



Professional Certificate Program in Product Management

Massachusetts Institute of Technology

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#### CardioAI

B2B2C Medical Hardware and Software Platform Impact Project - Group 2

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### Logistic Growth Model

Using the Logistic Growth equation and a density-dependent decline term (also known as the Allee Effects equation), our Team has developed a system of seven differential equations that allow us to model multiple business-specific and topology-specific metrics such as the number of computing units based on processing requirements, computing cost, storage cost, archive cost, number of storage data IO operations, number of archive data IO operations, storage data IO operations cost, archive data IO operations cost, infrastructure cost, total carbon footprint, carbon footprint by infrastructure tier, gross revenue, net revenue, and cost per platform user, among other metrics. In addition, our model has 34 different coefficients that can be adjusted to perform various business growth experiments, including defining multiple rate plans and modeling those simultaneously to analyze profitability under different growth rates. The results below were derived using 3.5 million users as the carrying capacity ( $K$ ), an initial pool of 1000 customers ( $N$ ), a 6% intrinsic growth rate ( $r$ ), a 1.3% intrinsic decline rate ( $d$ ), and a time projection of 15 years. We also modeled a Premium, Standard, and Basic plan with costs of \$75.00, \$35.00, and \$15.00, respectively. To review the system of differential equations and the complete list of coefficients, please refer to the document: Logistic Growth Model - R5.

Date	Customers	Delta	Units	Units Cost	Storage Size (GB)	Archive Size (GB)	Storage Cost	Archive Cost	Storage IO Cost	Archive IO Cost	Infrastructure Cost	Per User Cost	CO <sub>2</sub> e (g)	Gross Revenue	Net Revenue
2026-01-01	1000	47	2	\$27,714.66	733.34	488.89	\$16.87	\$0.73	\$48.96	\$0.83	\$27,782.05	\$27.78	5,119.84	\$45,200.00	\$17,417.95
2026-02-01	1047	49	2	\$27,714.66	767.80	511.87	\$17.66	\$0.76	\$51.26	\$0.87	\$27,785.21	\$26.54	5,142.76	\$47,324.40	\$19,539.19
2026-03-01	1096	51	2	\$27,714.66	803.74	535.83	\$18.49	\$0.80	\$53.66	\$0.91	\$27,788.52	\$25.35	5,166.65	\$49,539.20	\$21,750.68
2026-04-01	1147	53	2	\$27,714.66	841.14	560.76	\$19.35	\$0.83	\$56.16	\$0.96	\$27,791.95	\$24.23	5,191.52	\$51,844.40	\$24,052.45
2026-05-01	1200	56	2	\$27,714.66	880.00	586.67	\$20.24	\$0.87	\$58.75	\$1.00	\$27,795.53	\$23.16	5,217.37	\$54,240.00	\$26,444.47
2026-06-01	1256	59	2	\$27,714.66	921.07	614.05	\$21.18	\$0.91	\$61.49	\$1.05	\$27,799.30	\$22.13	5,244.68	\$56,771.20	\$28,971.90
2026-07-01	1315	61	2	\$27,714.66	964.34	642.89	\$22.18	\$0.95	\$64.38	\$1.10	\$27,803.27	\$21.14	5,273.45	\$59,438.00	\$31,634.73
2026-08-01	1376	64	2	\$27,714.66	1,009.07	672.71	\$23.21	\$1.00	\$67.37	\$1.15	\$27,807.39	\$20.21	5,303.20	\$62,195.20	\$34,387.81
2026-09-01	1440	67	2	\$27,714.66	1,056.01	704.00	\$24.29	\$1.05	\$70.50	\$1.20	\$27,811.70	\$19.31	5,334.41	\$65,088.00	\$37,276.30
2026-10-01	1507	70	2	\$27,714.66	1,105.14	736.76	\$25.42	\$1.09	\$73.78	\$1.26	\$27,816.21	\$18.46	5,367.08	\$68,116.40	\$40,300.19
2026-11-01	1577	74	2	\$27,714.66	1,156.47	770.98	\$26.60	\$1.14	\$77.21	\$1.32	\$27,820.93	\$17.64	5,401.22	\$71,280.40	\$43,459.47
2026-12-01	1651	77	2	\$27,714.66	1,210.74	807.16	\$27.85	\$1.20	\$80.83	\$1.38	\$27,825.92	\$16.85	5,437.31	\$74,625.20	\$46,799.28
2027-01-01	1728	81	2	\$27,714.66	1,267.21	844.80	\$29.15	\$1.25	\$84.60	\$1.44	\$27,831.11	\$16.11	5,474.86	\$78,105.60	\$50,274.49
2027-02-01	1809	85	2	\$27,714.66	1,326.61	884.40	\$30.51	\$1.31	\$88.57	\$1.51	\$27,836.56	\$15.39	5,514.36	\$81,766.80	\$53,930.24
2027-03-01	1894	89	2	\$27,714.66	1,388.94	925.96	\$31.95	\$1.38	\$92.73	\$1.58	\$27,842.29	\$14.70	5,555.81	\$85,608.80	\$57,766.51
2027-04-01	1983	93	2	\$27,714.66	1,454.21	969.47	\$33.45	\$1.44	\$97.09	\$1.66	\$27,848.29	\$14.04	5,599.21	\$89,631.60	\$61,783.31
2027-05-01	2076	97	2	\$27,714.66	1,522.41	1,014.94	\$35.02	\$1.51	\$101.64	\$1.73	\$27,854.56	\$13.42	5,644.57	\$93,835.20	\$65,980.64
2027-06-01	2173	102	2	\$27,714.66	1,593.54	1,062.36	\$36.65	\$1.58	\$106.39	\$1.81	\$27,861.09	\$12.82	5,691.87	\$98,219.60	\$70,358.51
2027-07-01	2275	106	2	\$27,714.66	1,668.34	1,112.23	\$38.37	\$1.65	\$111.38	\$1.90	\$27,867.97	\$12.25	5,741.61	\$102,830.00	\$74,962.03
2027-08-01	2381	111	2	\$27,714.66	1,746.08	1,164.05	\$40.16	\$1.73	\$116.57	\$1.99	\$27,875.11	\$11.71	5,793.31	\$107,621.20	\$79,746.09
2027-09-01	2492	117	2	\$27,714.66	1,827.48	1,218.32	\$42.03	\$1.81	\$122.01	\$2.08	\$27,882.59	\$11.19	5,847.44	\$112,638.40	\$84,755.81
2027-10-01	2609	122	2	\$27,714.66	1,913.28	1,275.52	\$44.01	\$1.89	\$127.74	\$2.18	\$27,890.47	\$10.69	5,904.50	\$117,926.80	\$90,036.33
2027-11-01	2731	128	2	\$27,714.66	2,002.74	1,335.16	\$46.06	\$1.98	\$133.71	\$2.28	\$27,898.70	\$10.22	5,963.99	\$123,441.20	\$95,542.50

Date	Customers	Delta	Units	Units Cost	Storage Size (GB)	Archive Size (GB)	Storage Cost	Archive Cost	Storage IO Cost	Archive IO Cost	Infrastructure Cost	Per User Cost	CO <sub>2</sub> e (g)	Gross Revenue	Net Revenue
2027-12-01	2859	134	2	\$27,714.66	2,096.61	1,397.74	\$48.22	\$2.08	\$139.98	\$2.39	\$27,907.32	\$9.76	6,026.41	\$129,226.80	\$101,319.48
2028-01-01	2993	140	2	\$27,714.66	2,194.88	1,463.25	\$50.48	\$2.17	\$146.54	\$2.50	\$27,916.35	\$9.33	6,091.76	\$135,283.60	\$107,367.25
2028-02-01	3133	147	2	\$27,714.66	2,297.55	1,531.70	\$52.84	\$2.27	\$153.39	\$2.62	\$27,925.79	\$8.91	6,160.03	\$141,611.60	\$113,685.81
2028-03-01	3280	154	2	\$27,714.66	2,405.35	1,603.56	\$55.32	\$2.38	\$160.59	\$2.74	\$27,935.69	\$8.52	6,231.72	\$148,256.00	\$120,320.31
2028-04-01	3434	161	2	\$27,714.66	2,518.28	1,678.85	\$57.92	\$2.49	\$168.13	\$2.87	\$27,946.07	\$8.14	6,306.82	\$155,216.80	\$127,270.73
2028-05-01	3595	168	2	\$27,714.66	2,636.35	1,757.57	\$60.64	\$2.61	\$176.01	\$3.00	\$27,956.92	\$7.78	6,385.34	\$162,494.00	\$134,537.08
2028-06-01	3763	176	2	\$27,714.66	2,759.55	1,839.70	\$63.47	\$2.73	\$184.24	\$3.14	\$27,968.24	\$7.43	6,467.27	\$170,087.60	\$142,119.36
2028-07-01	3939	185	2	\$27,714.66	2,888.62	1,925.74	\$66.44	\$2.86	\$192.85	\$3.29	\$27,980.10	\$7.10	6,553.10	\$178,042.80	\$150,062.70
2028-08-01	4124	193	2	\$27,714.66	3,024.28	2,016.19	\$69.56	\$2.99	\$201.91	\$3.44	\$27,992.57	\$6.79	6,643.31	\$186,404.80	\$158,412.23
2028-09-01	4317	202	2	\$27,714.66	3,165.82	2,110.55	\$72.81	\$3.13	\$211.36	\$3.60	\$28,005.57	\$6.49	6,737.43	\$195,128.40	\$167,122.83
2028-10-01	4519	212	2	\$27,714.66	3,313.95	2,209.30	\$76.22	\$3.28	\$221.25	\$3.77	\$28,019.18	\$6.20	6,835.94	\$204,258.80	\$176,239.62
2028-11-01	4731	222	2	\$27,714.66	3,469.42	2,312.95	\$79.80	\$3.43	\$231.63	\$3.95	\$28,033.47	\$5.93	6,939.33	\$213,841.20	\$185,807.73
2028-12-01	4953	232	2	\$27,714.66	3,632.22	2,421.48	\$83.54	\$3.60	\$242.50	\$4.13	\$28,048.43	\$5.66	7,047.59	\$223,875.60	\$195,827.17
2029-01-01	5185	243	2	\$27,714.66	3,802.35	2,534.90	\$87.45	\$3.76	\$253.86	\$4.33	\$28,064.06	\$5.41	7,160.73	\$234,362.00	\$206,297.94
2029-02-01	5428	255	2	\$27,714.66	3,980.56	2,653.70	\$91.55	\$3.94	\$265.75	\$4.53	\$28,080.44	\$5.17	7,279.24	\$245,345.60	\$217,265.16
2029-03-01	5683	267	2	\$27,714.66	4,167.56	2,778.37	\$95.85	\$4.13	\$278.24	\$4.74	\$28,097.62	\$4.94	7,403.59	\$256,871.60	\$228,773.98
2029-04-01	5950	279	2	\$27,714.66	4,363.36	2,908.91	\$100.36	\$4.32	\$291.31	\$4.97	\$28,115.62	\$4.73	7,533.80	\$268,940.00	\$240,824.38
2029-05-01	6229	292	2	\$27,714.66	4,567.96	3,045.31	\$105.06	\$4.52	\$304.97	\$5.20	\$28,134.42	\$4.52	7,669.86	\$281,550.80	\$253,416.38
2029-06-01	6521	306	2	\$27,714.66	4,782.09	3,188.06	\$109.99	\$4.73	\$319.27	\$5.44	\$28,154.09	\$4.32	7,812.26	\$294,749.20	\$266,595.11
2029-07-01	6827	320	2	\$27,714.66	5,006.49	3,337.66	\$115.15	\$4.96	\$334.25	\$5.70	\$28,174.71	\$4.13	7,961.48	\$308,580.40	\$280,405.69
2029-08-01	7147	335	2	\$27,714.66	5,241.16	3,494.11	\$120.55	\$5.19	\$349.92	\$5.97	\$28,196.28	\$3.95	8,117.54	\$323,044.40	\$294,848.12
2029-09-01	7482	351	2	\$27,714.66	5,486.83	3,657.89	\$126.20	\$5.43	\$366.32	\$6.25	\$28,218.85	\$3.77	8,280.91	\$338,186.40	\$309,967.55
2029-10-01	7833	368	2	\$27,714.66	5,744.23	3,829.49	\$132.12	\$5.69	\$383.50	\$6.54	\$28,242.51	\$3.61	8,452.08	\$354,051.60	\$325,809.09
2029-11-01	8201	385	2	\$27,714.66	6,014.10	4,009.40	\$138.32	\$5.95	\$401.52	\$6.85	\$28,267.31	\$3.45	8,631.54	\$370,685.20	\$342,417.89
2029-12-01	8586	403	2	\$27,714.66	6,296.43	4,197.62	\$144.82	\$6.23	\$420.37	\$7.17	\$28,293.25	\$3.30	8,819.30	\$388,087.20	\$359,793.95
2030-01-01	8989	422	2	\$27,714.66	6,591.97	4,394.65	\$151.62	\$6.53	\$440.10	\$7.50	\$28,320.41	\$3.15	9,015.83	\$406,302.80	\$377,982.39
2030-02-01	9411	442	2	\$27,714.66	6,901.44	4,600.96	\$158.73	\$6.83	\$460.76	\$7.86	\$28,348.84	\$3.01	9,221.62	\$425,377.20	\$397,028.36
2030-03-01	9853	463	2	\$27,714.66	7,225.57	4,817.05	\$166.19	\$7.15	\$482.40	\$8.23	\$28,378.63	\$2.88	9,437.17	\$445,355.60	\$416,976.97
2030-04-01	10316	484	2	\$27,714.66	7,565.11	5,043.41	\$174.00	\$7.49	\$505.07	\$8.61	\$28,409.83	\$2.75	9,662.96	\$466,283.20	\$437,873.37
2030-05-01	10800	507	2	\$27,714.66	7,920.04	5,280.03	\$182.16	\$7.84	\$528.77	\$9.02	\$28,442.45	\$2.63	9,899.00	\$488,160.00	\$459,717.55
2030-06-01	11307	531	2	\$27,714.66	8,291.85	5,527.90	\$190.71	\$8.21	\$553.59	\$9.44	\$28,476.61	\$2.52	10,146.24	\$511,076.40	\$482,599.79
2030-07-01	11838	556	2	\$27,714.66	8,681.25	5,787.50	\$199.67	\$8.59	\$579.59	\$9.88	\$28,512.39	\$2.41	10,405.20	\$535,077.60	\$506,565.21
2030-08-01	12394	582	2	\$27,714.66	9,088.98	6,059.32	\$209.05	\$9.00	\$606.81	\$10.35	\$28,549.86	\$2.30	10,676.34	\$560,208.80	\$531,658.94
2030-09-01	12976	609	2	\$27,714.66	9,515.79	6,343.86	\$218.86	\$9.42	\$635.30	\$10.83	\$28,589.08	\$2.20	10,960.16	\$586,515.20	\$557,926.12
2030-10-01	13585	638	2	\$27,714.66	9,962.39	6,641.59	\$229.13	\$9.86	\$665.12	\$11.34	\$28,630.12	\$2.11	11,257.15	\$614,042.00	\$585,411.88

Date	Customers	Delta	Units	Units Cost	Storage Size (GB)	Archive Size (GB)	Storage Cost	Archive Cost	Storage IO Cost	Archive IO Cost	Infrastructure Cost	Per User Cost	CO <sub>2</sub> e (g)	Gross Revenue	Net Revenue
2030-11-01	14223	668	2	\$27,714.66	10,430.26	6,953.51	\$239.90	\$10.33	\$696.36	\$11.87	\$28,673.11	\$2.02	11,568.29	\$642,879.60	\$614,206.49
2030-12-01	14891	699	2	\$27,714.66	10,920.13	7,280.08	\$251.16	\$10.81	\$729.06	\$12.43	\$28,718.13	\$1.93	11,894.05	\$673,073.20	\$644,355.07
2031-01-01	15590	732	2	\$27,714.66	11,432.73	7,621.82	\$262.95	\$11.32	\$763.29	\$13.01	\$28,765.23	\$1.85	12,234.93	\$704,668.00	\$675,902.77
2031-02-01	16322	767	2	\$27,714.66	11,969.53	7,979.69	\$275.30	\$11.85	\$799.13	\$13.63	\$28,814.56	\$1.77	12,591.91	\$737,754.40	\$708,939.84
2031-03-01	17089	803	2	\$27,714.66	12,532.00	8,354.67	\$288.24	\$12.41	\$836.68	\$14.27	\$28,866.25	\$1.69	12,965.95	\$772,422.80	\$743,556.55
2031-04-01	17892	840	2	\$27,714.66	13,120.87	8,747.25	\$301.78	\$12.99	\$875.99	\$14.94	\$28,920.36	\$1.62	13,357.55	\$808,718.40	\$779,798.04
2031-05-01	18732	880	2	\$27,714.66	13,736.88	9,157.92	\$315.95	\$13.60	\$917.12	\$15.64	\$28,976.96	\$1.55	13,767.19	\$846,686.40	\$817,709.44
2031-06-01	19612	921	2	\$27,714.66	14,382.21	9,588.14	\$330.79	\$14.24	\$960.20	\$16.37	\$29,036.26	\$1.48	14,196.34	\$886,462.40	\$857,426.14
2031-07-01	20533	965	2	\$27,714.66	15,057.62	10,038.41	\$346.33	\$14.91	\$1,005.30	\$17.14	\$29,098.33	\$1.42	14,645.48	\$928,091.60	\$898,993.27
2031-08-01	21498	1010	2	\$27,714.66	15,765.29	10,510.19	\$362.60	\$15.61	\$1,052.54	\$17.95	\$29,163.36	\$1.36	15,116.08	\$971,709.60	\$942,546.24
2031-09-01	22508	1057	2	\$27,714.66	16,505.96	11,003.97	\$379.64	\$16.34	\$1,101.99	\$18.79	\$29,231.42	\$1.30	15,608.63	\$1,017,361.60	\$988,130.18
2031-10-01	23565	1107	2	\$27,714.66	17,281.10	11,520.73	\$397.47	\$17.11	\$1,153.74	\$19.67	\$29,302.65	\$1.24	16,124.09	\$1,065,138.00	\$1,035,835.35
2031-11-01	24672	1159	2	\$27,714.66	18,092.90	12,061.93	\$416.14	\$17.91	\$1,207.94	\$20.60	\$29,377.25	\$1.19	16,663.94	\$1,115,174.40	\$1,085,797.15
2031-12-01	25831	1214	2	\$27,714.66	18,942.84	12,628.56	\$435.69	\$18.75	\$1,264.69	\$21.56	\$29,455.35	\$1.14	17,229.15	\$1,167,561.20	\$1,138,105.85
2032-01-01	27045	1271	2	\$27,714.66	19,833.11	13,222.07	\$456.16	\$19.63	\$1,324.12	\$22.58	\$29,537.16	\$1.09	17,821.18	\$1,222,434.00	\$1,192,896.84
2032-02-01	28316	1330	2	\$27,714.66	20,765.18	13,843.45	\$477.60	\$20.56	\$1,386.35	\$23.64	\$29,622.81	\$1.05	18,441.01	\$1,279,883.20	\$1,250,260.39
2032-03-01	29646	1393	2	\$27,714.66	21,740.52	14,493.68	\$500.03	\$21.52	\$1,451.47	\$24.75	\$29,712.43	\$1.00	19,089.61	\$1,339,999.20	\$1,310,286.77
2032-04-01	31039	1458	2	\$27,714.66	22,762.06	15,174.71	\$523.53	\$22.53	\$1,519.67	\$25.91	\$29,806.30	\$0.96	19,768.94	\$1,402,962.80	\$1,373,156.50
2032-05-01	32497	1527	2	\$27,714.66	23,831.27	15,887.51	\$548.12	\$23.59	\$1,591.05	\$27.13	\$29,904.55	\$0.92	20,479.96	\$1,468,864.40	\$1,438,959.85
2032-06-01	34024	1599	2	\$27,714.66	24,951.07	16,634.05	\$573.87	\$24.70	\$1,665.82	\$28.40	\$30,007.45	\$0.88	21,224.63	\$1,537,884.80	\$1,507,877.35
2032-07-01	35623	1674	3	\$41,571.99	26,123.68	17,415.79	\$600.84	\$25.86	\$1,744.10	\$29.74	\$43,972.54	\$1.23	24,320.50	\$1,610,159.60	\$1,566,187.06
2032-08-01	37297	1752	3	\$41,571.99	27,351.29	18,234.19	\$629.08	\$27.08	\$1,826.06	\$31.13	\$44,085.34	\$1.18	25,136.85	\$1,685,824.40	\$1,641,739.06
2032-09-01	39049	1835	3	\$41,571.99	28,636.09	19,090.73	\$658.63	\$28.35	\$1,911.84	\$32.60	\$44,203.41	\$1.13	25,991.25	\$1,765,014.80	\$1,720,811.39
2032-10-01	40884	1921	3	\$41,571.99	29,981.77	19,987.84	\$689.58	\$29.68	\$2,001.68	\$34.13	\$44,327.06	\$1.08	26,886.12	\$1,847,956.80	\$1,803,629.74
2032-11-01	42805	2011	3	\$41,571.99	31,390.51	20,927.01	\$721.98	\$31.08	\$2,095.73	\$35.73	\$44,456.51	\$1.04	27,822.94	\$1,934,786.00	\$1,890,329.49
2032-12-01	44816	2106	3	\$41,571.99	32,865.25	21,910.17	\$755.90	\$32.54	\$2,194.19	\$37.41	\$44,592.03	\$1.00	28,803.64	\$2,025,683.20	\$1,981,091.17
2033-01-01	46922	2205	3	\$41,571.99	34,409.66	22,939.77	\$791.42	\$34.07	\$2,297.30	\$39.17	\$44,733.95	\$0.95	29,830.67	\$2,120,874.40	\$2,076,140.45
2033-02-01	49127	2308	3	\$41,571.99	36,026.67	24,017.78	\$828.61	\$35.67	\$2,405.26	\$41.01	\$44,882.54	\$0.91	30,905.98	\$2,220,540.40	\$2,175,657.86
2033-03-01	51435	2417	4	\$55,429.32	37,719.21	25,146.14	\$867.54	\$37.34	\$2,518.26	\$42.94	\$58,895.40	\$1.15	34,347.61	\$2,324,862.00	\$2,265,966.60
2033-04-01	53852	2531	4	\$55,429.32	39,491.69	26,327.79	\$908.31	\$39.10	\$2,636.59	\$44.95	\$59,058.27	\$1.10	35,526.30	\$2,434,110.40	\$2,375,052.13
2033-05-01	56383	2650	4	\$55,429.32	41,347.76	27,565.18	\$951.00	\$40.93	\$2,760.51	\$47.07	\$59,228.83	\$1.05	36,760.59	\$2,548,511.60	\$2,489,282.77
2033-06-01	59033	2774	4	\$55,429.32	43,291.11	28,860.74	\$995.70	\$42.86	\$2,890.26	\$49.28	\$59,407.41	\$1.01	38,052.92	\$2,668,291.60	\$2,608,884.19
2033-07-01	61807	2904	4	\$55,429.32	45,325.38	30,216.92	\$1,042.48	\$44.87	\$3,026.07	\$51.60	\$59,594.34	\$0.96	39,405.71	\$2,793,676.40	\$2,734,082.06
2033-08-01	64711	3041	4	\$55,429.32	47,455.00	31,636.66	\$1,091.46	\$46.98	\$3,168.25	\$54.02	\$59,790.04	\$0.92	40,821.90	\$2,924,937.20	\$2,865,147.16
2033-09-01	67752	3184	4	\$55,429.32	49,685.08	33,123.38	\$1,142.76	\$49.19	\$3,317.14	\$56.56	\$59,994.96	\$0.89	42,304.91	\$3,062,390.40	\$3,002,395.44

Date	Customers	Delta	Units	Units Cost	Storage Size (GB)	Archive Size (GB)	Storage Cost	Archive Cost	Storage IO Cost	Archive IO Cost	Infrastructure Cost	Per User Cost	CO <sub>2</sub> e (g)	Gross Revenue	Net Revenue
2033-10-01	70936	3333	5	\$69,286.65	52,020.02	34,680.01	\$1,196.46	\$51.50	\$3,473.03	\$59.22	\$74,066.85	\$1.04	46,173.73	\$3,206,307.20	\$3,132,240.35
2033-11-01	74269	3490	5	\$69,286.65	54,464.24	36,309.49	\$1,252.68	\$53.92	\$3,636.21	\$62.00	\$74,291.46	\$1.00	47,799.13	\$3,356,958.80	\$3,282,667.34
2033-12-01	77759	3654	5	\$69,286.65	57,023.58	38,015.72	\$1,311.54	\$56.45	\$3,807.08	\$64.91	\$74,526.64	\$0.96	49,501.10	\$3,514,706.80	\$3,440,180.16
2034-01-01	81413	3826	5	\$69,286.65	59,703.20	39,802.13	\$1,373.17	\$59.11	\$3,985.98	\$67.96	\$74,772.87	\$0.92	51,283.04	\$3,679,867.60	\$3,605,094.73
2034-02-01	85239	4006	6	\$83,143.98	62,508.95	41,672.63	\$1,437.71	\$61.88	\$4,173.30	\$71.16	\$88,888.03	\$1.04	55,464.95	\$3,852,802.80	\$3,763,914.77
2034-03-01	89245	4194	6	\$83,143.98	65,446.70	43,631.13	\$1,505.27	\$64.79	\$4,369.44	\$74.50	\$89,157.98	\$1.00	57,418.55	\$4,033,874.00	\$3,944,716.02
2034-04-01	93439	4391	6	\$83,143.98	68,522.31	45,681.54	\$1,576.01	\$67.84	\$4,574.77	\$78.00	\$89,440.60	\$0.96	59,463.84	\$4,223,442.80	\$4,134,002.20
2034-05-01	97830	4598	6	\$83,143.98	71,742.40	47,828.27	\$1,650.08	\$71.02	\$4,789.76	\$81.67	\$89,736.50	\$0.92	61,605.19	\$4,421,916.00	\$4,332,179.50
2034-06-01	102428	4814	7	\$97,001.31	75,114.28	50,076.19	\$1,727.63	\$74.36	\$5,014.87	\$85.51	\$103,903.68	\$1.01	66,163.58	\$4,629,745.60	\$4,525,841.92
2034-07-01	107242	5040	7	\$97,001.31	78,644.57	52,429.71	\$1,808.83	\$77.86	\$5,250.57	\$89.52	\$104,228.09	\$0.97	68,511.22	\$4,847,338.40	\$4,743,110.31
2034-08-01	112282	5277	7	\$97,001.31	82,340.59	54,893.73	\$1,893.83	\$81.52	\$5,497.33	\$93.73	\$104,567.72	\$0.93	70,969.07	\$5,075,146.40	\$4,970,578.68
2034-09-01	117559	5525	7	\$97,001.31	86,210.41	57,473.61	\$1,982.84	\$85.35	\$5,755.69	\$98.14	\$104,923.32	\$0.89	73,542.50	\$5,313,666.80	\$5,208,743.48
2034-10-01	123084	5784	8	\$110,858.64	90,262.10	60,174.73	\$2,076.03	\$89.36	\$6,026.19	\$102.75	\$119,152.97	\$0.97	78,552.96	\$5,563,396.80	\$5,444,243.83
2034-11-01	128868	6056	8	\$110,858.64	94,503.72	63,002.48	\$2,173.59	\$93.56	\$6,309.38	\$107.58	\$119,542.74	\$0.93	81,373.64	\$5,824,833.60	\$5,705,290.86
2034-12-01	134924	6341	8	\$110,858.64	98,944.82	65,963.21	\$2,275.73	\$97.96	\$6,605.88	\$112.63	\$119,950.84	\$0.89	84,326.97	\$6,098,564.80	\$5,978,613.96
2035-01-01	141265	6639	9	\$124,715.97	103,594.91	69,063.27	\$2,382.68	\$102.56	\$6,916.33	\$117.93	\$134,235.47	\$0.95	89,735.36	\$6,385,178.00	\$6,250,942.53
2035-02-01	147904	6951	9	\$124,715.97	108,463.54	72,309.02	\$2,494.66	\$107.38	\$7,241.38	\$123.47	\$134,682.86	\$0.91	92,973.00	\$6,685,260.80	\$6,550,577.94
2035-03-01	154855	7278	10	\$138,573.30	113,560.96	75,707.31	\$2,611.90	\$112.43	\$7,581.70	\$129.27	\$149,008.60	\$0.96	98,678.87	\$6,999,446.00	\$6,850,437.40
2035-04-01	162133	7620	10	\$138,573.30	118,898.19	79,265.46	\$2,734.66	\$117.71	\$7,938.03	\$135.35	\$149,499.05	\$0.92	102,228.13	\$7,328,411.60	\$7,178,912.55
2035-05-01	169753	7978	10	\$138,573.30	124,486.22	82,990.82	\$2,863.18	\$123.24	\$8,311.11	\$141.71	\$150,012.54	\$0.88	105,944.17	\$7,672,835.60	\$7,522,823.06
2035-06-01	177731	8353	11	\$152,430.63	130,336.79	86,891.19	\$2,997.75	\$129.03	\$8,701.71	\$148.37	\$164,407.49	\$0.93	112,150.88	\$8,033,441.20	\$7,869,033.71
2035-07-01	186084	8745	11	\$152,430.63	136,462.36	90,974.90	\$3,138.63	\$135.10	\$9,110.67	\$155.34	\$164,970.37	\$0.89	116,224.38	\$8,410,996.80	\$8,246,026.43
2035-08-01	194829	9156	12	\$166,287.96	142,875.39	95,250.26	\$3,286.13	\$141.45	\$9,538.83	\$162.64	\$179,417.01	\$0.92	122,805.13	\$8,806,270.80	\$8,626,853.79
2035-09-01	203985	9587	12	\$166,287.96	149,589.83	99,726.55	\$3,440.57	\$148.09	\$9,987.11	\$170.28	\$180,034.01	\$0.88	127,270.23	\$9,220,122.00	\$9,040,087.99
2035-10-01	213572	10037	13	\$180,145.29	156,620.34	104,413.56	\$3,602.27	\$155.05	\$10,456.49	\$178.29	\$194,537.38	\$0.91	134,261.60	\$9,653,454.40	\$9,458,917.02
2035-11-01	223609	10509	14	\$194,002.62	163,980.84	109,320.56	\$3,771.56	\$162.34	\$10,947.90	\$186.66	\$209,071.08	\$0.93	141,472.42	\$10,107,126.80	\$9,898,055.72
2035-12-01	234118	11003	14	\$194,002.62	171,687.49	114,458.32	\$3,948.81	\$169.97	\$11,462.42	\$195.44	\$209,779.26	\$0.90	146,597.34	\$10,582,133.60	\$10,372,354.34
2036-01-01	245121	11520	15	\$207,859.95	179,756.40	119,837.60	\$4,134.40	\$177.96	\$12,001.12	\$204.62	\$224,378.05	\$0.92	154,279.25	\$11,079,469.20	\$10,855,091.15
2036-02-01	256641	12062	16	\$221,717.28	188,204.44	125,469.63	\$4,328.70	\$186.32	\$12,565.14	\$214.24	\$239,011.69	\$0.93	162,213.28	\$11,600,173.20	\$11,361,161.51
2036-03-01	268703	12629	16	\$221,717.28	197,049.96	131,366.64	\$4,532.15	\$195.08	\$13,155.70	\$224.31	\$239,824.52	\$0.89	168,095.55	\$12,145,375.60	\$11,905,551.08
2036-04-01	281332	13222	17	\$235,574.61	206,311.28	137,540.85	\$4,745.16	\$204.25	\$13,774.01	\$234.85	\$254,532.88	\$0.90	176,570.41	\$12,716,206.40	\$12,461,673.52
2036-05-01	294554	13844	18	\$249,431.94	216,007.47	144,004.98	\$4,968.17	\$213.85	\$14,421.36	\$245.89	\$269,281.21	\$0.91	185,334.46	\$13,313,840.80	\$13,044,559.59
2036-06-01	308398	14494	19	\$263,289.27	226,159.79	150,773.19	\$5,201.68	\$223.90	\$15,099.17	\$257.45	\$284,071.45	\$0.92	194,401.84	\$13,939,589.60	\$13,655,518.15
2036-07-01	322892	15175	19	\$263,289.27	236,788.78	157,859.19	\$5,446.14	\$234.42	\$15,808.79	\$269.54	\$285,048.17	\$0.88	201,470.12	\$14,594,718.40	\$14,309,670.23
2036-08-01	338067	15889	20	\$277,146.60	247,917.18	165,278.12	\$5,702.10	\$245.44	\$16,551.76	\$282.21	\$299,928.11	\$0.89	211,186.58	\$15,280,628.40	\$14

Date	Customers	Delta	Units	Units Cost	Storage Size (GB)	Archive Size (GB)	Storage Cost	Archive Cost	Storage IO Cost	Archive IO Cost	Infrastructure Cost	Per User Cost	CO <sub>2</sub> e (g)	Gross Revenue	Net Revenue
2036-09-01	353956	16635	21	\$291,003.93	259,569.17	173,046.12	\$5,970.09	\$256.97	\$17,329.69	\$295.48	\$314,856.16	\$0.89	221,251.24	\$15,998,811.20	\$15,683,955.04
2036-10-01	370591	17417	22	\$304,861.26	271,768.24	181,178.83	\$6,250.67	\$269.05	\$18,144.14	\$309.36	\$329,834.48	\$0.89	231,679.71	\$16,750,713.20	\$16,420,878.72
2036-11-01	388008	18236	23	\$318,718.59	284,540.78	189,693.85	\$6,544.44	\$281.70	\$18,996.87	\$323.90	\$344,865.50	\$0.89	242,489.53	\$17,537,961.60	\$17,193,096.10
2036-12-01	406244	19093	24	\$332,575.92	297,913.92	198,609.28	\$6,852.02	\$294.93	\$19,889.71	\$339.13	\$359,951.71	\$0.89	253,698.75	\$18,362,228.80	\$18,002,277.09
2037-01-01	425337	19990	25	\$346,433.25	311,915.53	207,943.69	\$7,174.06	\$308.80	\$20,824.50	\$355.06	\$375,095.67	\$0.88	265,325.90	\$19,225,232.40	\$18,850,136.73
2037-02-01	445327	20930	27	\$374,147.91	326,574.95	217,716.63	\$7,511.22	\$323.31	\$21,803.21	\$371.75	\$404,157.40	\$0.91	279,706.58	\$20,128,780.40	\$19,724,623.00
2037-03-01	466257	21914	28	\$388,005.24	341,923.70	227,949.13	\$7,864.25	\$338.50	\$22,827.94	\$389.22	\$419,425.16	\$0.90	292,229.58	\$21,074,816.40	\$20,655,391.24
2037-04-01	488171	22944	29	\$401,862.57	357,994.05	238,662.70	\$8,233.86	\$354.41	\$23,900.85	\$407.52	\$434,759.22	\$0.89	305,232.45	\$22,065,329.20	\$21,630,569.98
2037-05-01	511115	24022	31	\$429,577.23	374,819.75	249,879.83	\$8,620.85	\$371.07	\$25,024.19	\$426.67	\$464,020.02	\$0.91	321,053.70	\$23,102,398.00	\$22,638,377.98
2037-06-01	535137	25151	32	\$443,434.56	392,435.98	261,623.98	\$9,026.03	\$388.51	\$26,200.31	\$446.72	\$479,496.13	\$0.90	335,084.58	\$24,188,192.40	\$23,708,696.27
2037-07-01	560288	26333	33	\$457,291.89	410,880.15	273,920.10	\$9,450.24	\$406.77	\$27,431.70	\$467.72	\$495,048.32	\$0.88	349,666.04	\$25,325,017.60	\$24,829,969.28
2037-08-01	586621	27571	35	\$485,006.55	430,191.12	286,794.08	\$9,894.40	\$425.89	\$28,720.96	\$489.70	\$524,537.50	\$0.89	367,140.00	\$26,515,269.20	\$25,990,731.70
2037-09-01	614192	28867	37	\$512,721.21	450,409.97	300,273.31	\$10,359.43	\$445.91	\$30,070.84	\$512.72	\$554,110.10	\$0.90	385,217.70	\$27,761,478.40	\$27,207,368.30
2037-10-01	643059	30223	38	\$526,578.54	471,579.22	314,386.14	\$10,846.32	\$466.86	\$31,484.17	\$536.81	\$569,912.71	\$0.89	401,611.33	\$29,066,266.80	\$28,496,354.09
2037-11-01	673282	31644	40	\$554,293.20	493,742.87	329,161.92	\$11,356.09	\$488.81	\$32,963.89	\$562.04	\$599,664.02	\$0.89	420,982.33	\$30,432,346.40	\$29,832,682.38
2037-12-01	704926	33131	42	\$582,007.86	516,948.60	344,632.40	\$11,889.82	\$511.78	\$34,513.18	\$588.46	\$629,511.09	\$0.89	441,046.31	\$31,862,655.20	\$31,233,144.11
2038-01-01	738057	34688	44	\$609,722.52	541,244.80	360,829.87	\$12,448.63	\$535.83	\$36,135.27	\$616.12	\$659,458.37	\$0.89	461,835.45	\$33,360,176.40	\$32,700,718.03
2038-02-01	772745	36319	46	\$637,437.18	566,682.81	377,788.54	\$13,033.70	\$561.02	\$37,833.60	\$645.07	\$689,510.57	\$0.89	483,383.89	\$34,928,074.00	\$34,238,563.43
2038-03-01	809064	38026	48	\$665,151.84	593,316.89	395,544.59	\$13,646.29	\$587.38	\$39,611.77	\$675.39	\$719,672.68	\$0.89	505,727.72	\$36,569,692.80	\$35,850,020.12
2038-04-01	847090	39813	50	\$692,866.50	621,202.78	414,135.19	\$14,287.66	\$614.99	\$41,473.53	\$707.14	\$749,949.82	\$0.89	528,904.00	\$38,288,468.00	\$37,538,518.18
2038-05-01	886903	41684	53	\$734,438.49	650,399.14	433,599.43	\$14,959.18	\$643.90	\$43,422.77	\$740.37	\$794,204.71	\$0.90	555,267.83	\$40,088,015.60	\$39,293,810.89
2038-06-01	928587	43643	55	\$762,153.15	680,967.58	453,978.39	\$15,662.25	\$674.16	\$45,463.62	\$775.17	\$824,728.35	\$0.89	580,228.00	\$41,972,132.40	\$41,147,404.05
2038-07-01	972230	45694	58	\$803,725.14	712,972.62	475,315.08	\$16,398.37	\$705.84	\$47,600.38	\$811.60	\$869,241.33	\$0.89	608,459.61	\$43,944,796.00	\$43,075,554.67
2038-08-01	1017924	47842	60	\$831,439.80	746,481.74	497,654.49	\$17,169.08	\$739.02	\$49,837.56	\$849.75	\$900,035.20	\$0.88	635,375.34	\$46,010,164.80	\$45,110,129.60
2038-09-01	1065766	50091	63	\$873,011.79	781,566.07	521,044.05	\$17,976.02	\$773.75	\$52,179.90	\$889.68	\$944,831.15	\$0.89	665,654.67	\$48,172,623.20	\$47,227,792.05
2038-10-01	1115857	52445	66	\$914,583.78	818,299.67	545,533.12	\$18,820.89	\$810.12	\$54,632.36	\$931.50	\$989,778.65	\$0.89	697,030.76	\$50,436,736.40	\$49,446,957.75
2038-11-01	1168302	54910	69	\$956,155.77	856,759.55	571,173.04	\$19,705.47	\$848.19	\$57,200.07	\$975.28	\$1,034,884.78	\$0.89	729,554.83	\$52,807,250.40	\$51,772,365.62
2038-12-01	1223212	57490	72	\$997,727.76	897,027.11	598,018.07	\$20,631.62	\$888.06	\$59,888.46	\$1,021.12	\$1,080,157.02	\$0.88	763,281.00	\$55,289,182.40	\$54,209,025.38
2039-01-01	1280702	60192	76	\$1,053,157.08	939,186.68	626,124.45	\$21,601.29	\$929.79	\$62,703.17	\$1,069.11	\$1,139,460.45	\$0.89	800,581.45	\$57,887,730.40	\$56,748,269.95
2039-02-01	1340894	63022	79	\$1,094,729.07	983,327.72	655,551.82	\$22,616.54	\$973.49	\$65,650.17	\$1,119.35	\$1,185,088.63	\$0.88	836,883.49	\$60,608,408.80	\$59,423,320.17
2039-03-01	1403916	65984	83	\$1,150,158.39	1,029,544.11	686,362.74	\$23,679.51	\$1,019.25	\$68,735.73	\$1,171.96	\$1,244,764.85	\$0.89	876,881.72	\$63,457,003.20	\$62,212,238.35
2039-04-01	1469900	69085	87	\$1,205,587.71	1,077,932.65	718,621.77	\$24,792.45	\$1,067.15	\$71,966.30	\$1,227.05	\$1,304,640.67	\$0.89	918,324.43	\$66,439,480.00	\$65,134,839.33
2039-05-01	1538985	72332	91	\$1,261,017.03	1,128,595.26	752,396.84	\$25,957.69	\$1,117.31	\$75,348.71	\$1,284.72	\$1,364,725.45	\$0.89	961,279.40	\$69,562,122.00	\$68,197,396.55
2039-06-01	1611317	75731	95	\$1,316,446.35	1,181,639.02	787,759.35	\$27,177.70								

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2039-08-01	1766339	83017	104	\$1,441,162.32	1,295,322.45	863,548.30	\$29,792.42	\$1,282.37	\$86,479.96	\$1,474.51	\$1,560,191.57	\$0.88	1,102,262.06	\$79,838,522.80	\$78,278,331.23
2039-09-01	1849356	86919	109	\$1,510,448.97	1,356,201.93	904,134.62	\$31,192.64	\$1,342.64	\$90,544.47	\$1,543.81	\$1,635,072.53	\$0.88	1,154,327.33	\$83,590,891.20	\$81,955,818.67
2039-10-01	1936275	91004	114	\$1,579,735.62	1,419,942.88	946,628.59	\$32,658.69	\$1,405.74	\$94,800.02	\$1,616.37	\$1,710,216.44	\$0.88	1,208,295.48	\$87,519,630.00	\$85,809,413.56
2039-11-01	2027279	95282	120	\$1,662,879.60	1,486,679.52	991,119.68	\$34,193.63	\$1,471.81	\$99,255.58	\$1,692.34	\$1,799,492.96	\$0.89	1,266,571.84	\$91,633,010.80	\$89,833,517.84
2039-12-01	2122561	99760	125	\$1,732,166.25	1,556,553.37	1,037,702.25	\$35,800.73	\$1,540.99	\$103,920.59	\$1,771.88	\$1,875,200.43	\$0.88	1,324,618.37	\$95,939,757.20	\$94,064,556.77
2040-01-01	2222321	104449	131	\$1,815,310.23	1,629,711.11	1,086,474.07	\$37,483.36	\$1,613.41	\$108,804.84	\$1,855.15	\$1,965,066.99	\$0.88	1,387,164.76	\$100,448,909.20	\$98,483,842.21
2040-02-01	2326770	109358	137	\$1,898,454.21	1,706,307.47	1,137,538.31	\$39,245.07	\$1,689.24	\$113,918.66	\$1,942.35	\$2,055,249.53	\$0.88	1,451,997.84	\$105,170,004.00	\$103,114,754.47
2040-03-01	2436128	114498	144	\$1,995,455.52	1,786,503.78	1,191,002.52	\$41,089.59	\$1,768.64	\$119,272.83	\$2,033.64	\$2,159,620.21	\$0.89	1,521,540.97	\$110,112,985.60	\$107,953,365.39
2040-04-01	2550626	119879	150	\$2,078,599.50	1,870,469.45	1,246,979.63	\$43,020.80	\$1,851.76	\$124,878.65	\$2,129.22	\$2,250,479.93	\$0.88	1,591,274.63	\$115,288,295.20	\$113,037,815.27
2040-05-01	2670505	125513	157	\$2,175,600.81	1,958,381.20	1,305,587.47	\$45,042.77	\$1,938.80	\$130,747.92	\$2,229.29	\$2,355,559.59	\$0.88	1,665,948.53	\$120,706,826.00	\$118,351,266.41
2040-06-01	2796018	131412	165	\$2,286,459.45	2,050,424.58	1,366,949.72	\$47,159.77	\$2,029.92	\$136,893.04	\$2,334.07	\$2,474,876.24	\$0.89	1,745,686.04	\$126,380,013.60	\$123,905,137.36
2040-07-01	2927430	137589	172	\$2,383,460.76	2,146,793.91	1,431,195.94	\$49,376.26	\$2,125.33	\$143,326.97	\$2,443.77	\$2,580,733.09	\$0.88	1,825,984.23	\$132,319,836.00	\$129,739,102.91
2040-08-01	3065019	144055	180	\$2,494,319.40	2,247,693.07	1,498,462.05	\$51,696.94	\$2,225.22	\$150,063.33	\$2,558.62	\$2,700,863.51	\$0.88	1,911,610.83	\$138,538,858.80	\$135,837,995.29
2040-09-01	3209074	150826	189	\$2,619,035.37	2,353,333.99	1,568,889.33	\$54,126.68	\$2,329.80	\$157,116.26	\$2,678.88	\$2,835,286.99	\$0.88	2,002,706.79	\$145,050,144.80	\$142,214,857.81
2040-10-01	3359900	157915	198	\$2,743,751.34	2,463,940.34	1,642,626.89	\$56,670.63	\$2,439.30	\$164,500.70	\$2,804.79	\$2,970,166.76	\$0.88	2,097,104.76	\$151,867,480.00	\$148,897,313.24
2040-11-01	3517815	-45731	207	\$2,868,467.31	2,579,745.31	1,719,830.21	\$59,334.14	\$2,553.95	\$172,232.22	\$2,936.61	\$3,105,524.23	\$0.88	2,194,959.81	\$159,005,238.00	\$155,899,713.77
2040-12-01	3472084	163187	204	\$2,826,895.32	2,546,209.06	1,697,472.71	\$58,562.81	\$2,520.75	\$169,993.23	\$2,898.44	\$3,060,870.54	\$0.88	2,165,709.96	\$156,938,196.80	\$153,877,326.26