DEEP DIVE: PET TECHNOLOGY MARKET OVERVIEW: MARKET TRENDS AND KEY SUCCESS FACTORS FOR PET-TECH PRODUCTS

1) Spending in the US pet industry is set to increase to US$62.75 billion in 2016, up 4% year over year, according to estimates from the American Pet Products Association.

2) Sales of almost all pet product categories in the US, including pet food, supplies/over-the-counter (OTC) medicine, vet care and other services, are expected to increase in 2016. Only live animal purchases are expected to decline slightly, decreasing by 0.5% this year.

3) Owners are becoming more aware of their animals’ well-being, which supports the demand for “pet-tech” products.

4) A number of technology-enhanced products for pets, including cameras and wearables, have attracted funding in the past few years and are now available in major online and brick-and-mortar retail channels in the US.

5) The US and Europe are currently the major pet product markets. The key markets to watch are Asia and Latin America, as the disposable income of consumers in those countries continues to rise.
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EXECUTIVE SUMMARY

In this report, an update to Pet Technology Continues to Grow Market Share, published in 2015, we discuss developments in the global pet product market and some of the technology products gaining traction in 2016. We analyzed market trends, product features, consumer reviews and present case studies of both successes and failures in order to provide insights into key factors that affect the implementation of innovations in pet technology.

The market for pet products in the US has been growing for over a decade. Spending in the US pet industry will increase to US$62.75 billion in 2016, up 4% year over year, according to estimates from the American Pet Products Association (APPA).

Pet-tech products, which are part of the broader pet product market, can be divided into two major categories:

1. Pet cameras and treat dispensers.

2. Pet wearables and smart collars with GPS functions that track the location and/or monitor the pet’s activities.

These products are sold online and in brick-and-mortar stores such as Best Buy and Walmart. They were developed mostly by startups and made available to the market with the support of funding raised on Kickstarter or Indiegogo.

Our analysis has shown that the there are two key aspects that determine the success or failure of new pet tech products: design and marketing. When it comes to design, consumers value the interactivity of products in the pet camera and treat dispenser category, while they pay attention to the accuracy and real-time tracking capabilities of pet wearables and smart collars. In terms of marketing strategies, the campaigns that focus on educating the consumer have proven to be a successful way to increase adoption.

Source: Petchatz
PET PRODUCT MARKET OVERVIEW

The market for pet products in the US has been growing for over a decade. Spending in the US pet industry will increase to US$62.75 billion in 2016, up 4% year over year, according to estimates from the American Pet Products Association (APPA).

Sales across almost all categories (Figure 2) in the US pet industry are expected to increase in 2016, including pet food, supplies/OTC medicine, vet care and other services. Live animal sales are expected to decline slightly, down by 0.5% in 2016. It appears that owners are paying more attention to the well-being of their pets; this supports the demand for pet food, supplies or medicine, and other pet-care services. Owners also seem to be more willing to adopt pets rather than buying new ones.

We think the increasing awareness of pets’ well-being also supports the demand for innovative pet-care products, such as cameras and wearables, which we discuss in greater detail later in this report.
Pet ownership in the US is higher than the global average, but lower than in some South and Central American countries. According to a 2016 GfK survey (Figure 3), the countries with the highest pet ownership are Argentina and Mexico, where 80% of respondents have at least one pet. In the US, 70% of those surveyed have a pet. Asian countries, such as South Korea and Japan, have relatively low pet ownership rates of 31% and 37%, respectively. Globally, the figure is 56%. In other words, more than half of the global population has at least one pet.

GfK data shows that the US and Europe currently account for a large part—about 63%—of global retail pet sales. Annual retail sales of pet food in the US are expected to reach US$24 billion in 2016, accounting for approximately one-third of the US$70 billion in global pet food sales, followed by US$20 billion in the European countries, according to GfK. The key pet markets to watch in the near future are in Asia, including China and India, and in Latin America, due to rising disposable incomes in these regions.
Many of the pet-tech products mentioned in this report were developed recently in the US, and efforts were initially focused on the US market. These products have the potential to succeed in other parts of the world as demand grows, however, they may need to be localized if producers want to reach new consumers.

**PET TECHNOLOGY**

Pet-tech gadgets currently on the market can be divided into two major categories:

- Pet cameras and treat dispensers.
- Pet wearables and smart collars with GPS functions that track the location and/or monitor the pet’s activities.

These products are sold mostly online but some are also available at brick-and-mortar stores such as Best Buy and Walmart. They were developed mostly by startups and made available to the market with the support of funding raised on Kickstarter or Indiegogo.

In Figure 4, we list some of the pet-tech products currently available in the US through major online and/or brick-and-mortar retail channels in each of the two major categories.

*Source: Petchatz*
PET CAMERAS AND TREAT DISPENSERS

Pet cameras keep owners and pets connected when they are away from each other. For example, while at the office owners can check in on their pets at home.

These products often have their own iOS and Android apps which allow owners to interact with or “talk” to their pets when they are away from home. Some devices allow owners to dispense treats to their pets remotely, or serve as automatic feeders.

Figure 4. Feature Comparison of Pet Cameras/Treat Dispensers

<table>
<thead>
<tr>
<th>Product</th>
<th>Functions/Features</th>
<th>Sales Channels*</th>
<th>Pros and Cons**</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Petcube</strong></td>
<td>- HD live video with wide-angle lens.</td>
<td></td>
<td>- The two-way audio allows owners to “talk” to their pets.</td>
</tr>
<tr>
<td></td>
<td>- The two-way audio allows owners to chat with and listen to their pets.</td>
<td>- Amazon</td>
<td>- Owners can play with their pets through the remote-controlled laser toy.</td>
</tr>
<tr>
<td></td>
<td>- Owners can play with their pets remotely with the built-in laser toy.</td>
<td>Company website</td>
<td>- Owners can check in on their pets while away.</td>
</tr>
<tr>
<td></td>
<td>- Photos and videos can be captured and shared.</td>
<td>- BestBuy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- App for iOS and Android.</td>
<td></td>
<td><strong>Pros:</strong></td>
</tr>
<tr>
<td></td>
<td>- Allows for customized access for other users.</td>
<td></td>
<td>- Can dispense treats remotely.</td>
</tr>
<tr>
<td><strong>Petzi</strong></td>
<td>- Dispenses treats.</td>
<td>- Amazon</td>
<td>- Good for pets with separation anxiety.</td>
</tr>
<tr>
<td></td>
<td>- Wide-angle camera with night vision.</td>
<td>Company website</td>
<td>- Allows owners to check in on their pets.</td>
</tr>
<tr>
<td></td>
<td>- Audio allows the owner to speak to their pet.</td>
<td>- BestBuy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Photos can be captured and shared.</td>
<td>- Walmart</td>
<td><strong>Cons:</strong></td>
</tr>
<tr>
<td></td>
<td>- App for iOS and Android.</td>
<td></td>
<td>- Many users said the audio was not actually two-way and they could not hear their pets.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Some users experienced connection problems.</td>
</tr>
</tbody>
</table>
### iCPooch
Wi-fi treat dispenser
Price: US$270.99
2.8/5 stars
71 reviews on Amazon

- Dispenses treats.
- Allows for two-way video chat.
- App for iOS and Android.
- A tablet or smartphone does not come with the product. Users must mount their own tablet or smartphone on the device.

**Pros:**
- Amazon
- Company website

**Cons:**
- A tablet or smartphone does not come with the device. Users must install/use their own tablets or smartphones.
- Some users experienced connection problems.
- More expensive.

### PetChatz
Two-way audio/video system treat dispenser
Price: US$379
4.9/5 stars, 14 reviews on Amazon

- Dispenses treats.
- Dispenses scents that can help calm pets.
- The built-in camera allows for two-way video/audio.
- App available for iOS, but not yet available for Android.
- Add-on PawCall accessory allows the pet to call the owner.

**Pros:**
- Two-way video allows the pet to see the owner via video chats.
- Has a built-in screen.
- The PawCall accessory allows the pet to initiate a video call. It also has a game mode to keep the pet engaged.

**Cons:**
- Android app not yet available.
- More expensive.

### Pawbo
Wi-fi pet camera and treat dispenser
Price: US$199
4.2/5 stars
73 reviews on Amazon

- Dispenses treats.
- Two-way communication.
- Video recording capability: 720p camera, downloads directly into Dropbox cloud storage.
- Built-in interactive laser dot-chasing game.
- Captures and shares photos.
- App for iOS and Android.

**Pros:**
- Video saved directly to Dropbox.
- Great camera.

**Cons:**
- Some users experienced connection problems.

*Red: online channels; blue: brick-and-mortar retailers. ** Based on consumer comments, including reviews on amazon.com.
Source: Amazon/Top Dog Tips/Best Buy/Walmart/Company Websites/Fung Global Retail & Technology
The following products were supported by funding raised on Kickstarter or Indiegogo in 2013 and 2014.

### Figure 5. Funding Raised by Pet Camera/Treat Dispenser Companies

<table>
<thead>
<tr>
<th>Brand</th>
<th>Backers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Petcube</strong></td>
<td>Raised US$251,225 (251% of goal) on Kickstarter from 1,758 backers during its first crowdfunding campaign in 2013. Raised US$2.6 million in funding from investors, including Almaz Capital, A Ventures Capital and Y Combinator, in February 2016. Returned to Kickstarter to seek $200,000 in July 2016 for new products with treat dispensing function, Petcube Bite and Petcube Play.</td>
</tr>
<tr>
<td><strong>Petzi</strong></td>
<td>Raised US$130,210 (265% of goal) on Indiegogo from 735 backers in 2013.</td>
</tr>
<tr>
<td><strong>iCPooch</strong></td>
<td>Raised US$29,706 (148% of goal) on Kickstarter from 292 backers in 2014.</td>
</tr>
</tbody>
</table>

Source: Kickstarter/Indiegogo/Company Websites/Fung Global Retail & Technology

### Keys to Success

Key factors we identified that have contributed to the success of the more popular pet cameras such as Petcube are:

- **Interactivity**: Buyers of pet cameras value the interactivity of the products. The original Petcube camera does not have a treat-dispensing function, but the interactivity enabled by its two-way audio and laser toy is appealing to pet owners, especially when other competing devices only have one-way audio.

- **Product price**: We think a key reason for Petcube’s popularity is its relatively low price point compared to other similar products, especially PetChatz, which has two-way video, but is much more expensive.

### CASE STUDY: A SUCCESS STORY

Petcube is popular with both investors and consumers. It is one of the most supported pet projects on Kickstarter, where it raised more than 200% of its initial Kickstarter goal of $100,000 in 2013, as well as on Indiegogo. The company returned to Kickstarter to seek another US$200,000 in July 2016 so it could produce new products with a treat-dispensing function. It also attracted a US$2.6 million investment from investors in February 2016. Petcube is the bestseller on Amazon Launchpad in the pet supplies category.
Challenges

Petcube and other pet cameras also face a number of challenges, such as:

- **Privacy:** The Petcube app allows users to customize access to the camera signal, allowing family, friends or even the public to interact with the pets. Some users welcome this setting, but others find it annoying or are concerned about privacy issues.

- **The pet’s ability to recognize its owner’s voice:** Some pets failed to make an association with the voice coming from the device and their owner’s voice.

- **Incompatibility in other markets:** Pawbo mentions on its website that users wanting to use the product in China may face connectivity issues because of the Internet infrastructure in that market. Therefore, if pet tech manufacturers want to explore markets outside of the US, such as the Chinese market for example, they must make adjustments to their products to make them compatible with the local requirements and environment.

- **Connection issues:** This is a common problem faced by pet cameras. Figure 4 shows that users of some products complained about connection problems.

CASE STUDY: A FAILURE STORY

Petnet is an automatic pet feeder that dispenses food to pets as scheduled. A system failure, due to third-party server problems, caused the devices to stop working. This angered many consumers because they relied on Petnet to feed their pets when they were away for days, especially during the holidays.

Source: Petnet
PET WEARABLES AND SMART COLLARS

Pet wearables, often in the form of smart collars, are GPS-enabled devices that can help pet owners locate or track missing pets, monitor pet movements and collect data on pet activities. This is useful for health monitoring.

Figure 6. Feature Comparison of Pet Wearables/Smart Collars

<table>
<thead>
<tr>
<th>Product</th>
<th>Functions/Features</th>
<th>Sales Channels*</th>
<th>Pros and Cons**</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tractive</strong></td>
<td>- GPS tracking device with integrated SIM card.</td>
<td>- Amazon</td>
<td>Pros:</td>
</tr>
<tr>
<td></td>
<td>- Live positioning for pets.</td>
<td>- Company website</td>
<td>- Users can turn on the device’s light and sound, which makes it easier to find pets.</td>
</tr>
<tr>
<td></td>
<td>- Real-time location tracking.</td>
<td></td>
<td>- Notification sent when the pet leaves the safe zone.</td>
</tr>
<tr>
<td></td>
<td>- A safe zone can be defined.</td>
<td></td>
<td>- Waterproof.</td>
</tr>
<tr>
<td></td>
<td>- The monthly service fee starts at US$5.</td>
<td></td>
<td>Cons:</td>
</tr>
<tr>
<td></td>
<td>- Waterproof.</td>
<td></td>
<td>- Short battery life.</td>
</tr>
<tr>
<td></td>
<td>- Also works for kids, cars and suitcases.</td>
<td></td>
<td>- Accuracy of GPS tracking varies for different users under different conditions.</td>
</tr>
<tr>
<td><strong>Whistle</strong></td>
<td>- Uses cellular and GPS technology to track the pet’s location.</td>
<td>- Amazon</td>
<td>- Relatively heavy.</td>
</tr>
<tr>
<td></td>
<td>- Customizable safe zone.</td>
<td>- Company website</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- On-demand alerts.</td>
<td>- BestBuy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Monitors pets’ activities for insights about their behavior and health.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Waterproof.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- For pets 15 lbs and above.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Requires a service plan that starts at US$6.95/month.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FitBark</strong></td>
<td>- Monitors a dog’s activities 24/7 and sets health goals.</td>
<td>- Amazon</td>
<td>Pros:</td>
</tr>
<tr>
<td></td>
<td>- Provides data and insights on a dog’s activities and health.</td>
<td>- Company website</td>
<td>- Helps owners keep an eye on dogs with health problems.</td>
</tr>
<tr>
<td></td>
<td>- Explains changes in behavior.</td>
<td>- BestBuy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Allows for comparison with similar dogs.</td>
<td></td>
<td>Cons:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Some users complained the device was not waterproof.</td>
</tr>
</tbody>
</table>

* Red: online channels; blue: brick-and-mortar retailers. ** Based on consumer comments including reviews on amazon.com. Source: Amazon/Walmart/BestBuy/Company websites
Keys to Success

Key factors we identified that have contributed to the success of the more popular wearables and smart collars are:

• **Combines location tracking and health monitoring:** Whistle has a much higher number of consumer reviews compared to other similar products sold on Amazon, which suggests it has a considerable customer base. Many Whistle users previously used Tagg, a market-leading pet GPS tracking device that was acquired by Whistle. Whistle was originally mainly a pet activity and health monitoring device. The acquisition allowed it to combine location tracking and health monitoring, an advantage over other products of a similar price point which usually have only one of the two functions. Tractive is a location tracker device and FitBark monitors pet activities.

• **Waterproof feature:** A waterproof device is valued by consumers, according to reviews on Amazon. Without the waterproof feature, the device can easily be damaged when pets go in the water, which some are prone to do.

• **Lightweight feature:** Devices that are heavy and bulky are not suitable for small pets. Therefore, smaller and lighter devices reach more consumers because they can be used on pets of all sizes.

Challenges

A number of areas where wearables and smart collars still need improvement include:

• **Connection issues:** Consumer reviews of all three products listed above indicated connection problems.

• **Accuracy:** Some users also reported problems with accuracy or signal delays.

• **Battery life:** Some Tractive users complained about the product’s short battery life.

• **Customer service:** Good customer service and adequate support are very important. Some users want better technical support. For example, the integration of Whistle and Tagg led to greater demand for customer service, as the original Tagg users needed support and guidance to adapt to the new Whistle app.
IMPLICATIONS FOR PET TECH COMPANIES

A number of innovative pet tech products, including pet cameras and pet wearables, have attracted attention and funding over recent years and are now in the consumer adoption phase.

There are two things to watch for concerning the development or new product launches of these innovative devices:

1) Design
- For pet camera and treat dispensers: design to ensure interactivity and connectivity.
- For pet wearables and smart collars: design to ensure the accuracy of real-time tracking information.

2) Marketing

Because pet tech products are a new, uncharted product category, producers should put more effort into marketing in order to increase consumer adoption, improve education and manage consumer expectations.
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