Delucchi Plus Digital Trends Report

Vol. 2: The Internet of Things

Introduction

Thank you for downloading this Delucchi Plus Digital Trends Report, a bimonthly educational product from our Strategy + Insights team. The crowded conversation around digital trends can make it difficult to distill the chatter into actionable insights. The goal of our Trends Reports is to provide exactly this: A matter-of-fact exploration of the opportunities, cautions, and takeaways for marketers and brand champions to make the most of the latest trends.

The Trend: The Internet of Things

Whereas the Internet used to consist of a network of personal computers and servers linked to each other, it now includes billions of connected physical objects sharing performance data in real-time. Fittingly, this evolved network is being called "the Internet of Things."

The Internet of Things, or IoT, is providing unprecedented experiences, services and information to consumers and businesses alike: Smart watches that record vitals, thermostats that intelligently control the temperature of a home, cars that stream operating data to a mechanic, and networked factories that reduce waste by learning from mistakes: The IoT is touching every aspect of modern life.

As such, the IoT market is moving toward the same kind of inflection point experienced by Bluetooth products and smart phones in the 2000s: IoT device production is projected to triple by 2020 and have a $6.2 trillion economic impact by 2025.

As we explore in this report, the growth of the IoT presents exciting opportunities for every individual and industry — including sales and marketing — as well as significant challenges that threaten its widespread adoption.

The Benefits of the IoT

The exciting possibilities of the IoT are manifold, but generally can be divided into one of two characteristics: **Responsive** traits, which enable devices to deliver intelligent, contextual feedback that enhances functionality, and **Informative**, which empower users with analytics that improve device performance.

Responsive

The first defining characteristic of IoT technology is responsiveness, which is making waves especially at the consumer level. Built-in sensors and actuators are embedded into otherwise regular objects to make them "smart," allowing the product to interact with other devices, applications, and users, creating experiences that are more engaging, efficient, and useful.

Responsive, smart devices provide unprecedented convenience and utility because they learn from and give intelligent feedback about how they're used. This quality allows them to service themselves and, in theory, operate entirely independently of their users.

Although it may sound like science fiction, millions of responsive objects are already among us (or in development):

Brand/Institution	Technology
Nest Labs	Self-learning thermostats that know just how cool you want it when you get home from work (and what time that will be).
Apple & Google	"Wearables" that provide contextual information and services.
Tesla	Cars that learn from performance across varying terrain and conditions, automatically updating their software over time to suit the vehicle's unique patterns of use.
Kevo	Smart locks that know when you're on vacation, contacting you if anyone tries to enter your home during that time.
MyQ	Garage doors that alert you if left open, allowing you to close them remotely.
Université Paris-Sud	Haptic snowboards and golf clubs that provide real-time feedback on your technique.
Rachio	Sprinkler systems that check the weather before turning on.

Things get even cooler, sometimes literally, when these devices communicate not just with their users, but with each other: For instance, when a home owner enters his IoT-equipped house, his Kevo smart lock communicates with his Nest Labs thermostat, which then adjusts the temperature to his stated preference.

Informative

The second — and perhaps most significant — advantage of IoT devices is the immense quantity of data they collect and share. By embedding our tools, machines, and even buildings and factories with sensors, we gain performance metrics on processes and objects that were previously isolated and static, generating real-time readings of unprecedented variety and volume. This data has major implications for consumers, businesses, and entire industries.

For consumers, this data increases the efficiency of our daily activities. No more waiting for an open washer at the laundromat, where smart, connected machines will report their availability and notify users when washes are done. All of our devices will report on their performance to allow for optimal functioning, and on product health to indicate need for maintenance or replacement.

On the enterprise level, this information goes far beyond convenience, allowing businesses to cut production and operating costs while improving products and user experiences. Continuing with the laundromat example, smart washers and dryers will provide usage data to indicate the need for more machines, different functions, or maintenance.

Whereas consumers are generally dealing with a network of individual devices, companies can unearth powerful insights by identifying patterns in readings from millions of products over time. En masse, this data provides potentially industry-changing insights about how products are used and who is using them. Here are some ways industries are using IoT data:

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Industry	Innovation
Auto Insurance	Providers now offer plans in which drivers install sensors in their cars, letting insurers charge rates based on driving performance rather than projections.
Farming	Data from on-site sensors are combined with weather forecasts, optimizing watering equipment to save money and reduce waste.
Transportation	Information about the service needs and location of each car or truck in a fleet lets maintenance departments increase the efficiency of repairs.
Manufacturing	Machines are being equipped with sensors and linked together in systems, allowing "smart" factories to detect and correct dangerous errors and increase production efficiency (by double, in some cases).
Supply Chains	Sensor-equipped products make supply chain dynamics more reliable and more profitable. For instance, Johnnie Walker added a sensor tag to its premium Blue Label Scotch to indicate whether a bottle has been opened, allowing the company to address the issue of bars re-filling the bottles with cheaper alcohol.
Travel & Tourism	Disney Parks' Magic Bands put tickets, meal plan information, credit cards, and other guest info in a smart bracelet that in turn provides the park crucial information about visitor activity and spending.
Marketing	As we explore in the following section, IoT technology provides marketers with unprecedented audience information and new pathways to distribute content, both of which remove the guesswork and waste from advertising.

Actionable Advice for Marketers

Smart devices are changing how we sell things, and even what we sell.

How does the remarkable rise of the IoT impact the sales and marketing industry? In addition to providing unprecedented insight into who makes up a brand's audience, smart devices are also changing how we sell things, and even what we sell. As such, it is crucial that marketers view the IoT not just as a new tool, but as an industry-wide opportunity for growth and change. Here are the principle ways the IoT is transforming sales and marketing:

Social 3.0

With the addition of data from smart devices, the social landscape is finally maturing from a playground of entertaining content to an ecosystem of useful tools and experiences. This concept of "on-demand" personalized content, services and experiences might soon impact industries in the following ways:

Marketing Vertical	Innovation
Real Estate	**Social access management**: APIs transform entire buildings into social twins to create seamless physical experiences for their occupants. These systems grant contextual access around a building and flexibly deliver services and social content based on the location and needs of a given user.
Retail	**No More Lines:** Your Starbucks order will be submitted when you get within five minutes of your regular store around your normal commute time. **No More Clipping**: Based on your location and the age of the goods you're wearing, retailers will serve coupons to let you pick up a new sweater or pair of shoes while you're already out running errands. **Localized Recommendations:** Telling Siri you're hungry will prompt Yelp reviews of nearby restaurants alongside geo-located Tweets about #dining.
Health & Wellness	**Nuanced App Behaviors**: Your workout playlist and your fitness app will start automatically when you begin a cardio activity. **Networked Vitals:** Devices that monitor your vital signs — including blood pressure stations at the grocery store — will communicate with fitness apps and health professionals to paint a clearer picture of your wellness, downloadable instantly anywhere.

Not all of these features are available just yet, but this transformation is happening now. Case in point: Google recently acquired Nest Labs, allowing the company learn about the usage patterns of hundreds of thousands of households to infuse future products with insights from this data.

Marketing to Individuals

Smart, connected products allow for much better audience segmentation through access to data about customer characteristics, preferences, and usage patterns. As a result, marketers can tailor special offers, create unique service packages, and develop more nuanced pricing strategies suited to the unique needs of each audience segment, or even each individual customer.

Could we be on the verge of a 100% click-through rate? Possibly. In theory, the refinement of customer segments using IoT data will eventually remove all guesswork from advertising, ending the era of irrelevant, interruptive commercials. Advertisers will no longer question whether a customer wants to buy something and know exactly what that customer wants based on his or her usage patterns and current inventory of a certain good. Now when a light bulb goes dark in your smart home, it will note the need for a replacement, and maybe even send a coupon directly to your smartphone.

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By aligning completely with customer interests, purchases, and usage, advertisers will save millions of dollars on wasteful advertising, while saving consumers the headaches of irritating commercials. Even more optimistically, this evolution could allow marketers to stop being marketers and start being valued consumer partners who provide on-demand goods and services.

Remaining Challenges

Thus far this report has focused on the immense opportunities of the IoT, but there are also substantial limitations to be addressed.

Lack of Standards

Although there is great cause for optimism about the IoT's role in business, the truth is that many industries are not sufficiently organized to use this influx of data effectively. This is mostly due to a lack of communication standards between devices.

This shortcoming is especially apparent in the retail industry, which has benefited from significant IoT buzz related to beacon technology. Despite this promise, the industry has yet to sort out the roles and operating standards of each part of the value chain — from the in-store beacon operation to the large-scale networking of devices to the storage and analysis of data.

Security Concerns

Related to standardization is the daunting security risk posed by the IoT. Because of the volume of devices and diverse communication standards, the IoT has created exponentially more "entry points" for malicious attacks and data theft. Even more concerning, IoT devices are closely connected to, and sometimes embedded in, vital systems like mass transit, hospitals and financial institutions. As a result, data security and privacy concerns are the biggest barrier to the IoT's mainstream adoption.

In order to address these concerns, it is imperative that IoT industry stakeholders standardize security and privacy protocols, and that consumers make informed decisions about the exchange of their personal information: In essence, the security question becomes one of both technology and social norms.

Conclusion

The scale of the Internet of Things revolution goes far beyond individual convenience or industry transformation: It has the potential to realize a more responsible global society.

By increasing the efficiency of how we use resources, and by reducing the creation of waste, the IoT could reverse a decades-long trend of consumption growth: Of making things *more* numerous, *more* affordable, and *more* disposable. Thanks to the IoT and related technology, we are now offered a refreshing alternative: *Consuming less*.

IoT products will free consumers to purchase only the goods and services they need, to share the products they don't use enough, and to get new utility out of the products they already own. Is this scaled-back consumption the antithesis of marketing? We don't believe so: By empowering consumers to make better purchasing decisions, the IoT will make selling more personal and functional, if perhaps less voluminous.

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If you're interested in learning more about how the IoT will affect your company, you're in luck: Delucchi Plus recently introduced a suite of products to help our clients maximize their marketing investment with our analytical and actionable approach to data. Please contact us to learn how the Strategy + Insights team can help your team and your business grow, whether it's through data-driven research, a custom trends report, or a webinar or lunch-and-learn.

As we said, the intent of our Trends Reports is to arm clients, colleagues and partners with the latest thinking in the digital space. We hope you learned something and will continue to join us on our educational journey.