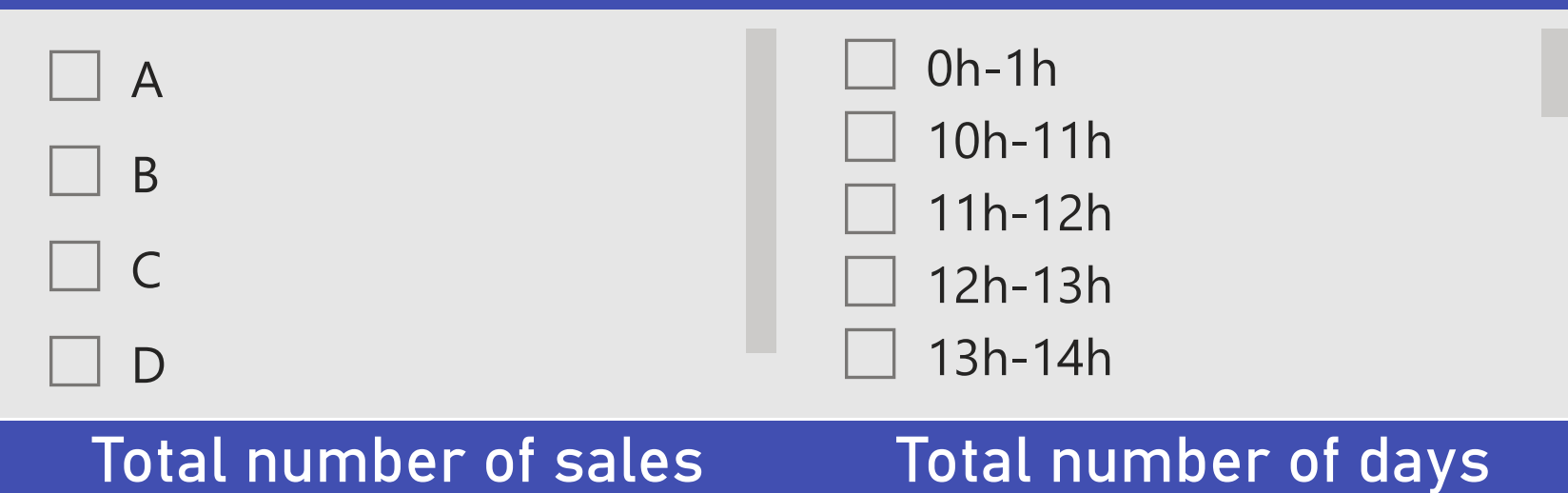
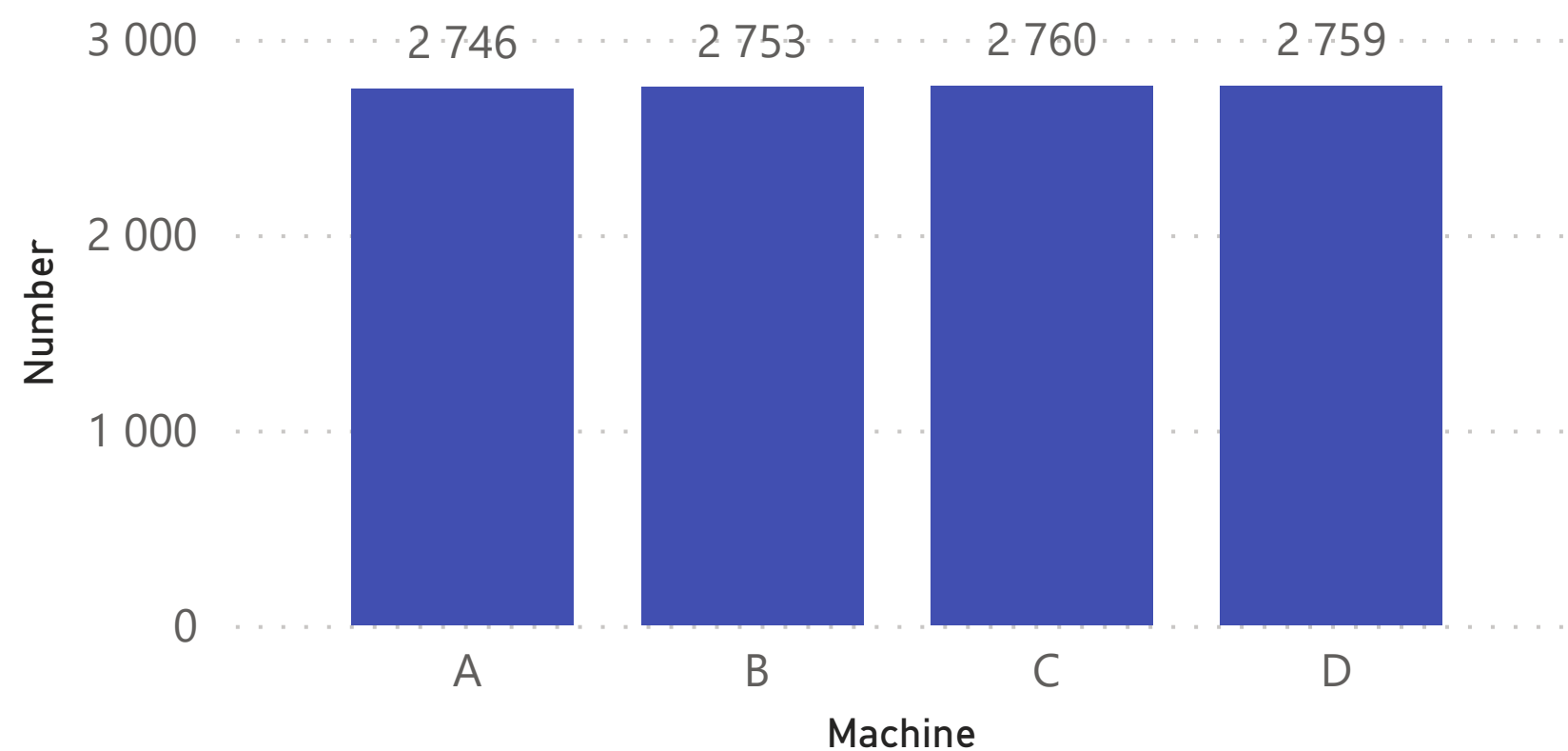




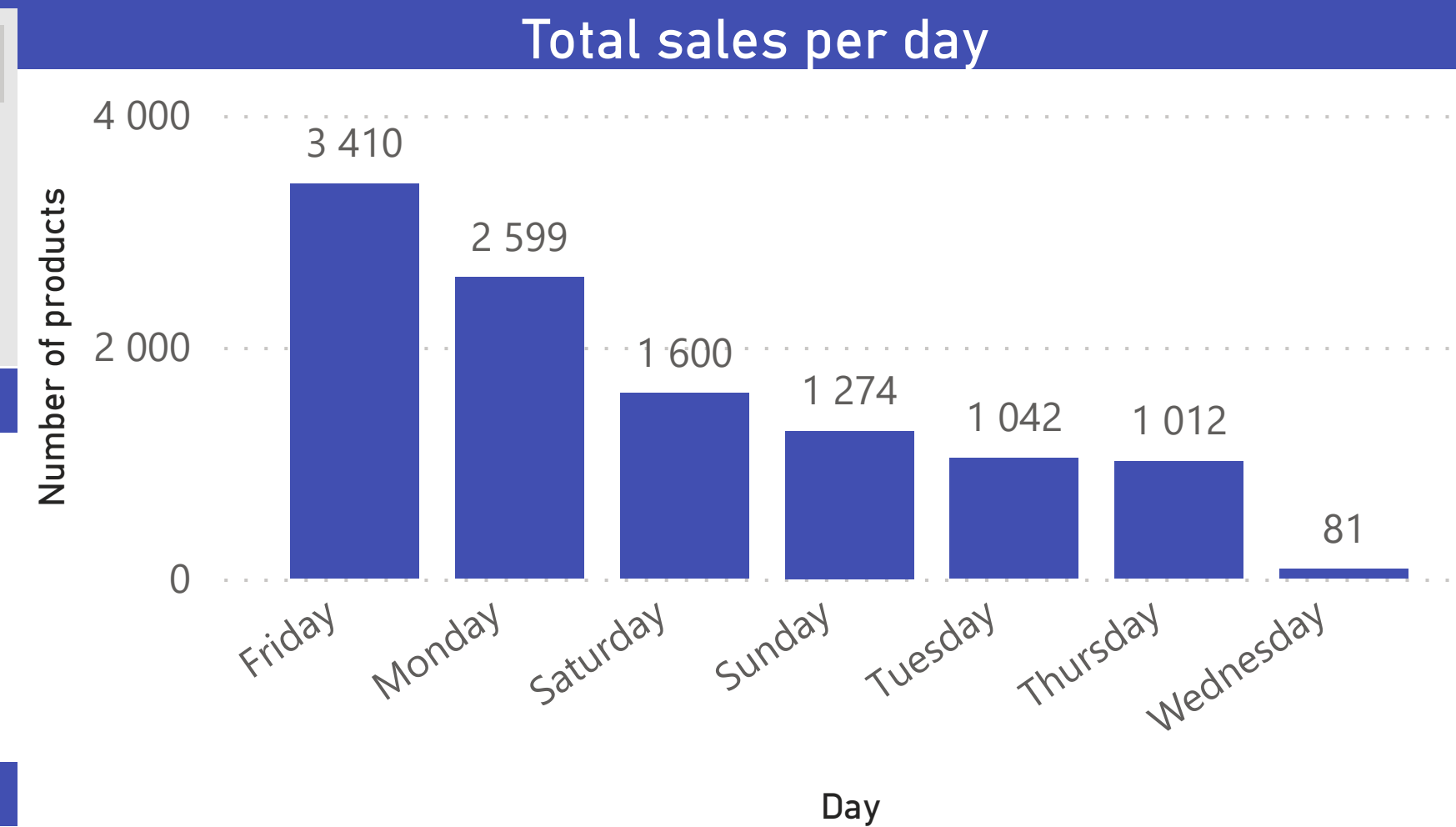
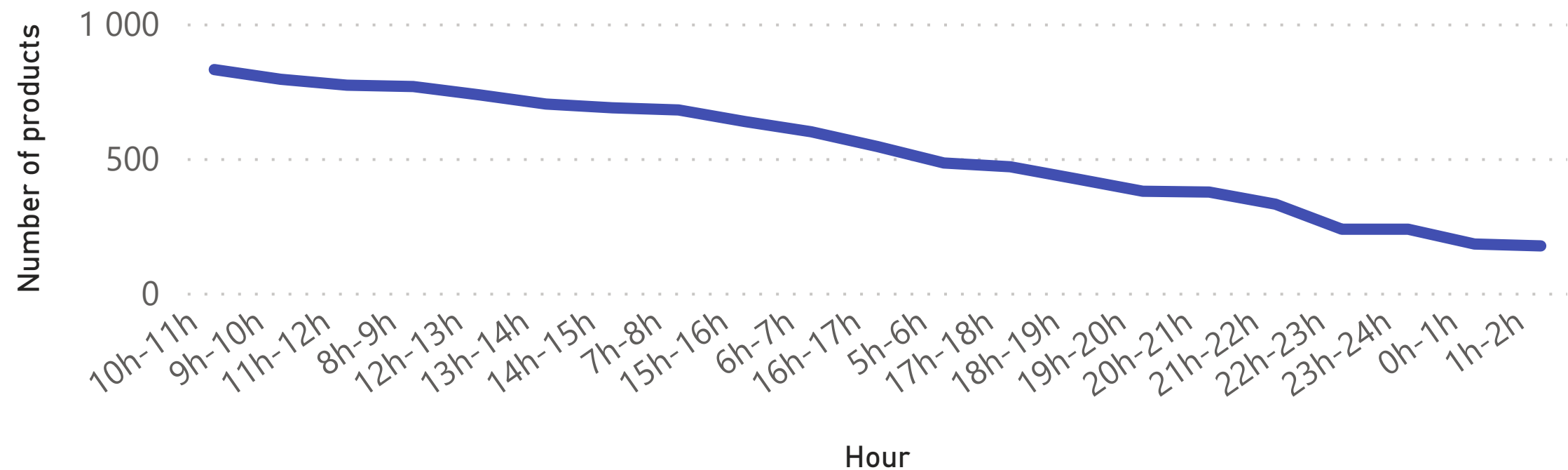
Beverage Dispensers - Report November & December 2019 (Sales)



Total number of sales by machine



Number of sales per hour



Day of refill

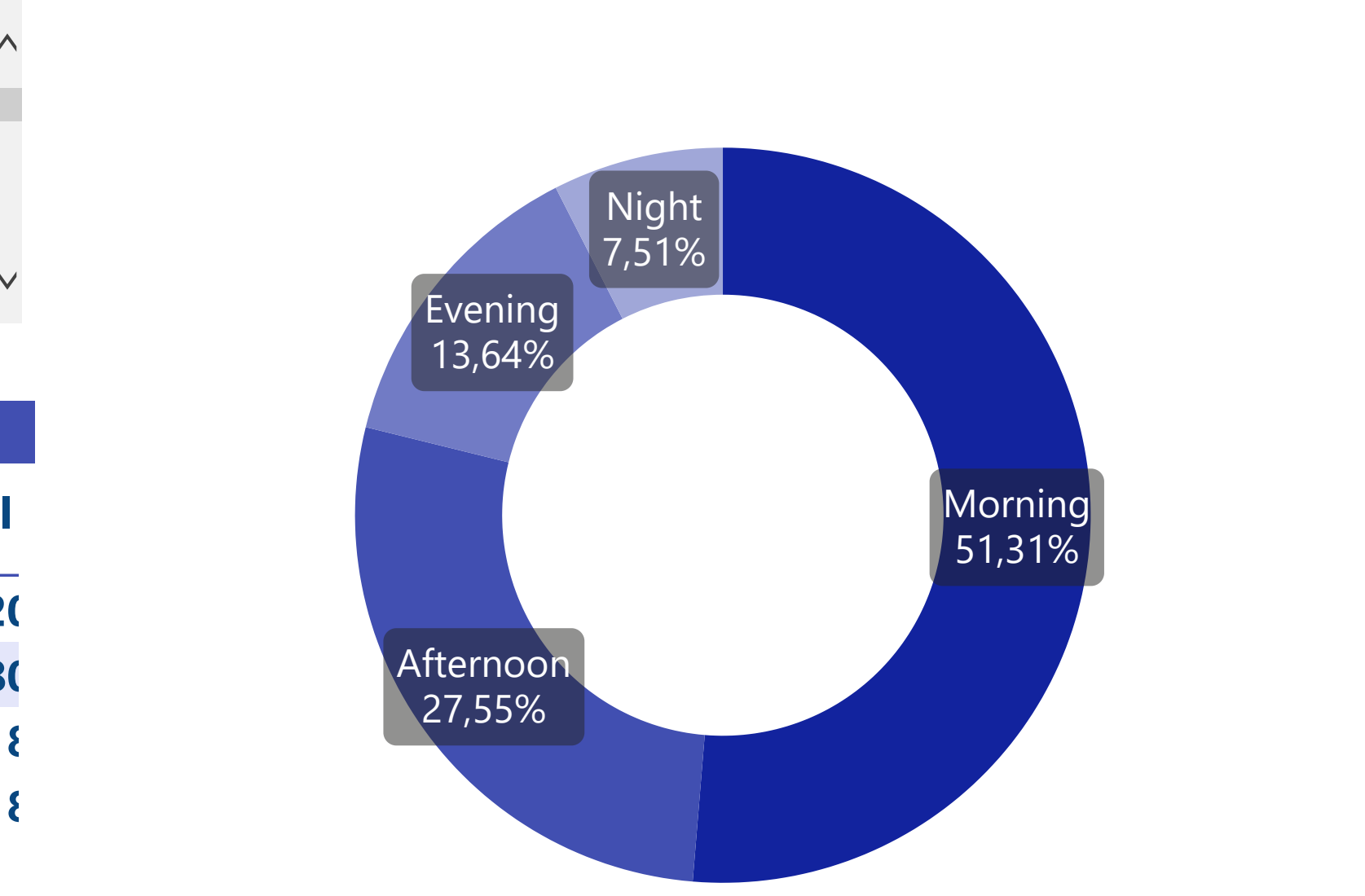
| product | day | num_day | month | year | hour | machine |
|---------|----------|---------|-------|------|----------|---------|
| refill | Thursday | 14 | 11 | 2019 | 11:53:00 | A |
| refill | Thursday | 14 | 11 | 2019 | 12:47:00 | B |
| refill | Thursday | 14 | 11 | 2019 | 13:51:00 | C |
| refill | Thursday | 14 | 11 | 2019 | 14:54:00 | D |

Sales by products and machine

| product | A | B | C | D | Total |
|---------|-------|-------|-------|-------|--------|
| coffee | 1 680 | 1 680 | 1 680 | 1 680 | 6 720 |
| soda | 720 | 720 | 720 | 720 | 2 880 |
| nrj | 346 | 353 | 360 | 359 | 1 418 |
| Total | 2 746 | 2 753 | 2 760 | 2 759 | 11 018 |

- Notes
- Number of sales between 14/11 and 25/12/2019 = **11 018 products.**
 - Sales are evenly distributed among the machines but **coffee** is the most sold product in every machine.
 - Day with the highest sales : **Friday**
 - Day with the least sales : **Wednesday**
 - Day of refill : **Thursday** (for every machine)
 - Most of the beverages are bought in the **morning** but the nrj drinks are more sold in the **evening**.
 - No sales between 2 and 5 am because the station is closed at these hours.

Number of sales per period

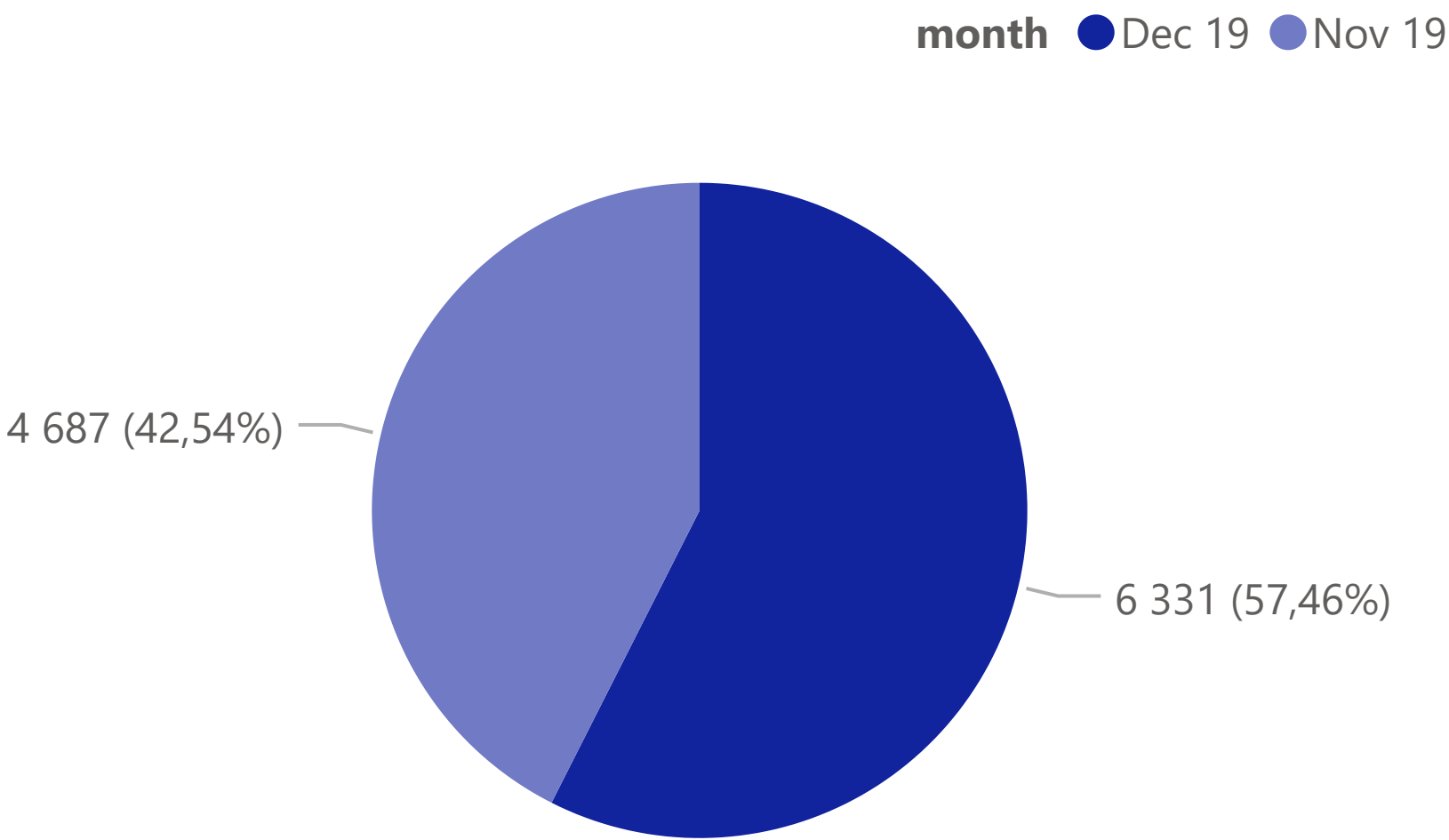




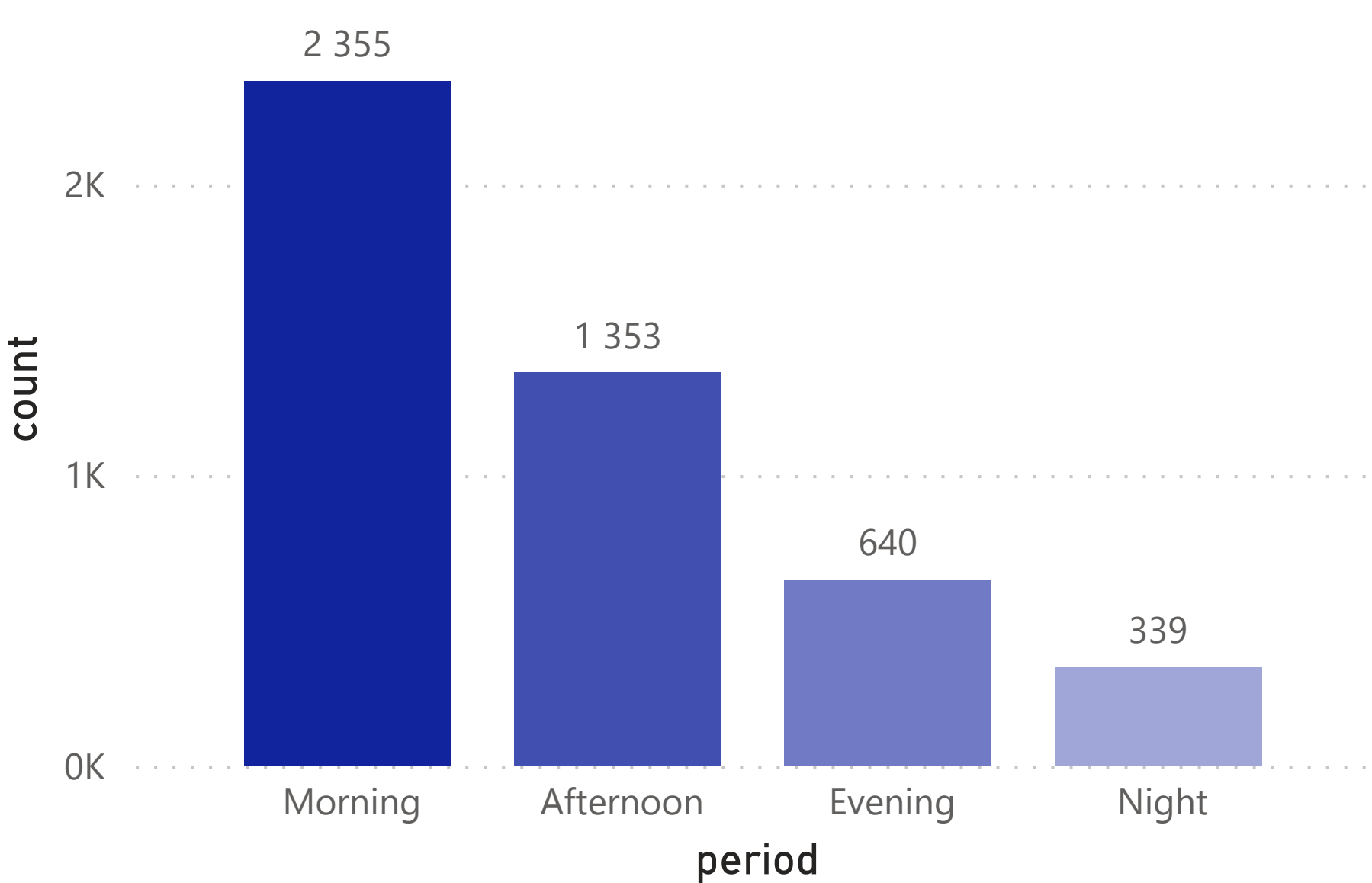
Beverage Dispensers - Report November & December 2019 (Month)



Total sales by month



Number of sales per period in November 2019



Notes

More sales in **December** in general.

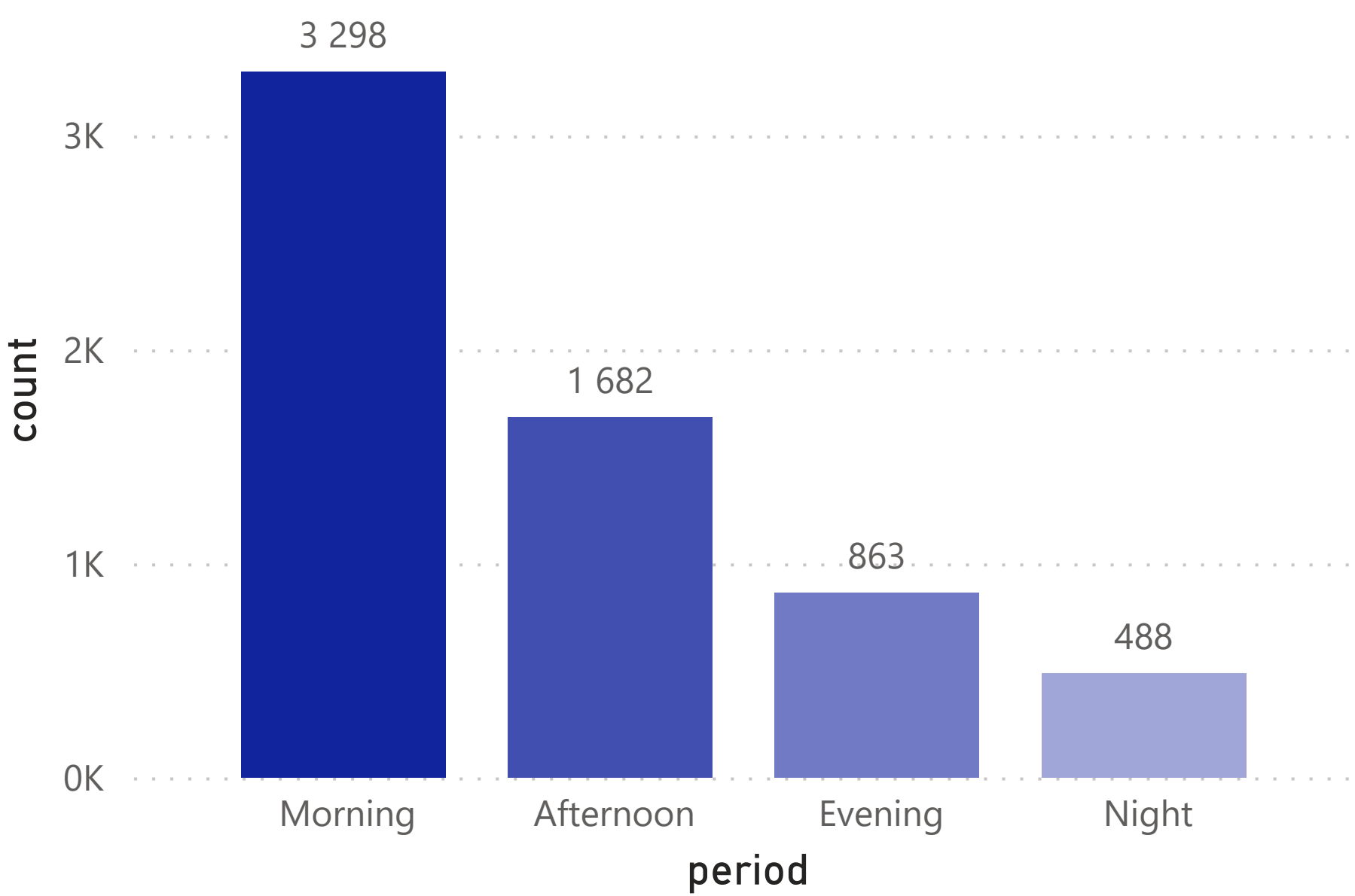
Warning: there are more days covered by the dataset in December : 25 (only 17 days in November).

Most products are sold on morning for the two months.

Sales per week

| Semaine ISO | coffee | nrj | soda | Total |
|------------------|--------|-------|-------|--------|
| <div>+ W46</div> | 657 | 189 | 368 | 1 214 |
| <div>+ W47</div> | 1 111 | 231 | 506 | 1 848 |
| <div>+ W48</div> | 1 108 | 247 | 469 | 1 824 |
| <div>+ W49</div> | 1 144 | 233 | 476 | 1 853 |
| <div>+ W50</div> | 1 073 | 231 | 519 | 1 823 |
| <div>+ W51</div> | 1 111 | 248 | 439 | 1 798 |
| <div>+ W52</div> | 516 | 39 | 103 | 658 |
| Total | 6 720 | 1 418 | 2 880 | 11 018 |

Number of sales per period in December 2019



Sales by weekdays and weekends

| Weekday | coffee | nrj | soda | Total |
|----------|--------|------|------|-------|
| Week | 5317 | 856 | 1971 | 8144 |
| Week-end | 1403 | 562 | 909 | 2874 |
| Total | 6720 | 1418 | 2880 | 11018 |



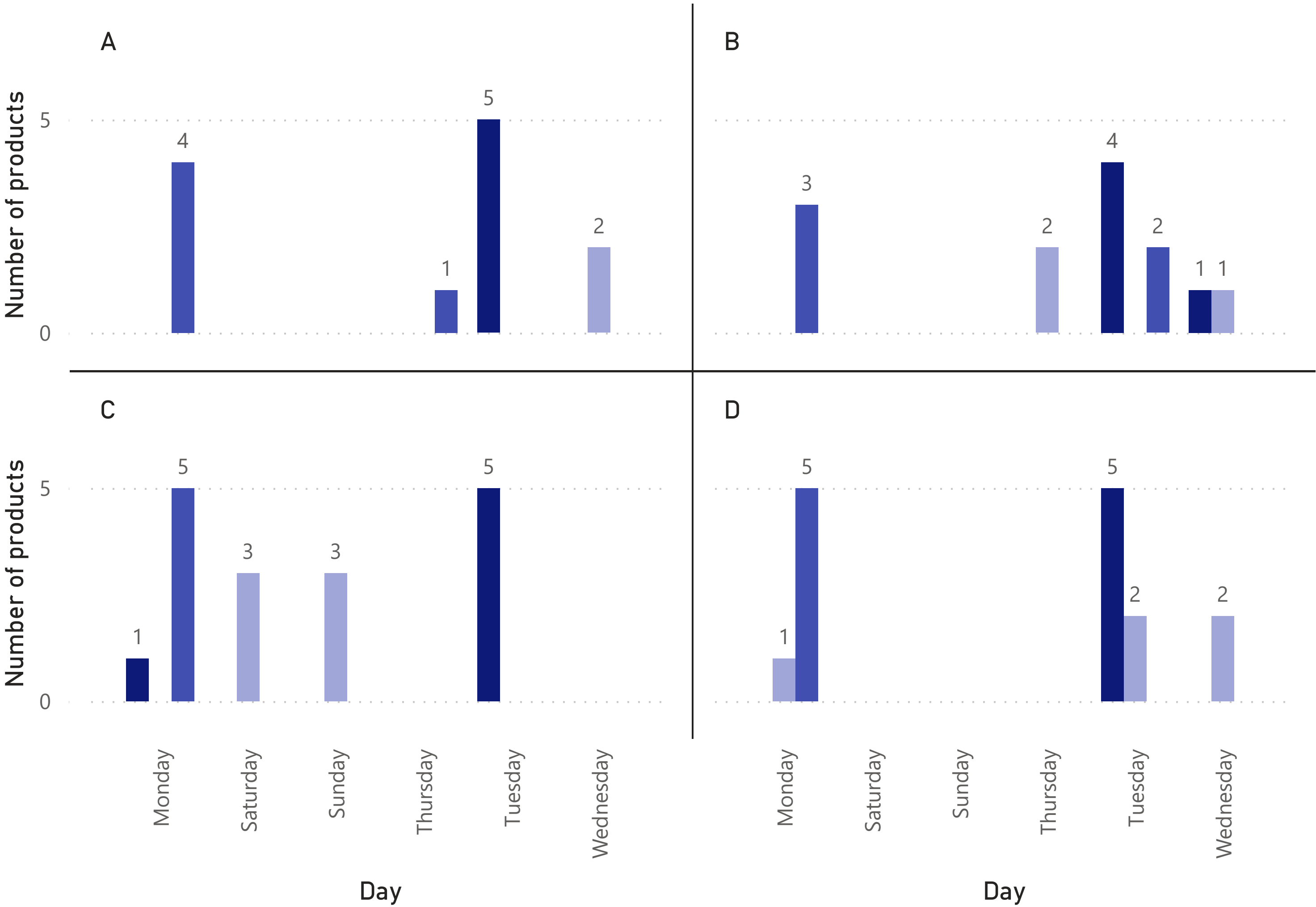
Beverage Dispensers - Report November & December 2019 (Stockouts)



Out of stocks products per machine and day

Notes

Product ● coffee ● nrj ● soda



Day of refill : **Thursday** (see General sales page for more informations).
No stockouts on **Friday**.

Many products are out of stock on **Tuesday**, especially coffees.
Sodas are out of stock on **Monday** on every machine !
Nrj drinks are well distributed because they are out of stocks on **Wednesday**, just before the refill.

Warning ! On machine C, nrj drinks are out of stock on **weekends** !

To avoid the stockouts, maybe it would be necessary to a make second refill on **Monday** ?

Number of stockouts per day and machine

| Product | Monday | Saturday | Sunday | Thursday | Tuesday | Wednesday | Total |
|--|--------|----------|--------|----------|---------|-----------|-------|
| <input checked="" type="checkbox"/> coffee | 1 | | | | 19 | 1 | 21 |
| A | | | | | 5 | | 5 |
| B | | | | | 4 | 1 | 5 |
| C | 1 | | | | 5 | | 6 |
| D | | | | | 5 | | 5 |
| <input checked="" type="checkbox"/> nrj | 1 | 3 | 3 | 2 | 2 | 5 | 16 |
| A | | | | | | 2 | 2 |
| B | | | | 2 | | 1 | 3 |
| C | | 3 | 3 | | | | 6 |
| D | 1 | | | | 2 | 2 | 5 |
| <input checked="" type="checkbox"/> soda | 17 | | | 1 | 2 | | 20 |
| A | 4 | | | 1 | | | 5 |
| B | 3 | | | | 2 | | 5 |
| C | 5 | | | | | | 5 |
| D | 5 | | | | | | 5 |
| Total | 19 | 3 | 3 | 3 | 23 | 6 | 57 |

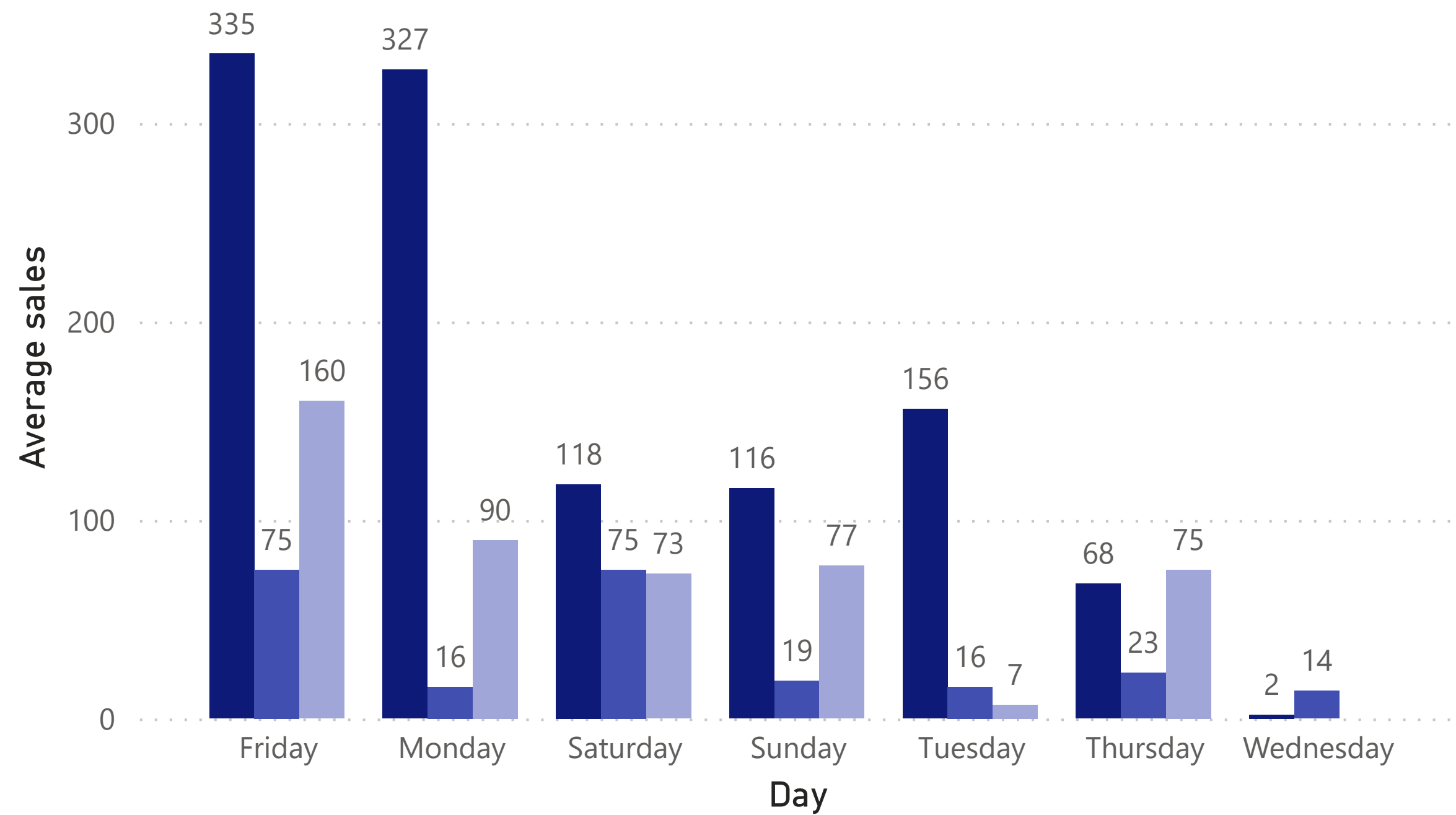


Beverage Dispensers - Report November & December 2019 (Lost sales)



Average sales by product and day

Product ● coffee ● nrj ● soda



Stockouts by product per day

| Product | Monday | Saturday | Sunday | Thursday | Tuesday | Wednesday | Total |
|---------|--------|----------|--------|----------|---------|-----------|-------|
| coffee | 1 | | | | 19 | 1 | 2 |
| nrj | 1 | 3 | 3 | 2 | 2 | 5 | 1 |
| soda | 17 | | | 1 | 2 | | 2 |
| Total | 19 | 3 | 3 | 3 | 23 | 6 | 5 |

Total sales on stockout days

| Product | Sales |
|---------|-------|
| coffee | 25 |
| nrj | 25 |
| soda | 22 |
| Total | 72 |

Notes

Sales for a day without stockouts are estimated by product -> sales average for days with stocks :

- Coffee = Friday, Saturday and Sunday (335 + 118 + 116) / 3 = 189,66 \$ **(190 \$)**
- Soda = Friday, Saturday and Sunday (160 + 73 + 77) / 3 = 103,33 \$ **(104 \$)**
- Nrj = Friday **(75 \$)**

Lost sales are estimated with typical sales and the number of days with stockouts. Sales made on the days with stockouts will be deducted from the total.

The calculation is made on every machine because the sales are similar.

A stockout on a Saturday leads to 6 days of break, on a Sunday 5 days, on a Monday 4, etc...

Coffee = (1x4) + (19x3) + (1x2) = **63**

Soda = (17x4) + (2x3) + (1x1) = **74**

Nrj = (3x6) + (3x5) + (1x4) + (2x3) + (5x2) + (2x1) = **55**

Possible sales made during these days :

Coffee : 63 x 190 = **11 970**

Soda : 74 x 104 = **7 696**

nrj : 55 x 75 = **4 125**

Estimated shortfall :

11 970 x (1 - 0,3) + 7 696 x (1,6 - 0,6) + 4 125 x (1,8 - 0,8) = **20 200 \$**.

Confirmation : it's necessary to make a second refill of machines every **Monday**.