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Wing's IoT Startup State Of The Union: An Update

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In October 2016 we published our first comprehensive look at the state of the Internet of Things startup ecosystem. Much has happened since then. In the first quarter of this year alone, we saw headlines about the hacking of smart TVs, Intel's $15.3BN acquisition of Mobileye, whose artificial-vision sensors and systems increase driver safety, and a number of other significant developments. So we thought it would be timely to provide a brief update, which you can see in the slide deck above.

To release our IoT Startup State of The Union study (http://wing.vc/blog/iot-startup-state-of-the-union-2016) in October last year, we had to stop data collection at the end of August. By then, we had amassed and analyzed data on 2335 accelerator and venture capital funding deals for IoT startups from the start of 2013, drawn from helpful services like Mattermark, Pitchbook, and Crunchbase. Once we'd gathered the data, we reviewed the individual deals, assigning each one to a high-level category (Industrial/Enterprise, Home, Wearables, Drones, Auto/Transport etc.). Then we conducted additional analysis to assign the deals to sub-categories in each area.

We've just completed that same analysis through to the end of 2016, so we can now look back and see what happened over the rest of the year. A number of things are worth highlighting:

Our IoT "Wingdex" of startup funding deals fell in 2016, though the total amount raised increased year-on-year

When we presented our inaugural report in October, we forecast there would be around 800 funding rounds for IoT startups in 2016; the actual number turned out to be 760. So in 2016 we saw a deceleration in deal activity, with a year-on-year decline for the first time in our data series.

Nevertheless, the total amount invested still increased, reaching almost $6.2BN

Average deal size rose significantly and we're seeing the emergence of a healthy set of "middle class" IoT deals

Although the volume of deals was lower than we expected, there were some very big funding rounds in the latter part of the year. These included $100M-plus deals for startups like Metromile (insurance via connected cars) and Sigfox (a low-power wide-area network for IoT connectivity).

Big later-stage deals help explain why average IoT deal size rose sharply. We're also seeing the emergence of a healthy "middle class" of IoT startup investments, which suggests that investor confidence in technologies and business models is growing more broadly. In 2016, deals that raised between $5M and $30M rose to 26% of all of the deals that we tracked, compared with around 20% in each of the prior three years. Some 2016 examples include Dronedeploy (software platform for drone mapping), which raised $20M, Influxdata (IoT monitoring and analytics), which raised $16M, and Pinc (supply chain and asset tracking), which raised $13.7M.

The Autos/Transport category accelerated in the latter part of 2016, and Health was in good shape. Other categories underperformed in terms of deal volume.

In our October report, we published two charts showing the number of deals in various IoT categories over time, as well as a forecast of what would happen to the end of 2016. This update contains two similar charts that highlight what actually happened in those last four months of the year.

The dotted lines show where we thought each category would end up and the solid ones show what actually transpired. Most categories saw lower deal volume than we had expected, with just two—Auto/Transport and Health—bucking the trend.

Auto/Transport had a phenomenal end to the year. One thing that stood out was the number of funding deals for vision-sensing companies such as Velodyne ($150M), Oryx ($17m), and XGene ($10M). Strong investor interest here is reflected in corporate interest too, as Intel's Mobileye acquisition demonstrates.

Health's robust end to 2016 was powered by connected monitoring and tracking products. In the last four months of the year there were numerous deals for companies making things such as

asthma trackers (Propeller), sleep trackers (Eight), and infant health monitors (Owlet).

In Drones, the number of hardware deals kept falling, while investments elsewhere in the drone stack expanded

We were surprised by the sharp slowdown in drone-related deals that took place in the last few months of 2016. When we published our IoT Startup State of The Union report last October, the category had looked like it was set to finish the year well ahead of 2015. However, it lost altitude in the last few months, ending up pretty much flat year-on-year.

In our report we noted that the number of hardware-related drone deals had been falling fast, which reflects the ongoing commoditization of the drone market driven by intense competition from Chinese and other manufacturers. Our latest dataset shows that in the last four months of 2016 that decline continued.

Deal activity in the drone category is moving up the stack. Towards the end of 2016, we saw multiple deals happen in several interesting sub-categories, including infrastructure (e.g. computer vision and motion-planning tech for drones), data collection and analysis, and drone fleet management.

Industrial/Enterprise IoT is still being driven by deals involving technologies that can produce swift "RoIoT"

In our October report, we noted that quite a few of the IoT deals that we had seen in our Industrial/Enterprise category were focused on tracking assets, monitoring productivity, and providing predictive maintenance capabilities—areas where it's possible to generate a rapid return on IoT investment, or "RoIoT". That trend accelerated in the latter part of 2016.

IoT insecurity remains a huge headache—and a significant entrepreneurial opportunity

There's been no shortage of headlines recently about the security risks associated with the Internet of Things. We highlighted some of the dangers of an increasingly connected physical world in our previous work. We also noted that while there had been quite a lot of funding deals for cybersecurity startups in general, there had been surprisingly few for IoT-focused ones.

The last four months of the year saw just two additional funding deals for startups concentrating on

IoT threats. Yet there are a host of specific challenges associated with attacks that can occur at different levels of the IoT stack. It will be very interesting to see if entrepreneurs pay more attention to this area as we move through the year.

We'll be covering updates on all of the trends above, and much more, in our 2017 IoT Startup State of The Union report that will go live in October. See you then!

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http://wing.vc/perspectives/essays/wings-iot-startup-state-of-the-union-an-update
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