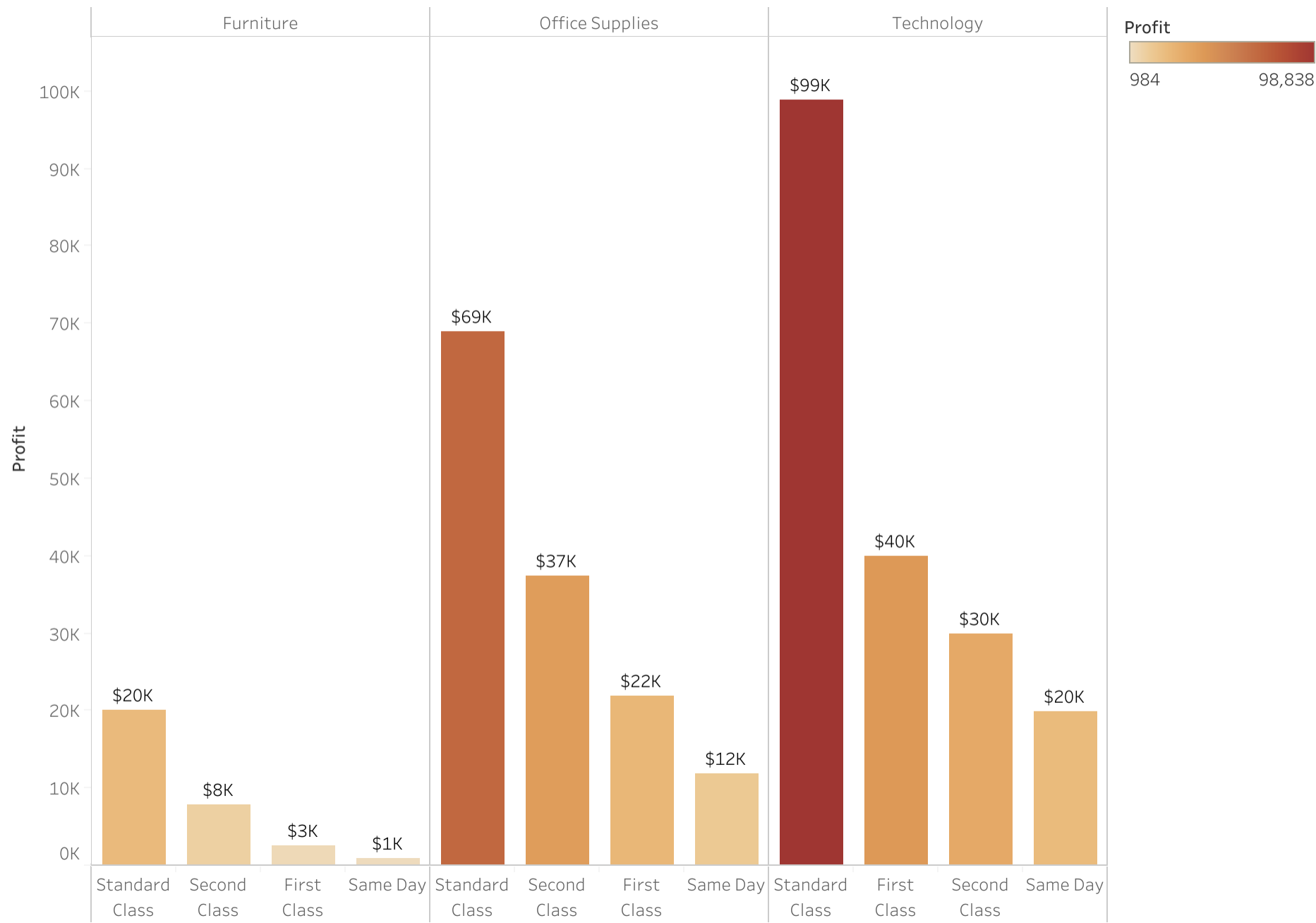# Project 4: Superstore Analysis
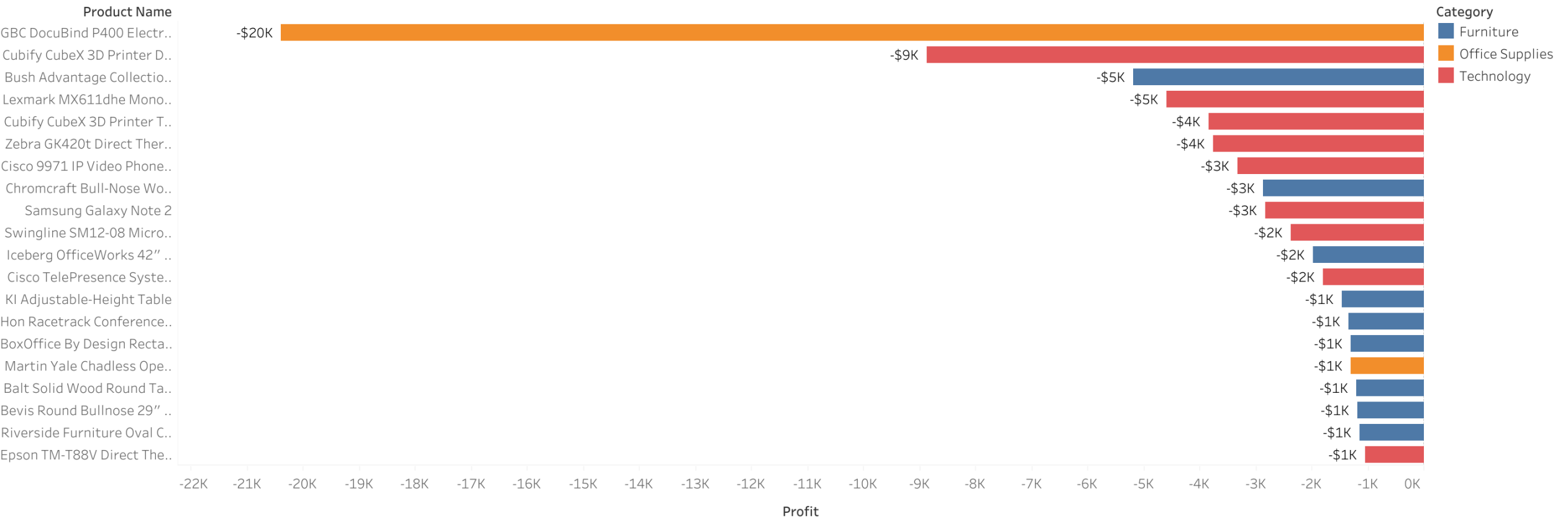
Carlos Gallegos
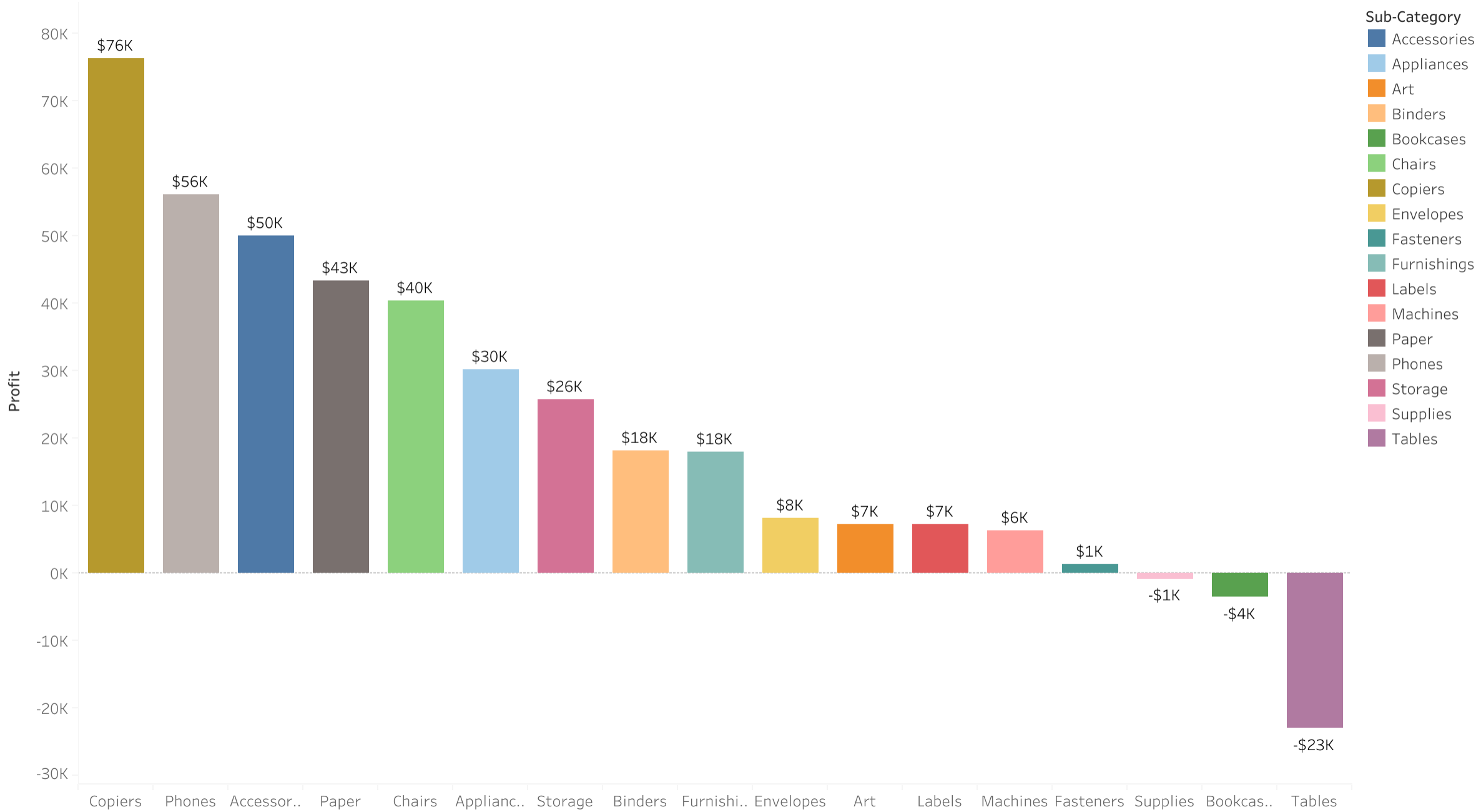
1.1 Profit by Category and Ship Mode

1.2 Products with the biggest losses

Product Name	Profit
GBC DocuBind P400 Electr..	-$20K
Cubify CubeX 3D Printer D..	-$9K
Bush Advantage Collectio..	-$5K
Lexmark MX611dhe Mono..	-$5K
Cubify CubeX 3D Printer T..	-$4K
Zebra GK420t Direct Ther..	-$4K
Cisco 9971 IP Video Phone..	-$3K
Chromcraft Bull-Nose Wo..	-$3K
Samsung Galaxy Note 2	-$3K
Swingline SM12-08 Micro..	-$2K
Iceberg OfficeWorks 42" ..	-$2K
Cisco TelePresence Syste..	-$2K
KI Adjustable-Height Table	-$1K
Hon Racetrack Conference..	-$1K
BoxOffice By Design Recta..	-$1K
Martin Yale Chadless Ope..	-$1K
Balt Solid Wood Round Ta..	-$1K
Bevis Round Bullnose 29" ..	-$1K
Riverside Furniture Oval C..	-$1K
Epson TM-T88V Direct The..	-$1K

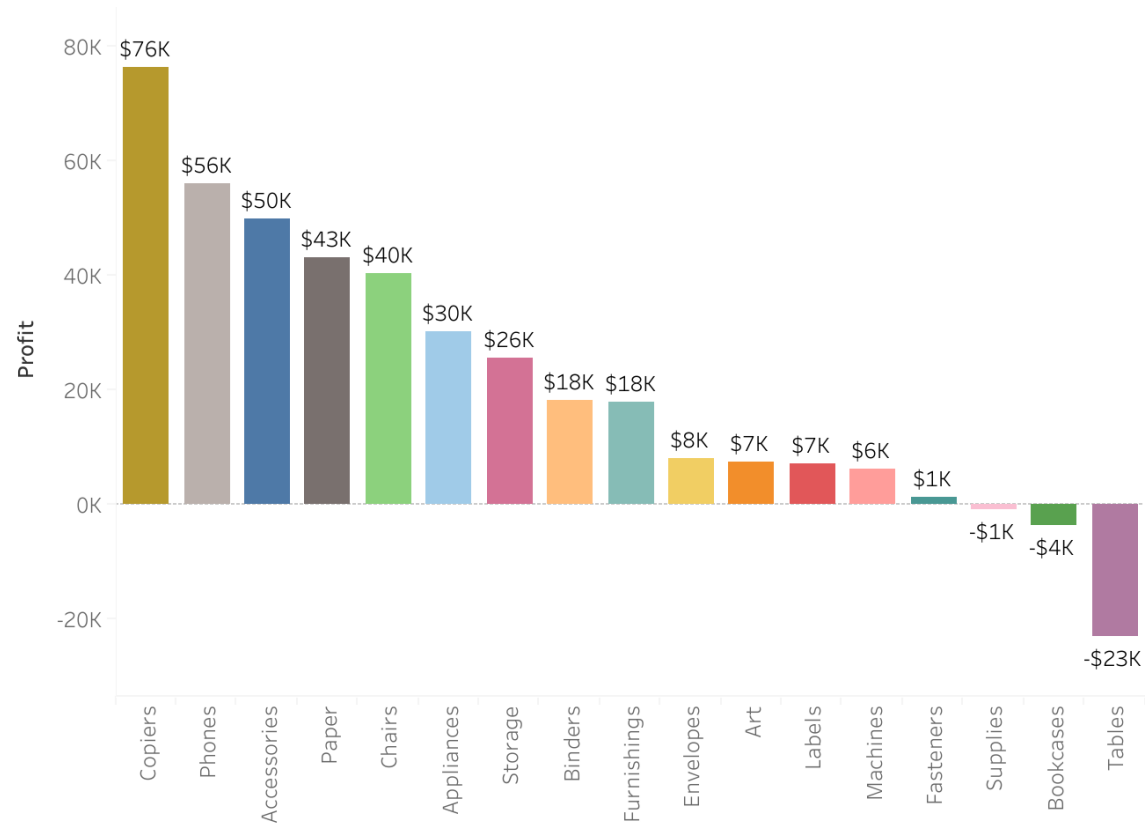Category
- Furniture
- Office Supplies
- Technology
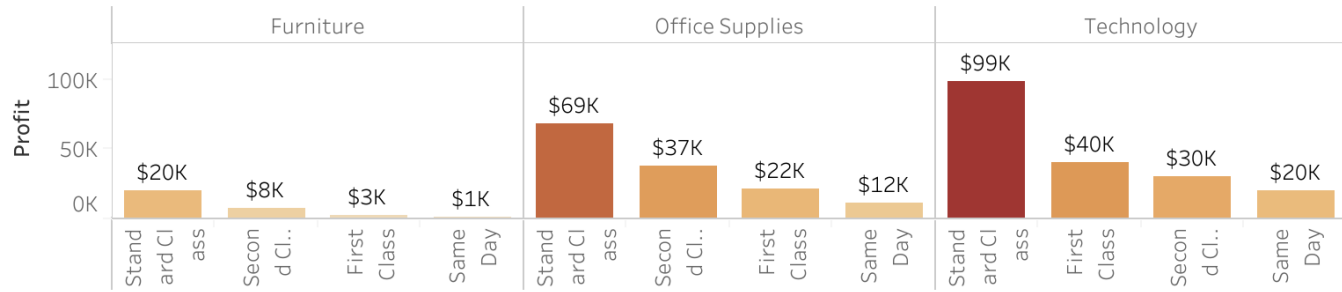
1.3 Profit by Sub-categories

Part 1: Profits & Losses

1.3 Profit by Sub-categories

The top three subcategories from the superstore are copiers, phones, and accessories. The three lowest-performing subcategories are tables and bookcases and supplies.

1.1 Profit by Category and Ship Mode

Analyzing profits by category and shipping method, technology and office supplies are our most profitable categories. Customers prefer standard shipping for both categories...
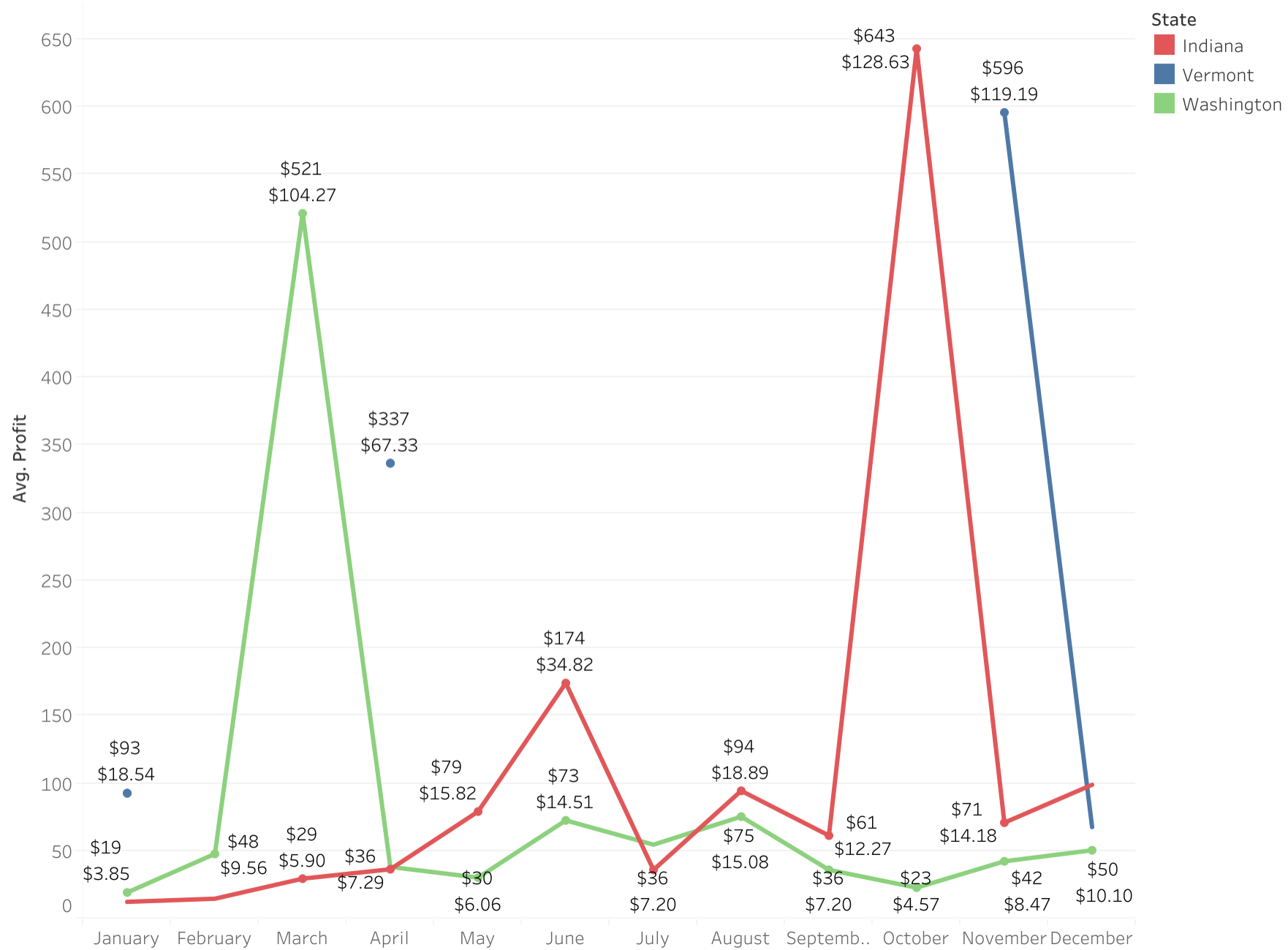
1.2 Products with the biggest losses
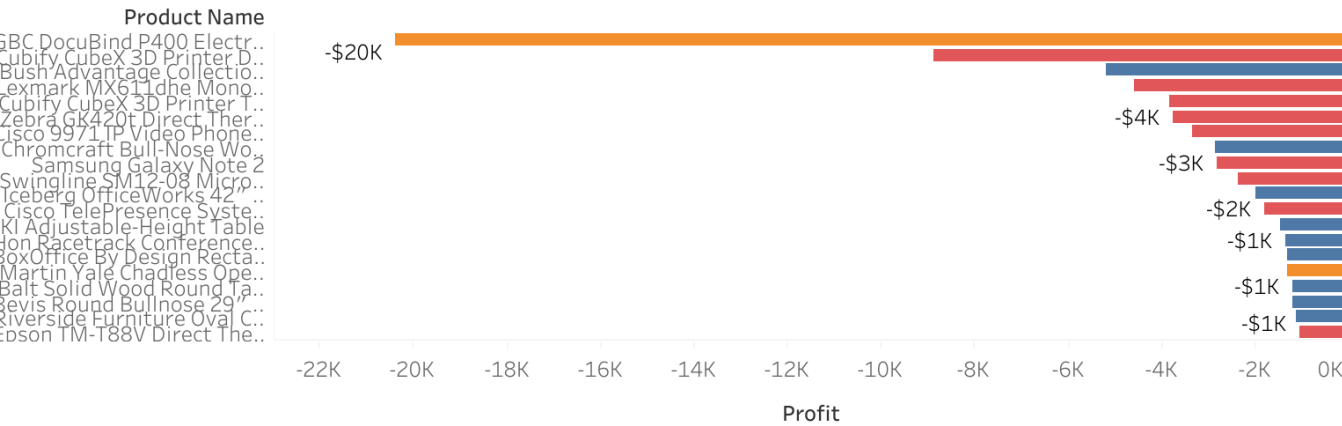
It is imperative to stop selling the top 20 products, as they are causing the biggest losses.

2.1 Average profit per month and state Table

State	January	February	March	April	May	June	July	August	Septemb..	October	November	December
Indiana	$12 $2	$15 $3	$29 $6	$36 $7	$79 $16	$174 $35	$36 $7	$94 $19	$61 $12	$643 $129	$71 $14	$99 $20
Vermont	$93 $19			$337 $67							$596 $119	$68 $14
Washington	$19 $4	$48 $10	$521 $104	$38 $8	$30 $6	$73 $15	$55 $11	$75 $15	$36 $7	$23 $5	$42 $8	$50 $10

Avg. Profit

$12 $643

2.2 Average profit per month and state Chart

State
- Indiana
- Vermont
- Washington

Month	Value 1	Value 2
January	$93 / $18.54	$19 / $3.85
February	$48 / $9.56	
March	$521 / $104.27	$29 / $5.90
April	$337 / $67.33	$36 / $7.29
May	$79 / $15.82	$30 / $6.06
June	$174 / $34.82	$73 / $14.51
July	$36 / $7.20	
August	$94 / $18.89	$75 / $15.08
September	$61 / $12.27	$36 / $7.20
October	$643 / $128.63	$23 / $4.57
November	$596 / $119.19	$71 / $14.18	$42 / $8.47
December	$50 / $10.10	

Part 2. Advertising

2.1 Average profit per month and state Table

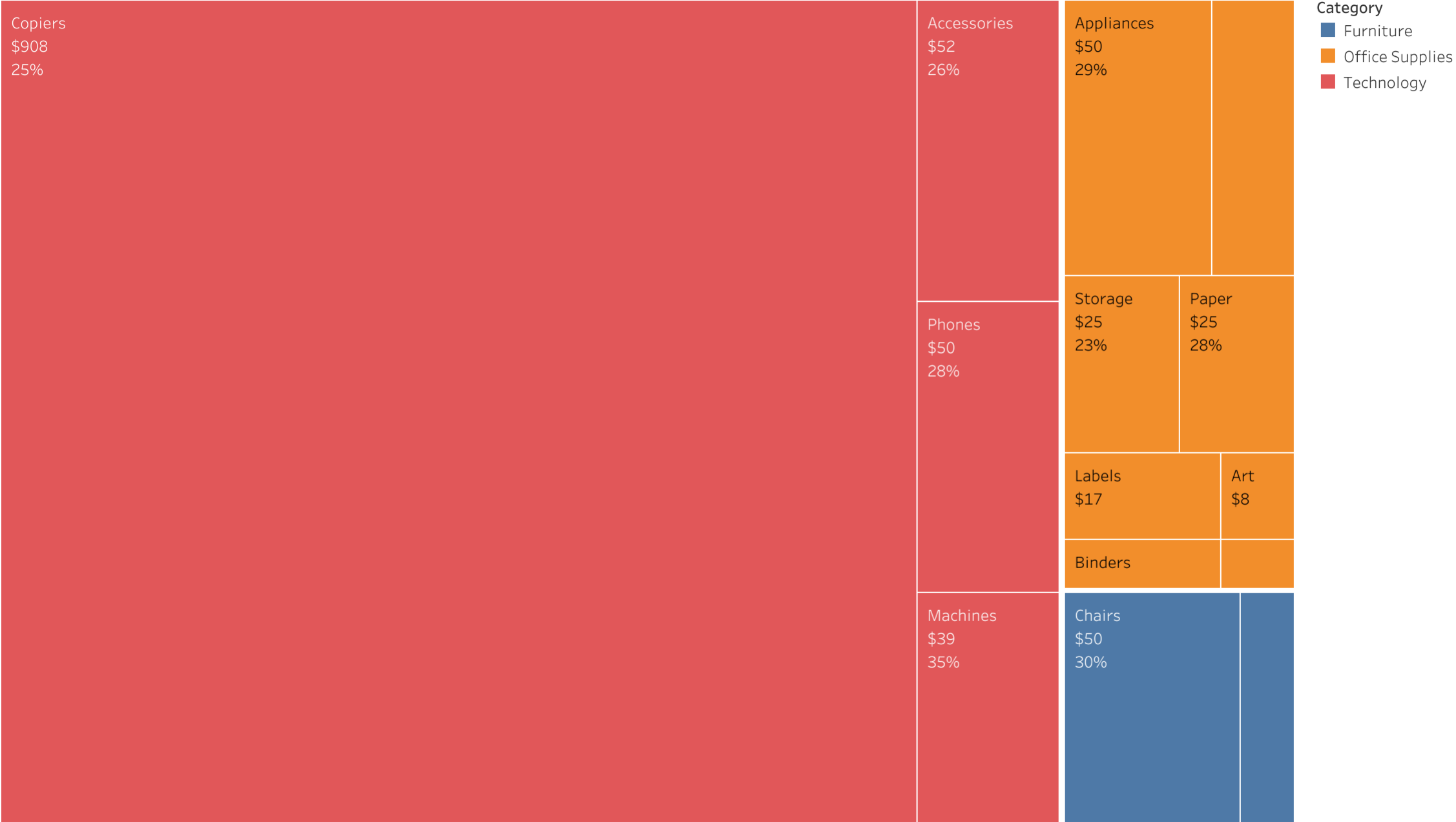| State	January	February	March	April	May	June	July	August	Septemb..	October	November	December
Indiana	$12 $2	$15 $3	$29 $6	$36 $7	$79 $16	$174 $35	$36 $7	$94 $19	$61 $12	$643 $129	$71 $14	$99 $20
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Washington	$19 $4	$48 $10	$521 $104	$38 $8	$30 $6	$73 $15	$55 $11	$75 $15	$36 $7	$23 $5	$42 $8	$50 $10

The budget for Advertising based on ROAS is as follows: $129 for Indiana in October, $119 for Vermont in November, and $104 for Washington in March. This budget aligns with our willingness to allocate one-fifth of profits to advertising.

2.2 Average profit per month and state Chart

State

- [ ] Alabama
- [ ] Arizona
- [ ] Arkansas
- [ ] California
- [ ] Colorado
- [ ] Connecticut
- [ ] Delaware
- [ ] District of Columbia
- [ ] Florida
- [ ] Georgia
- [ ] Idaho
- [ ] Illinois
- [✓] Indiana
- [ ] Iowa
- [ ] Kansas
- [ ] Kentucky
- [ ] Louisiana
- [ ] Maine
- [ ] Maryland
- [ ] Massachusetts
- [ ] Michigan
- [ ] Minnesota
- [ ] Mississippi
- [ ] Missouri
- [ ] Montana
- [ ] Nebraska
- [ ] Nevada

State
- Indiana
- Vermont
- Washington

5.1 Return rate per product

3.2 Return rate per customer

3.3 Average Profit & Average Return by Subcategory

Copiers
$908
25%

Accessories
$52
26%

Appliances
$50
29%

Phones
$50
28%

Storage
$25
23%

Paper
$25
28%

Labels
$17

Art
$8

Binders

Machines
$39
35%

Chairs
$50
30%

Art
$8

Category
- Furniture
- Office Supplies
- Technology

Returned Items
## The Return rate by category is high on all the years. Specially on last year of analysis 2021
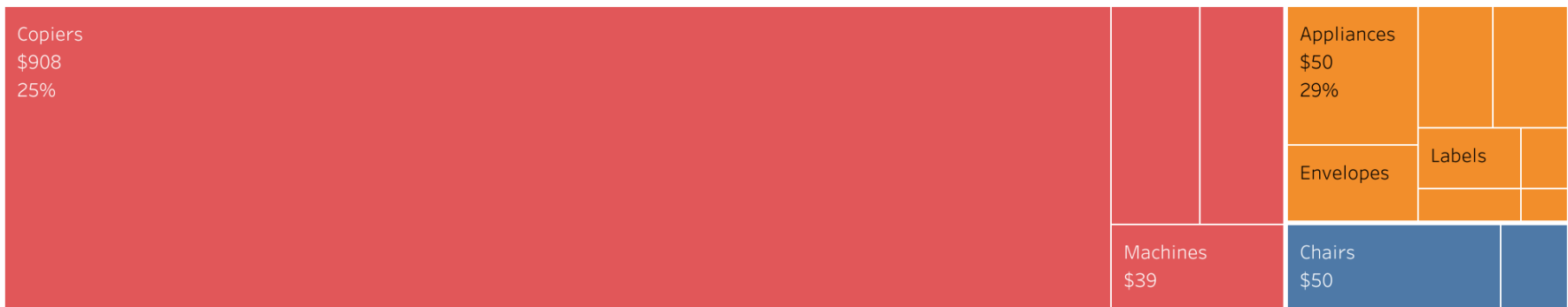
3.1 Return rate per product

Product Name

Return Rate
100%
50%
0%

Newe.. Apple.. Hoov.. Acme.. Newe.. Safco.. Roger.. Xerox.. GBC I.. Xerox.. Xerox.. Eldon.. Globa.. Steril.. Jabra.. C-Line.. 4009.. GBC L.. Imati.. Xerox.. Delux.. Mess.. Acco.. Newe.. Comp.. Vinyl.. Hon C.. Novi.. Ibico.. Bevis.. ACCO.. Holm..
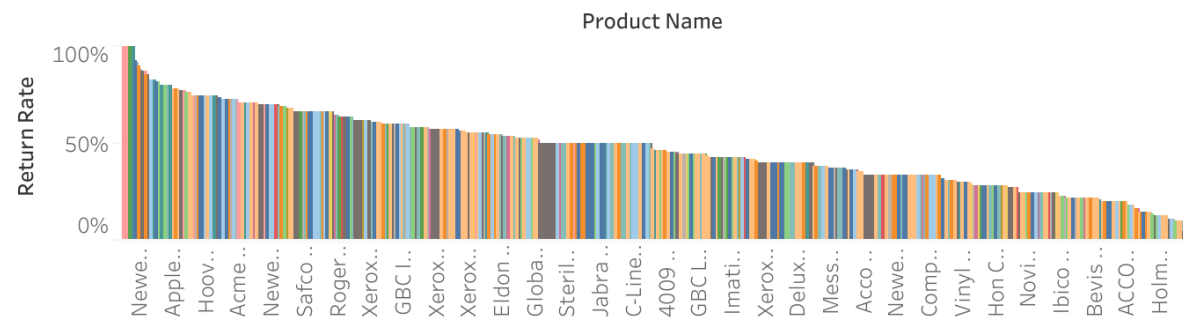
Eight products have a return rate of 100%, so we should consider their viability

3.2 Return rate per customer

Customer Name

Return Rate
200%
150%
100%
50%
0%

100.00% 83.33% 81.82% 78.26% 75.38% 69.57% 61.90% 59.26% 55.56% 52.94% 50.00% 47.06% 44.44% 40.00% 36.36% 34.62% 33.33% 28.57% 25.00% 23.53% 21.05% 18.18% 16.67% 14.29% 12.50% 11.11% 10.00% 8.33% 6.67% 5.26%

Joni B.. Adria.. Deanr.. Maur.. Luke.. Marib.. Cynth.. Clay C.. Brian.. Bill E.. Sanjit.. Nick Z.. Muha.. Bruce.. Josep.. Thom.. Ed Ja.. Zusch.. Mike.. Larry.. Emily.. Debor.. Grace.. Anna.. Rober.. David.. Benja.. Brian.. Allen.. John.. Philip.. Penel.. Emily.. Christ.. Linds..

For products with a return rate above 25%, we should gather more information about customers' experiences with the supersto..

3.3 Average Profit & Average Return by Subcategory

Copiers
$908
25%

Machines
$39

Appliances
$50
29%

Envelopes

Labels

Chairs
$50
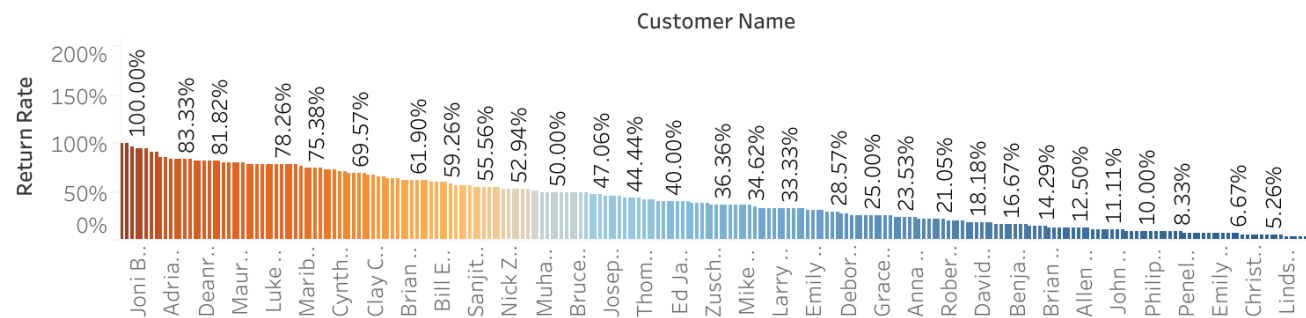
If we analyze all years, the main sources of profit for the superstore coincide with high return rates, averaging over 25%. The superstore should either cease operations under these conditions or make changes based on the analysis of profits, losses, and advertising. Additionally, consider the suggestions from our assessment and establish a timeline for reevaluating the situation. The discounts applied to transactions could also be contributing to the current situation.