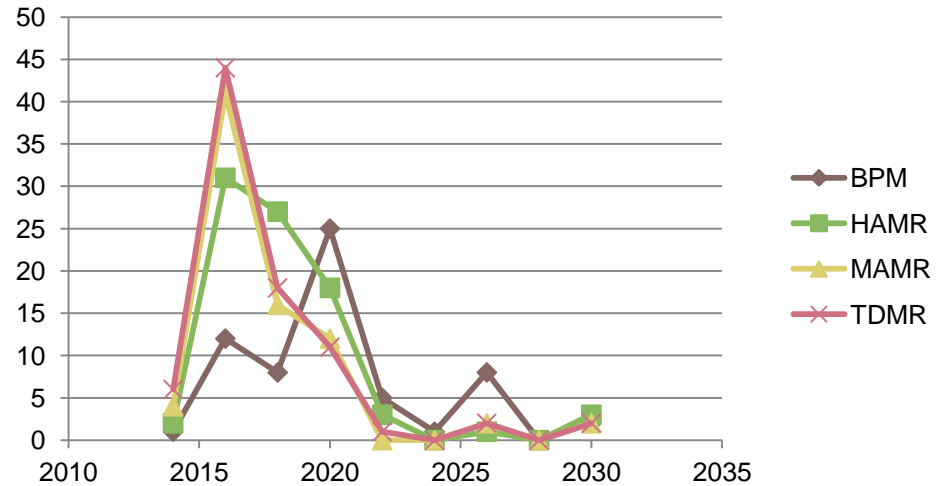


TMRC 2013 - HDD Novel Technology Survey

Overall N=134

	BPM	HAMR	MAMR	TDMR
Yes will ship	48%	66%	61%	65%
No will not ship	40%	29%	28%	23%
Don't know	12%	5%	10%	12%
Date shipment	2019.9	2017.9	2017.1	2017.1
sigma	3.5	3.2	3.0	3.1



Academia N=29

	BPM	HAMR	MAMR	TDMR
Yes	55%	76%	59%	62%
No	34%	14%	31%	24%
Don't know	10%	10%	10%	14%
Date	2018.7	2016.2	2018.1	2016.3
sigma	2.7	1.9	2.8	2.0

Japan N=74

	BPM	HAMR	MAMR	TDMR
Yes	36%	58%	54%	57%
No	49%	35%	34%	28%
Don't know	15%	7%	12%	15%
Date	2019.6	2018.3	2018.0	2017.5
sigma	4.3	3.6	4.0	3.2

Industry N=95

	BPM	HAMR	MAMR	TDMR
Yes	44%	62%	62%	65%
No	43%	34%	31%	24%
Don't know	13%	4%	7%	11%
Date	2020.5	2018.6	2016.9	2017.5
sigma	3.7	3.4	3.2	3.3

US N=40

	BPM	HAMR	MAMR	TDMR
Yes	80%	93%	85%	93%
No	13%	8%	8%	5%
Don't know	8%	0%	8%	3%
Date	2020.1	2017.1	2016.2	2016.3
sigma	3.1	1.8	1.3	2.0