Twitter Thread by Mukund Mohan



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1. LIDAR thread. Will write a longer article in a few days. Light Detection and Ranging is technology using lasers to measure distances. In particular Robots, Autonomous Cars and industrial applications.

2. Although LIDAR tech has been around for a while, it is very useful for autonomous driving. Either in passenger cars or "robot taxis". Since 2010 over 30 startups have been founded to build LIDARs specifically for these applications

3. There are 3 types (high level) Scanners (MEMS and non MEMS), Frequency modulated and Time modulated. Every vehicle will need LIDARs. Think of LIDAR as the CPU for autonomous vehicles.

4. Many of the companies developing LIDARs have been acquired as well. E.g. GM Cruise acquired one and the first tier auto suppliers have made investments in multiple.

5. The "furthest along" in this is Google WAYMO and Velodyne. But Velodyne LIDAR is big and expensive ($75K). So the race is on to make them smaller and <$100. $VLDR announced a sub $1000 and sub $500 LIDAR in late 2019 but $LAZR is making prototypes in <$1000 LIDAR

6. $AEVA and $INOV claim to focus on non autonomous applications as well. All these companies have filed between 30-100 patent applications to protect their technology.

7. Reading their presentations only $VLDR is selling their products in market. They expect to make over $100M in revenue. All the others have "partners" who potentially want to buy their products which are expected to ship between 2022 and 2023

8. The LIDAR market is large. According to Woodside Capital it is expected to be $8-$10 Billion by 2025.

9. The LIDAR companies are still research projects with very strong founders and teams. Most have extensive backgrounds in the space. They are however still to be market proven.

10. $VLDR. Pros. Furthest along in terms of product. Range of offerings instead of one product. Actual revenues that are meaningful.

Cons. Expensive initial product. $75K. Making less expensive LIDARS but still not production scale shipments.

11. $LAZR. Mercurial 20 year old founder. Peter Thiel backed. Strong patent portfolio. Over 50 "partners" ready to buy once products ship.
Cons. Not expecting products to ship at scale until 2022

12. $INOV. Israel company with founders & employees who have worked toogether for years. Strong backers (investors).

Product still to be shipped.

13 $OSTR. Applications beyond autonomous cars. E.g. Robots and surveillance. Good team.

Yet to ship products at scale.

14. $AEVA. Good patent filings from the 3 I read. Strong team with background in related fields.

No products until 2022 that can show revenues.

15. $MVIS. 20+ years in business. Patents granted for multiple applications.

Cons. Small team. Revenue is non exisistant. Company is likley being prepared for a sale.

16. $INOV. Interesting technology approach to solving the problem. Smaller footprint of hardware and software.

Cons. Shipping products only in 2022