

Insights and Suggestions

General Insights-

- In the initial year of 2003, a total of 36,439 sales [transactions](#) were recorded. This figure experienced a decline, reaching 19,590 sales in 2005.

	Year	Total_quantity_sales
►	2003	36439
	2004	49487
	2005	19590

- The preponderance of [clients](#) hailed from the United States, and it is noteworthy that this nation yielded the [highest revenue](#), followed by Spain and France.

	country	Amount
►	USA	3040029.52
	Spain	994438.53
	France	965750.58
	Australia	509385.82
	New Zealand	392486.59
	UK	391503.90
	Italy	325254.55
	Finland	295149.35
	Norway	270846.30
	Singapore	261671.60

- Interestingly, six countries—Poland, Portugal, Netherlands, South Africa, Russia, and Israel—did not contribute to revenue generation, while Hong Kong and Ireland generated the [least revenue](#).

	country	Amount
►	Poland	NULL
	Russia	NULL
	Israel	NULL
	South Africa	NULL
	Netherlands	NULL
	Portugal	NULL
	Hong Kong	45480.79
	Ireland	49898.27
	Philippines	87468.30
	Belgium	91471.03

- During this period, [six clients](#) canceled their orders, with one [prominent client](#) opting for a more favorable offer from a competitor.

	status	number_of_customers
▶	Shipped	303
	Resolved	4
	Cancelled	6
	On Hold	4
	Disputed	3
	In Process	6

	customerNumber	status	Quantity_ordered	comments
▶	141	Cancelled	1133	This customer found a better offer from one of our competitors. Will call back to renegotiate.
	362	On Hold	609	Customer credit limit exceeded. Will ship when a payment is received.
	328	On Hold	597	Customer credit limit exceeded. Will ship when a payment is received.
	450	On Hold	571	Customer credit limit exceeded. Will ship when a payment is received.
	448	Cancelled	550	Customer called to cancel. The warehouse was notified in time and the order didn't ship. They have ...
	282	In Process	532	NULL
	131	Cancelled	454	Order was mistakenly placed. The warehouse noticed the lack of documentation.
	201	Cancelled	429	Customer disputed the order and we agreed to cancel it. We must be more cautious with this custom...
	119	In Process	427	NULL
	357	Cancelled	308	Customer heard complaints from their customers and called to cancel this order. Will notify the Sales ...
	496	Cancelled	288	Customer cancelled due to urgent budgeting issues. Must be cautious when dealing with them in the ...
	144	On Hold	217	The outstanding balance for this customer exceeds their credit limit. Order will be shipped when a pa...
	145	Disputed	174	Customer claims container with shipment was damaged during shipping and some items were missing....
	471	Disputed	164	Customer claims the scales of the models don't match what was discussed. I keep all the paperwork t...
	314	In Process	111	NULL
	157	In Process	76	NULL
	124	In Process	75	Custom shipping instructions were sent to warehouse

	productCode	quantityOrdered	priceEach
▶	S18_1662	49	157.69
	S18_3029	32	81.72
	S18_3856	34	85.75
	S24_1785	34	98.48
	S24_2841	24	63.71
	S24_3420	46	65.75
	S24_3816	49	82.18
	S24_3949	48	58.69
	S32_4289	40	63.97
	S50_1341	49	35.78
	S700_1691	40	87.69
	S700_2047	44	83.28
	S700_2466	33	81.77
	S700_3167	27	64.80
	S700_4002	35	64.41
	S72_1253	21	41.71

- To maintain competitiveness, a 5% [price reduction](#) is proposed for select products while ensuring continued profitability.

	productName	buyPrice	priceEach	price_difference	Price_reduction
▶	1980s Black Hawk Helicopter	77.27	134.04	56.77	127.3380
	1999 Yamaha Speed Boat	51.61	80.86	29.25	76.8170
	1941 Chevrolet Special Deluxe Cabriolet	64.58	94.22	29.64	89.5090
	1928 British Royal Navy Airplane	66.74	107.23	40.49	101.8685
	1900s Vintage Bi-Plane	34.25	65.77	31.52	62.4815
	1937 Horch 930V Limousine	26.30	55.89	29.59	53.0955
	1940 Ford Delivery Sedan	48.64	75.47	26.83	71.6965
	Corsair F4U (Bird Cage)	29.34	55.96	26.62	53.1620
	1928 Ford Phaeton Deluxe	33.02	65.35	32.33	62.0825
	1930 Buick Marquette Phaeton	27.06	35.78	8.72	33.9910
	American Airlines: B767-300	51.15	91.34	40.19	86.7730
	HMS Bounty	39.83	85.09	45.26	80.8355
	America West Airlines B757-200	68.80	99.72	30.92	94.7340
	F/A 18 Hornet 1/72	54.40	76.00	21.60	72.2000
	American Airlines: MD-11S	36.27	70.33	34.06	66.8135
	Boeing X-32A JSF	32.77	43.70	10.93	41.5150

Problem-specific Insights:

- Significantly, the profit percentage exhibited minimal variance between the [least](#) and [most](#) popular products. Price of the product also did not seem to influence the popularity of the product.

	productName	buyPrice	priceEach	MSRP	profit_percentage	profit
▶	1957 Ford Thunderbird	34.21	62.00	71.27	81.233557	27.79
	1970 Chevy Chevelle SS 454	49.24	72.02	73.49	46.263201	22.78
	1936 Mercedes Benz 500k Roadster	21.75	35.29	41.03	62.252874	13.54
	1911 Ford Town Car	33.30	55.09	60.54	65.435435	21.79
	1999 Indy 500 Monte Carlo SS	56.76	126.72	132.00	123.255814	69.96
	1932 Alfa Romeo 8C2300 Spider Sport	43.26	75.46	92.03	74.433657	32.20
	1992 Porsche Cayenne Turbo Silver	69.78	106.45	118.28	52.550874	36.67
	1969 Chevrolet Camaro Z28	50.51	80.47	85.61	59.314987	29.96
	1952 Citroen-15CV	72.82	112.74	117.44	54.820104	39.92
	1928 Mercedes-Benz SSK	72.56	167.06	168.75	130.237045	94.50

	productName	buyPrice	priceEach	MSRP	profit_percentage	profit
▶	1992 Ferrari 360 Spider red	77.90	165.95	169.34	113.029525	88.05
	1937 Lincoln Berline	60.62	95.55	102.74	57.621247	34.93
	American Airlines: MD-11S	36.27	70.33	74.03	93.906810	34.06
	1941 Chevrolet Special Deluxe Cabriolet	64.58	94.22	105.87	45.896562	29.64
	1930 Buick Marquette Phaeton	27.06	35.78	43.64	32.224686	8.72
	1940s Ford truck	84.76	98.07	121.08	15.703162	13.31
	1969 Harley Davidson Ultimate Chopper	48.81	81.35	95.70	66.666667	32.54
	1957 Chevy Pickup	55.70	111.39	118.50	99.982047	55.69
	1964 Mercedes Tour Bus	74.86	122.73	122.73	63.946033	47.87
	1956 Porsche 356A Coupe	98.30	132.00	140.43	34.282808	33.70

- We also observed that a product named 1985 Toyota Supra (product code- S18_3233) had not been sold at all, on further investigating the product we observed that this product had not been priced yet. So, the reason why it didn't sell could be that its newly launched product or maybe there has been an error with the data entry.
- Inventory primarily resides in [warehouses](#) A, B, and C, with warehouses A and B serving as primary shipping hubs, followed by warehouses C and D.

warehouseCode	warehouseName	warehousePctCap	warehouseCode	quantity_shipped	warehouseCode	stock
a	North	72	a	24650	a	131688
b	East	67	b	35582	b	219183
c	West	50	c	22933	c	124880
d	South	75	d	22351	d	79380
NULL	NULL	NULL				

- To address the significant disparity between available stock and ordered quantities over the past three years, a [reduction in stock](#) levels (20%-30%) is suggested for the 68 listed products that may potentially become obsolete with time. However, precise numbers should be discussed with the supplier.

productName	quantityInStock	reduction_stock	totalQuantityOrdered	difference
1992 Ferrari 360 Spider red	8347	5842.9	1808	6539
1937 Lincoln Berline	8693	6085.1	1111	7582
American Airlines: MD-11S	8820	6174.0	1085	7735
1930 Buick Marquette Phaeton	7062	4943.4	1074	5988
1969 Harley Davidson Ultimate Chopper	7933	5553.1	1057	6876
1957 Chevy Pickup	6125	4287.5	1056	5069
1964 Mercedes Tour Bus	8258	5780.6	1053	7205
1956 Porsche 356A Coupe	6600	4620.0	1052	5548
Corsair F4U (Bird Cage)	6812	4768.4	1051	5761
1980s Black Hawk Helicopter	5330	3731.0	1040	4290

- Approximately 24 products are maintaining [optimal stock](#) levels for received orders, while five products require [restocking](#) in the near term, and 11 products demand [immediate](#) replenishment to meet market demands. As the demand for stocks of each product is different from the other, it won't be feasible to reduce the stocks for each and every product by 5%.

productName	productVendor	quantityInStock	totalQuantityOrdered	difference
F/A 18 Hornet 1/72	Motor City Art Classics	551	1047	-496
1960 BSA Gold Star DBD34	Highway 66 Mini Classics	15	1015	-1000
1997 BMW F650 ST	Exoto Designs	178	1014	-836
2002 Yamaha YZR M1	Autoart Studio Design	600	992	-392
1996 Peterbilt 379 Stake Bed with Outrigger	Red Start Diecast	814	988	-174
1928 Ford Phaeton Deluxe	Highway 66 Mini Classics	136	972	-836
Pont Yacht	Unimax Art Galleries	414	958	-544
1968 Ford Mustang	Autoart Studio Design	68	933	-865
The Mayflower	Studio M Art Models	737	898	-161
1928 Mercedes-Benz SSK	Gearbox Collectibles	548	880	-332

	productName	productVendor	quantityInStock	totalQuantityOrdered	difference
►	1970 Chevy Chevelle SS 454	Unimax Art Galleries	1005	803	202
	P-51-D Mustang	Gearbox Collectibles	992	917	75
	1969 Ford Falcon	Second Gear Diecast	1049	965	84
	Diamond T620 Semi-Skirted Tanker	Highway 66 Mini Classics	1016	979	37
	1957 Corvette Convertible	Classic Metal Creations	1249	1013	236

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	The Mayflower	Studio M Art Models	737	898	-161
	1928 Mercedes-Benz SSK	Gearbox Collectibles	548	880	-332
	1911 Ford Town Car	Motor City Art Classics	540	832	-292