				Exe	cutive	<b>Executive Overview</b>	ew				
1	. What is the ove	erall trend in sa	1. What is the overall trend in sales and profit fro	om 2014 to 2017?	17?	2. Are w	e growing m	ore through v	2. Are we growing more through volume (quantity) or price (margin)?	ty) or price (	margin)?
A: Tota	I Sales steadily	increased acros	A: Total Sales steadily increased across the 4 years, with especially strong Q4	th especially s	trong Q4	A: Sales pe	er Product a	nd Profit per Pi	A: Sales per Product and Profit per Product each saw a slight increase each	w a slight inc	rease each
spike	s every year, like	ely driven by the	spikes every year, likely driven by the holidays. Total Profit grew as well but	Profit grew as v		year, while Q	<b>Juantity Ord</b>	ered increased	year, while Quantity Ordered increased significantly, indicating that most of the	ndicating th	at most of the
sho	wed more volatil	ity, suggesting d	showed more volatility, suggesting discount-heavy promotions or margin	romotions or r		growth cam	e from the q	uantity sold. To	growth came from the quantity sold. Total Sales and Quantity Ordered follow a	<b>Quantity Orc</b>	lered follow a
pres	sures in certain	categories. Profi	pressures in certain categories. Profit Margins overall	I remained about the	out the	similar grow	vth trend the	ir it's peaks in	similar growth trend their it's peaks in Q4, however Total Profit doesn't see the	otal Profit do	esn't see the
same	while Total Quar	ntity saw an incr	same while Total Quantity saw an increase, indicating t	the business grew in a	grew in a	same level	of growth in	Q4, indicating	same level of growth in Q4, indicating that there were likely heavy promotions	e likely heav	y promotions
		sustaina	sustainable way.					Ë	in Q4.		
	YoY Total Sales	ales	YoY	YoY Total Profit		X	<b>YoY Profit Margin</b>	rgin	YoY	YoY Quantity Ordered	dered
1) OSE	X	1000 1000 1000 1000 1000 1000 1000 100	201	No.	No. 1100.00 11	No. 100		PUPE SUPE	0011 00011		ment many many many many many many many many
% E	ride Mor Aus May has hel Aug Sep Cut Nov Des	tig Seo Cut New Dec	Jun Yolk Mai Apr May	e An Al Ang Say Oct New Dec	New Dear	Jens of the Mar A	f ier beit Mas Apri Mas Ais Auf Sep Sep Set New Ser	Sep Out New See	U Ann bette Algor Aper	on belt May Apr May lies 11d Aug Sep Dat Nov. De-	ap Oct Not On
					KPI's by Year	y Year					
Year	Total Sales	Sales per Customer	Sales per Customer Sales per Product	Total Profit P	Profit per Customer		Profit per Product Pro	Profit Margin Quan	Quantity Ordered Total Customers		Total Products
2017	7 \$724,994.51	\$1,050.72	\$502.07	\$92,775.45	5.1	\$134.46	\$64.25	12.8%	12051	069	1444
2016	6 \$601,265,55	\$946.87	\$460.39	\$80,130.74	51	\$126.19	\$61.36	13.3%	2056	635	1306
2015	5 \$464,426.18	\$817.65	\$389.62	\$60,907.79	\$1	\$107.23	\$51.10	13.1%	7777	898	1192
2014	4 \$481,763.83	\$816.55	\$411.76	\$49,044.48	S	\$83.13	\$41.92	10.2%	7414	290	1170
Tota	Total \$2,272,450.07	\$2,865.64	\$1,285.32	\$282,858.46	\$3	\$356,69	\$159.99	12.4%	36749	793	1768

	Customer	<b>Customer Insights</b>	
3. Which customer segment con	3. Which customer segment contributes the most to profitability?	4. Do customers tend to be one-time buyers or repeat customers?	ime buyers or repeat customers?
<b>A:</b> From 2014 to 2017, the Consumer	A: From 2014 to 2017, the Consumer segment has the highest Total Profit,	A: When looking at Total Custome	A: When looking at Total Customers and Total Profit grouped by the
while the Home Office segment has t	while the Home Office segment has the lowest Total Profit. However this is	Number of Months the customer re	Number of Months the customer returned, we can see that these two
due to the Consumer segment havin	due to the Consumer segment having the largest Quantity Ordered, when	metrics follow a similar trend, with b	metrics follow a similar trend, with both of them peaking at around 5 to 8
we look at Profit Margin, we can se	we look at Profit Margin, we can see that Home Office is actually the	months of retention, suggesting that	months of retention, suggesting that the customers generating the most
largest, meaning it is the most effici	largest, meaning it is the most efficient segment. When we look at 2017	profit tend to be repeat customers. I	profit tend to be repeat customers. In 2017 alone (the most recent year),
alone (the most recent year), we can see that the Con	sumer segment now	Total Customers and Total Profit both peak at customers with 2 months of	peak at customers with 2 months of
has the largest Profit Margin, indicating that it is both	ting that it is both the most profitable	retention, indicating that even in the	retention, indicating that even in the last year, the customers generating
and the mo	and the most efficient.	the most profit were repeat customers.	repeat customers.
Total Sales by Segment	2017 Profit by Segment	Total Profit Margin by Segment	2017 Profit Margin by Segment
Segment: Segment: Container Conjugate Conjugat	Total Customer Retention Retention  By Months Ordered  **Transchools**  **	2017 Customer Retention by Months Ordered  **Trial Cationers** **Trial Cationers*** **Trial Cationers************************************	15.7% (20.95%)  15.7% (20.95%)  11.7% (20.95%)

			Pro	duct 8	Pr	Product & Profitability	lity								
5. Which products drive the most sales vs the	ost sales vs		most profit?	t?		6. Do w	6. Do we have any products with duplicated SKUs or inconsistent IDs?	ny produc	ts with d	uplica	ted SKI	Js or in	consist	ent IDs?	
					1	A: Yes, there were multiple cases of one product ID being linked to several product	were mu	Itiple cas	es of one	produ	ct ID be	ing link	ed to se	everal prod	duct
A: We can see that the two items the bring in the most Total	in the most		ales and	Sales and the two items	ns	names, an	d vice ve	rsa. After	cleaning	, we st	andardi;	zed all F	Product	names, and vice versa. After cleaning, we standardized all Product IDs and all	=
that bring in the most Total Profit are actually the same,	ctually the s		ind both.	and both are in the		Product Names to the most common one, and aggregated duplicates rows. This	mes to th	e most co	ommon c	ne, an	d aggreg	gated d	uplicate	es rows. Th	his
technology category. In fact almost all the items in the Top	e items in th		:0 for Tot	10 for Total Sales and	-	ensures a	ccurater	eporting	and prev	ents un	ider or c	ver cou	unting e	ensures accurate reporting and prevents under or over counting errors when	_
Total Profit belong in the Technology category, indicating that it is the most profitable	ry, indicatir	ig that i	it is the n	ost profital	ple	creating calculated columns in Power BI. We also found that there were multiple	culated c	olumnsi	n Power I	3I. We	also fou	ınd that	t there v	vere multip	ple
category. We can also see the Top 10 products with the largest Profit Margin and Total	cts with the	largest	: Profit M.	argin and To		Segments mapped to the same Product, but this didn't affect our calculations so	napped to	the sam	e Produc	t, but t	his didn	't affeci	t our ca	lculations	08:
Profit greater than \$1,000, indicating these are the most efficient items to sell.	se are the n	nost ef	ficient ite	ims to sell.					we let	we left it as is.	s.				
Top 10 Products by Total Sales	by Total Sa	les						Top	Top 10 Prducts by Total Profit	s by To	otal Pro	fit			
Product Name Total Sales (ales/Mortill Octor Quartity Quantity/Month	Send Profit	Profit/Mover P	Profit Margin Teta	Tetal Months Count of Code ID		Product Name	This law.	Sales/Month Order Quantity Quantity/Month SnaiProfil	e Quantity Quant	by Waterds To		Profit/Month Fro	of Maryin Tak	Praffi Margin. Total Months. Count of Order 10	Order ID
RES 12,319.07 JU	400 \$25,198,34	5,010.99	40.9%	e.	0	Canon IssageCURS 2009	\$61,590.03	12,310,97	30	400	625,199.94	5,039,00	40.0%	8	8
4 \$27.453.30 2.745.34 31		775.31	38.2%	10	IN The	Pelinees PESOS Clerchic Po.	E27,413,38	2,745.34	31	110	\$1,211.06	16.875	28.2%	10	dr.
\$22.638.40 22.638.40 6	9	-1,511.06	909	- 1	2)	Sentiett Pachard Laurriet	\$16,819.08	2,691,38	n	541	\$4,181,00	997.70	37.1%	j.	
COST Developed Table Cost STATES 2 200 kg 17	430 4031110	248.12	11 000	4 1		Canam PC1000 Nersonal L.	411,619,83	2304.90	18	4.73	54,970.94	1,542,74	39.3%	* :	* ;
\$9000ASD 2113.85		64.55	40%		9.	of Decoriet 1500 haiert	\$12 DASS	6.154.97		400	54,0164,96	1 362 80	32.50	y (W	2 19
\$18,899.68 2,601.18	5.43 \$4,963.80	397.70	37.7%	1-	3 As	Attach With SAUDD Micro-C	27,640.03	1,849.95	1	2.81	\$2,777.95	1386.40	46.0%		7
\$18,574.50 \$124.57 TZ		1,184,29	22.3%	**	1	3D Sytheria Cube Portler,	\$14,200,00	7,140.95	n:	\$50	58,717,82	1,858.00	26,0%	74	*
GDC Docustoned Public Section 5 2 954 TB 27 PM 18 A 18	550 (\$282.00)	111.00	128	el 74	9 14	Deput 254831 Thermatiati	\$4,405,522 \$4,065,72	5,291.97 8,885.70	2 *	900	S1,412.20 \$1,942.50	1,115,111	440%	n -	er ye
		Top 1	0 Produ	sts by Profi	t Marg	10 Products by Profit Margin (Total Profit > \$1,000)	ofit > \$1,(	(000							
Product Name	Contraction of the	ford Sales Tale	Whoreth Order C	Lales/Month Order Quantity Quantity/Month Total Publi	th Total fin		Profit/Month Portr Maryle Stal Manthe Count of Dishe El	familye Countral's	Class El						
Carron mag	Carron magarCLASS N#74, 8.	\$3,997.98	3,991,96	1. 2.	913 00	.595.19 1,995.59.	30.08		2						
Hersett, Pa		\$5,404.50	3,404.50		97.5	156621 156821	4000	*	*						
Agent 94116		57,099,003	1,840,95	11	50 137		1000	79	M)						
Herderly Pa	Hewkett Packand Designt 1. S.	53.040.00	3,040,00		100	1,499.20 1,499.20	400%		<b>E</b> 1						
Nerse 1007	The state of	(2,167,25	14449	70 4	Ĭ		10,4%	12	. 5						
Det Matric	Dot Matric Printer Tape Re. S.	\$3,322.07	415.38	200	50 \$13	1,917.91 100.74	45.7%		a						
Menos 1015		\$2,780.03	100.43	28 4			45.3%	4	0						
July SCIO Seekki	MCB Car.	\$2,504.18 \$2,755.40	10.26	100	001	(1843) 50342	ALIN	0.0	9 (7						
	CONTRACTOR AND ADDRESS.	The second second	Trans.	The second secon		THE REAL PROPERTY AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NA	The second secon								

			Œ.	Regional Performance	Perform	ance		
7. Which regio	ns are th	ne strongest	7. Which regions are the strongest and weakest performers?	ırs?		8. Were then	e geographic	8. Were there geographic data quality issues?
A: The West Region has the largest Total Sales and Total Profit, with the East Region close had elegificantly lawer Total Sales Total Brofit	argest To	otal Sales an	nd Total Profit, with the E	East Region clos	e <b>A:</b> Yes, ther	re were about 400 posta	l codes that	A: The West Region has the largest Total Sales and Total Profit, with the East Region close A: Yes, there were about 400 postal codes that were only 4 digits long, while the rest were 5 habined it The South and Central Basines had cincilizated by cincilization that have a light and Central Basines had cincilizated by cincilization that have a light and Central Basines had cincilizated by cincilizated by cincilization that have a light and Central Basines had cincilizated by cincilization that have a light and Central Basines had cincilizated by cincilization that have been also b
and Quantity Ordered. The East Region benefits the most from the holidays in Q4 with the	ast Regi	sions nad sig on benefits ti	he most from the holida	ys in Q4 with the		is, willer would have dis lized into proper 5-digit (	stolitcu geogl codes, impro	standardized into proper 5-digit codes, improving regional mapping accuracy. We also
largest spike out of any region. The South has high potential for growth with a large Profit	on. The S	South has hig	રુh potential for growth w	vith a large Profi		hat the mapping for stat	.e, region, an	checked that the mapping for state, region, and zip codes were unique and we didn't find
	per Cus	per Customer and low Quantity.	ow Quantity.				any issues.	Jes.
West Total Sales vs. Total Profit (2017)	l Profit (		East Total Sales vs. Total Profit (2017)	al Profit (2017)	Central To	Central Total Sales vs. Total Profit (2017)	it (2017)	South Total Sales vs. Total Profit (2017)
Profile Selection (Profile		\$100	Thran Sales • Folial Profit	301		Alpha John Salam Tarani Perjal C	.113	■ Potad Salvey ◆ Motad Protify
NOX B	>)	8,914	1	5	NOT UP		em Ši	and we work
77		IDC SUB-	1	7	S PPE	\ \ \	S tend	1001
SOK Are for Mar Apr May have Ad Aug Sop Oct Next Che-	Sag. Det New	. O.	See heir Mar Apr May her lad Aug legs Oof New Sec.	ag hep Oof Now Dec. NOR	SOX Asy Fell	her Felt Mars Ages Many Ages and Analy Serp Cit. Nov. Des-	to the Chil	SON Age for the Age May ber led Any Sep Det New Dec (All)
				Sales and	Sales and Profit by Region	on		
	Region	Total Sales	Sales/Customer/Month Sales/Product/Month Total Profit	es/Product/Month T		Profit/Customer/Month Profit/Product/Month Sum of Quantity	fuct/Month Sun	n of Quantity
	West	\$713,471,45	5 \$457,13	238.56	\$106,021,47	\$66.51	34,22	11845
	East	\$672,194.15	5 \$453.32	227.70	\$90,672.04	\$56.02	29,81	10281
	South	\$388,983.59	5.494,07	247.81	\$46,036,00	\$64.13	30.86	2,00
	Central	\$497,800.88	\$438.09	217.72	\$40,128.95	\$28.85	14.75	8546
	Total	\$2,272,450.07	7 \$490,81	247.87 \$	\$282,858.46	\$59.67	30,40	36749

		Order E	Order Efficiency		
9. What is the average sales per order, and how has this changed over time?	r, and how has this chang	ed over time?	10. How do th	ne different trends thro	10. How do the different trends throughout the year per order compare?
A: Sales per order grew slightly year over year, but inconsistently across categories.	year, but inconsistently ac	cross categories.	A: Sales per Order an	nd Profit per Order follow	A: Sales per Order and Profit per Order follow a similar trend, while Profit per Order stays
Technology orders are much higher in value, while Office Supplies orders are frequent	ue, while Office Supplies o	rders are frequent	more constant over	time. This suggests that	more constant over time. This suggests that Sales per Order is more heavily affected by
but smaller. This points to cross-selling opportunities, encouraging low-value customers	oortunities, encouraging lo	w-value customers		per Order, while Profit	changes in Quantity per Order, while Profit per Order is balanced out by discounts and
to bundle tec	to bundle technology items.			promo	promotions.
Sales per Order per Month	Profit per Order	Order per Month	Quantity per C	Quantity per Order per Month	Margin per Order per Month
THE STATE OF THE S	Story of the part of the story	0.2016		Weer and the state of the state	7356.
Transaction Common Man					The sale of the sa
		Averages	Averages per Month		
	\$460.85	\$57.36	7.45	4931	