appliances in 2020.

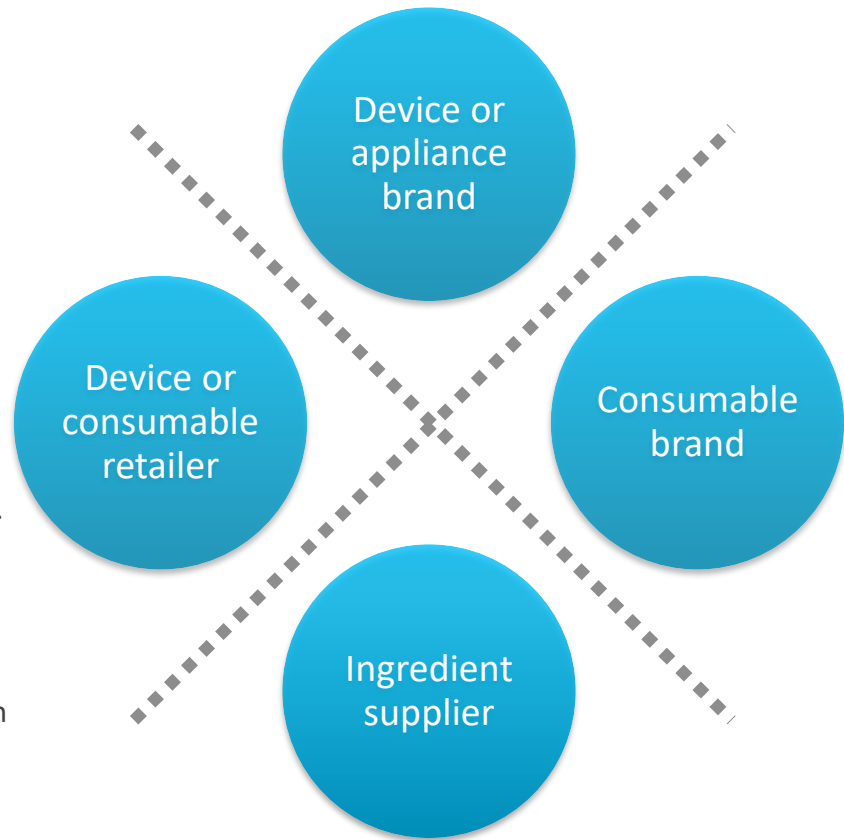
Smart disruption: A force eroding silo mindsets and testing barriers between stakeholders

Before smart disruption began, the walls between industry stakeholders and between industries were perceived as solid and unchanging for decades. Defending positions and creating value involved specialisation and being the best within set parameters.

By its nature, smart technology demands greater sharing of data between user and brand and between partners within cloud structures. This is a necessity to realise service potential and new value. Remote control of devices, image recognition, use of web data and voice services are all dependent on data sharing.

The creation of new value from smart technology inherently erodes silo mindsets, forcing brands to see beyond their immediate area of operation. Again, smart disruption forces brands to think about what value is accessible on the other side of a wall and how to break down these walls to unlock additional value.

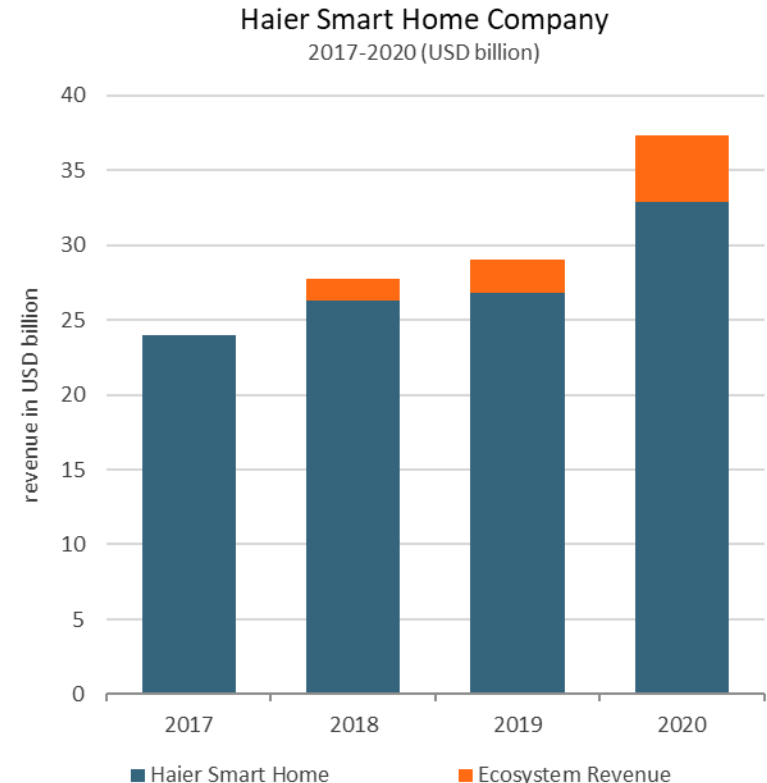
For example, more car brands are appearing at consumer tech shows, such as CES, than traditional automotive events. Further, one of the cars at CES in 2020 carried Sony branding, which foreshadows how these consumer systems are taking shape.



New business models: A radical overhaul of ownership where anyone can be a “frenemy”

Direct-to-consumer (D2C) replenishment agreements blend revenue streams, give substitutional value to one stakeholder at the cost of another and create incremental value from synergy in controlling two or more parts of a consumer system.

Shared economy and leasing options for physical goods are also emerging business models, which focus on subscriptions and cost per use (product-as-a-service) and are dependent on smart technology keeping track of usage. The circular economy needs smart technology to track appliance locations throughout a service life; it is important for appliance brands to have products returned to them, as cost structures depend on harvesting residual end-of-life value.

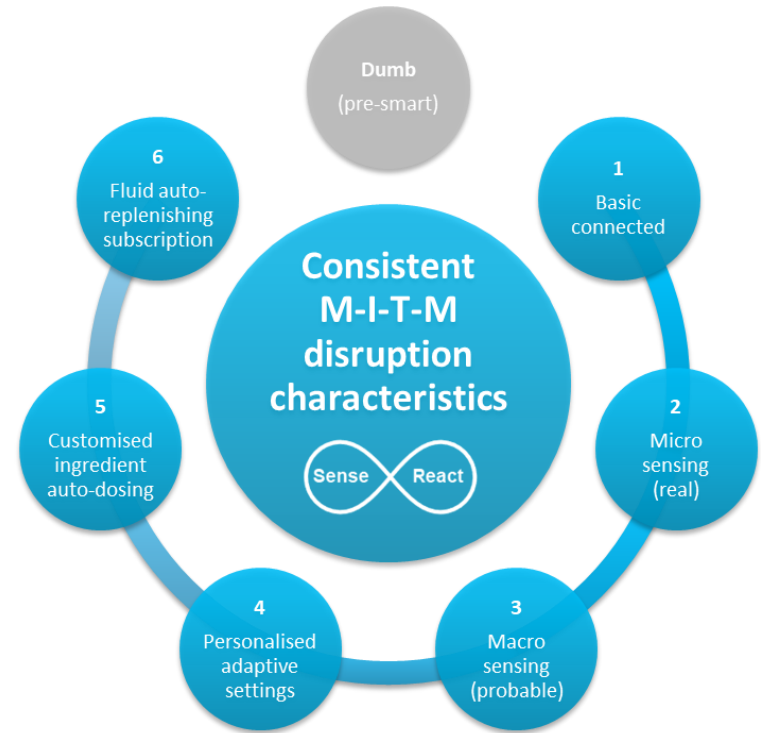


Note: This graphic is derived from Haier Smart Home Co Ltd's financial reporting.

Mixing-in-the-moment: A predictable smart disruption impacting most consumer systems

The first iteration of mixing-in-the-moment (MITM) at home occurred in fabric care, with an evolution of auto-dosing technology mixing two cleaning fluids inside an appliance to achieve an optimal result, reacting to sensed conditions and having an algorithm (AI) decide on formula mixing and blends. This continues to evolve with three-fluid mixing penetrating the market, and the most recent and advanced version testing a four-fluid proposition with an AI control for MITM.

Commercially important aspects include MITM driving appliance brands into consumable operations, consumable brands into device operations and retail industry stakeholders into both sectors. Consumable brands unlock large-ticket and premiumisation routes and appliance brands gain a more frequent consumer dialogue for retention programmes. Staff migration between brands and industries leads to broader system knowledge through cross-pollination of brand strategies beyond industry borders.



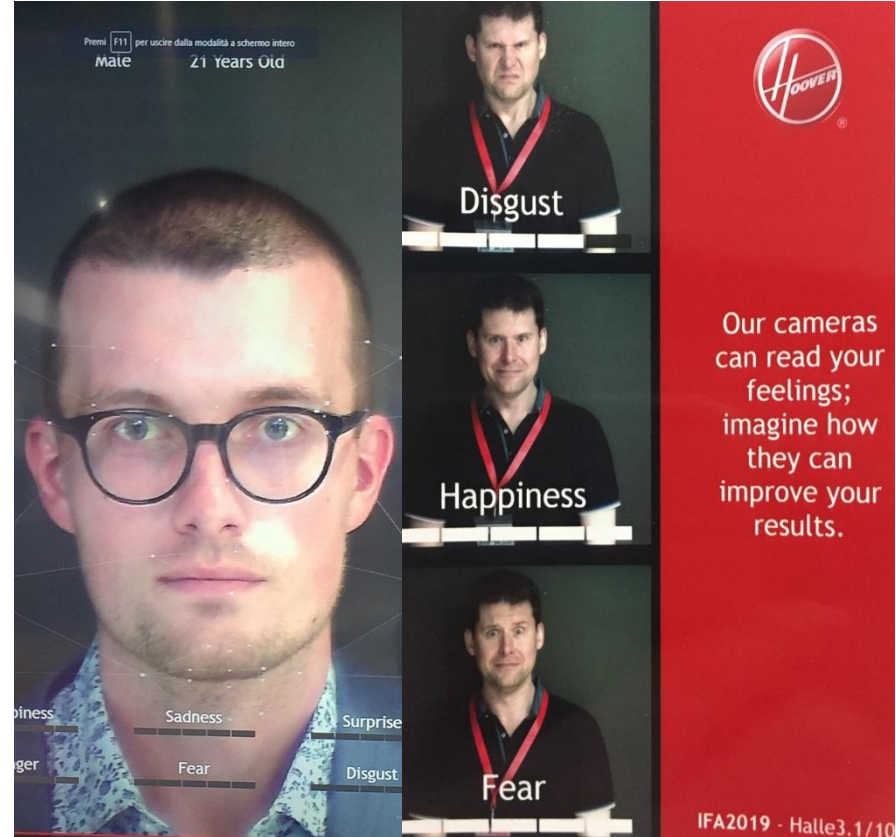
Empathic technology is next: Reacting across an entire consumer system creates synergy

Value from the latest technology trends will be best exploited by those who can react with multiple value chains providing synergy across a system. As a result, disruptive brands try to control entire systems in house or build partnerships that give coverage of all aspects.

For example, a device owner with emotionally sensitive camera sensors can learn if a certain consumer likes the latest scent after opening their washing machine on a specific time and day.

That same device brand, or a smart home partner, may also detect via an aroma sensor the exact scent formulation. The retailer could also potentially provide that scent data to consumable brands, if the link can be made to the user and to the moment.

The brand with this user data can then formulate personalised fragrances across laundry, dishwashing, air care and surface care products to optimise the scent for individuals or consumer segments, passively and continuously measuring reactions to changes.



Meeting Consumer Needs



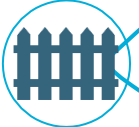
Companies are meeting the needs of consumers using various strategies



D2C with cross-sell and up-sell: Substitutional and incremental revenue gains (Candy's WashPass, Henkel's Somat Smart)



Technology leadership: New value from blockchain with retail, partner and supplier integrations (Haier's IoC partner platform)



Ring-fenced shopping journeys: The implications of voice- and AI-driven auto-replenishment (Amazon's Alexa and DRS)



New business models: Gains from shared / circular thinking, longevity design and new ownership concepts (Bundles with Miele)

Candy's WashPass brings more system spending under one roof, with gains for all involved



In September 2020, Candy started to pilot WashPass, a subscription service that uses a four-fluid auto-dosing smart washing machine to clean clothes, in 500 homes in the UK. WashPass costs USD95 to set up and then clients pay a monthly cost of USD9.50 for the appliance lease and USD1.11 pay-per-wash for depreciation and cost of consumables inside an AI-controlled auto-replenishment structure.

WashPass's business model solves many challenges faced by appliance and consumable brands, such as reducing the large up-front cost of an appliance, performance issues in cold and quick wash cycles and consumable commoditisation, using premium ingredients to achieve superior cleaning results.

Our take:

One critical aspect differentiating this versus prior offers, such as Miele's Blue Horizon, is that users can make 10-50% total cost of "ownership" savings, depending on usage frequency. Candy is not trying to amortise appliance value in two years; WashPass is costed with retained value to be recovered from the device after the three-year lease. In theory, everyone wins.

Henkel's 2019 Somat Smart consumable insert goes in dishwashers, taking over auto-dosing



Somat Smart from Henkel shows the other side of the same coin; a consumable brand claiming an appliance role using a device.

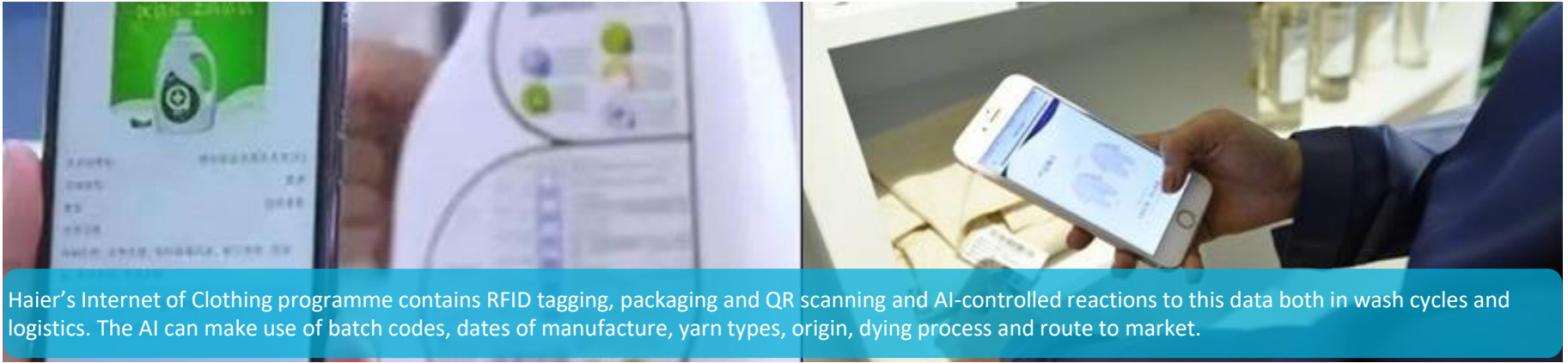
Henkel perceives the rise of auto-dosing in laundry care and dishwashing as an existential threat, with appliance brands moving into consumables and replacing branded fluids with own label substitutions. In response, Henkel developed Somat Smart, which dispenses the right amount of detergent at the right time of the cycle for an optimal clean. This contains five-fluid auto-dosing of premium ingredients but also needs to fund the delivery device each time, making cost per wash more expensive than standard automatic dishwashing products.

The device is accompanied by an app, which allows the user to monitor the wash cycle. Somat Smart is currently sold in the UK, Germany and China and comes with optional automatic replenishment.

Our take:

We chose to provide one fabric care and one dishwashing example where a brand has transitioned across a barrier to access a part of a consumer system close to its own operations. The door can swing both ways where consumables are dispensed to solve a mission in the home.

Haier's Internet of Clothing (IoC) is huge and continues to evolve



Haier's Internet of Clothing programme contains RFID tagging, packaging and QR scanning and AI-controlled reactions to this data both in wash cycles and logistics. The AI can make use of batch codes, dates of manufacture, yarn types, origin, dyeing process and route to market.

Consumers can scan the RFID tag on a garment using the mobile app, which enables the washing appliance to recognise the fabric and type of detergent needed for best cleaning results.

Clothing manufacturers who partner with Haier can see how often their garments are worn. Detergent brands can get data on exactly what dilution and patterns their detergents are used in, with feedback from users, significantly improving outcomes and moving the solution closer to luxury fashion care in the home.

Our take:

The synergy on display is impressive. With IoC, Haier's partners get insight of the full consumer system to offer special services, such as delicate fashion care. One partner, Wensli, experienced double-digit growth of luxury silk garment sales, showing the real value in fabric care is in the purchase and use of clothing.

Bundles challenges the concept of “owning” devices, mixing shared economy with circularity

Subscription-based “access-over-ownership” applies to all devices across consumer systems. This drives consumable and service add-ons within subscriptions, but the next iteration will be from players, such as Haier with COSMOPlat, with consumer system-sized business models built on modular circularity.

Bundles, a Dutch start-up offering pay-per-wash in partnership with appliance brand Miele, is the first and most successful venture into circularity in an appliance context.

Bundles focuses on selling high-end washing machines that last up to 10,000 cycles. This pay-per-use model reduces the high up-front cost for the customer and brings in additional revenue over time for the brand supplying it. The average European household spends less compared to traditional ownership. Candy WashPass costs USD30.60 per month, assuming an average of 19 monthly wash cycles, and this includes auto-dosing fluids as part of the subscription.

Our take:

Bundles expanded from the fabric care system to the healthy eating system and continues to grow. Circularity rivals include BlueMovement and WeWash (B/S/H/), Homie (Electrolux) and CoolBlue. The first generation of leases have expired their three-year periods, releasing original units for refurbishment and re-leasing in a tiered cost structure sensitive to usage.

Conclusion



The evolution of consumer systems

+26%

Global volume CAGR of connected ovens (2015-2020)



18%

of automatic washing machines sold globally in 2020 were connected



142 million

Amazon Echo and Google Home Speakers sold to US households (2015-2020)



Become tomorrow's next leader

Think holistically

An out-of-silo perspective must be the first step in assessing value outside of traditional and outdated industry silos. Smart disruption has started to fundamentally change the way brands engage consumers. This comes with incremental gains for the disruptor and potentially devastating consequences for the disrupted.

Improve the user experience

The user sits at the heart of system thinking. Brands learned from past mistakes, when new technology was pushed into the market without asking the pivotal question of real-life relevance. This is about improving outcomes and enhancing existing emotions through automation and seamless integration of all steps along a consumer journey. The whole is greater than the sum of its parts.

Act now

We have now reached a stage of smart disruption that evidences a much broader adoption of home automation, MITM and advanced AI control offering personalisation for superior results. Brands must act now if they want to avoid being excluded from future consumer relationships.

Seek partnership

Leading consumer system disrupters with the likes of Haier and Amazon have made no pretence of aiming for dominance across entire user journeys. However, value creation through partnership has so far formed an important part of consumer systems and will continue to do so. Strategic alliances must be created where requirements exceed own capabilities.