Table of Contents

1. Get familiar with the company

- How many campaigns and sources does CoolTShirts use and how are they related? Be sure to explain the difference between utm_campaign and utm_source.
- What pages are on their website?

2. What is the user journey?

- How many first touches is each campaign responsible for?
- How many last touches is each campaign responsible for?
- How many visitors make a purchase?
- How many last touches on the purchase page is each campaign responsible for?
- What is the typical user journey?

3. Optimize the campaign budget

- CoolTShirts can re-invest in 5 campaigns. Which should they pick and why?

1. Get familiar with the company

How many campaigns and sources does CoolTShirts use and how are they related? (Be sure to explain the difference between utm_campaign and utm_source)

- A source is the channel of communication to target the potential buyer. CoolTShirts uses 6 different sources.
- A campaign is the theme of the communication. CoolTShirts uses 8 different campaigns.
- A couple of sources (email and google) are used for multiple campaigns.

Number of Campaign	
8	
Number of Sources	
6	
utm_campaign	**utm_source**
getting-to-know-cool-tshirts	nytimes
weekly-newsletter	email
ten-crazy-cool-tshirts-facts	buzzfeed
retargetting-campaign	email
retargetting-ad	facebook
interview-with-cool-tshirts-founder	medium
paid-search	google
cool-tshirts-search	google

```sql
SELECT COUNT(DISTINCT utm_campaign)
  AS 'Number of Campaign'
FROM page_visits;


SELECT COUNT(DISTINCT utm_source)
  AS 'Number of Sources'
FROM page_visits;


SELECT DISTINCT utm_campaign, utm_source
FROM page_visits;
```

1. Get familiar with the company – continued

What pages are on their website?

- There are four distinct page names in order of steps to final purchase.
- The 'land_page' is used to measure the all initial visits to CoolTShirts websites.

Page Names
1 - landing_page
2 - shopping_cart
3 - checkout
4 - purchase

```
SELECT DISTINCT page_name AS 'Page Names'
FROM page_visits;
```

2. What is the user journey?

How many first touches is each campaign responsible for?

- The first touches is to measure the effectiveness of campaign to draw the initial traffic to CoolTShirts websites.
- Out of 8 campaigns, only 4 campaigns draw any traffic to the sites.

Campaign	Source	Counts
interview-with-cool-tshirts-founder	medium	622
getting-to-know-cool-tshirts	nytimes	612
ten-crazy-cool-tshirts-facts	buzzfeed	576
cool-tshirts-search	google	169

```
WITH first_touch AS (   -- set of all first touch
    SELECT user_id,
         MIN(timestamp) as first_touch_at
    FROM page_visits
    GROUP BY 1),
ft_attr AS (    --set of all first touch with additon colums
  SELECT ft.user_id,
         ft.first_touch_at,
         pv.utm_source,
         pv.utm_campaign
  FROM first_touch ft
  JOIN page_visits pv
    ON ft.user_id = pv.user_id
    AND ft.first_touch_at = pv.timestamp
)
SELECT ft_attr.utm_campaign AS Campaign,
       ft_attr.utm_source AS Source,
       COUNT(*) AS Counts
FROM ft_attr
GROUP BY 1
order by 3 DESC;
```

2. What is the user journey? - continued

How many last touches is each campaign responsible for?

- Last touches is to measure the effectiveness of campaign to draw the last visits to CoolTShirts websites.
- First two campaigns (weekly-newsletter and retargeting-ad) comprise of 45% (447+443) of total last visits of 1979.

Campaign	Source	Counts
weekly-newsletter	email	447
retargetting-ad	facebook	443
retargetting-campaign	email	245
getting-to-know-cool-tshirts	nytimes	232
ten-crazy-cool-tshirts-facts	buzzfeed	190
interview-with-cool-tshirts-founder	medium	184
paid-search	google	178
cool-tshirts-search	google	60

```sql
WITH last_touch AS (  -- set of all last touch
    SELECT user_id,
        MAX(timestamp) as last_touch_at
    FROM page_visits
    GROUP BY 1),
lt_attr AS ( --set of all last touch with additon colums
  SELECT lt.user_id,
        lt.last_touch_at,
        pv.utm_source,
        pv.utm_campaign
  FROM last_touch lt
  JOIN page_visits pv
    ON lt.user_id = pv.user_id
    AND lt.last_touch_at = pv.timestamp
)
SELECT lt_attr.utm_campaign AS Campaign,
      lt_attr.utm_source AS Source,
      COUNT(*) AS Counts
FROM lt_attr
GROUP BY 1
order by 3 DESC;
```

2. What is the user journey? - continued

How many visitors make a purchase?

- Conversion rate from visitor to purchaser is 18.24% (361/1,979 = 0.1824)

```
SELECT COUNT(DISTINCT user_id) AS 'Total Visitors'
FROM page_visits;


SELECT COUNT(DISTINCT user_id) AS 'Number of
                        Vistors Who Purchased'
FROM page_visits
WHERE page_name = '4 - purchase';
```

Total Visitors
1979
Number of Vistors Who Purchased
361

2. What is the user journey? - continued

How many last touches on the purchase page is each campaign responsible for?

- First two campaigns (weekly-newsletter and retargeting-ad) result in 41% (115+113) of total purchase of 561.

| Campaign	Source	Counts
weekly-newsletter	email	115
retargetting-ad	facebook	113
retargetting-campaign	email	54
paid-search	google	52
getting-to-know-cool-tshirts	nytimes	9
ten-crazy-cool-tshirts-facts	buzzfeed	9
interview-with-cool-tshirts-founder	medium	7
cool-tshirts-search	google	2

```sql
WITH last_touch AS (  -- set of all last touch
    SELECT user_id,
        MAX(timestamp) as last_touch_at
    FROM page_visits
    WHERE page_name = '4 - purchase'
    GROUP BY 1),
lt_attr AS ( --set of all last touch with additon colums
    SELECT lt.user_id,
        lt.last_touch_at,
        pv.utm_source,
        pv.utm_campaign
    FROM last_touch lt
    JOIN page_visits pv
    ON lt.user_id = pv.user_id
    AND lt.last_touch_at = pv.timestamp
)
SELECT lt_attr.utm_campaign AS Campaign,
    lt_attr.utm_source AS Source,
    COUNT(*) AS Counts
FROM lt_attr
GROUP BY 1
order by 3 DESC;
```

2. What is the user journey? – First Touches

As far as the effectiveness of initial traffic generation, only 4 out of 8 campaigns generated traffics. 91% of user came to CoolTShirts through 3 out of 4 campaigns. CoolTShirts should focus on three campaigns to generate the awareness of CoolTShirts:

- Getting-to-know-cool-shirts
- Ten-crazy-cool-tshirts-facts
- Interview-with-cool-tshirts-founder

| Campaign	First Touches	First Touches %
weekly-newsletter		
retargetting-ad		
retargetting-campaign		
paid-search		
getting-to-know-cool-shirts	612	31%
ten-crazy-cool-tshirts-facts	576	29%
interview-with-cool-tshirts-founder	622	31%
cool-tshirts-search	169	9%
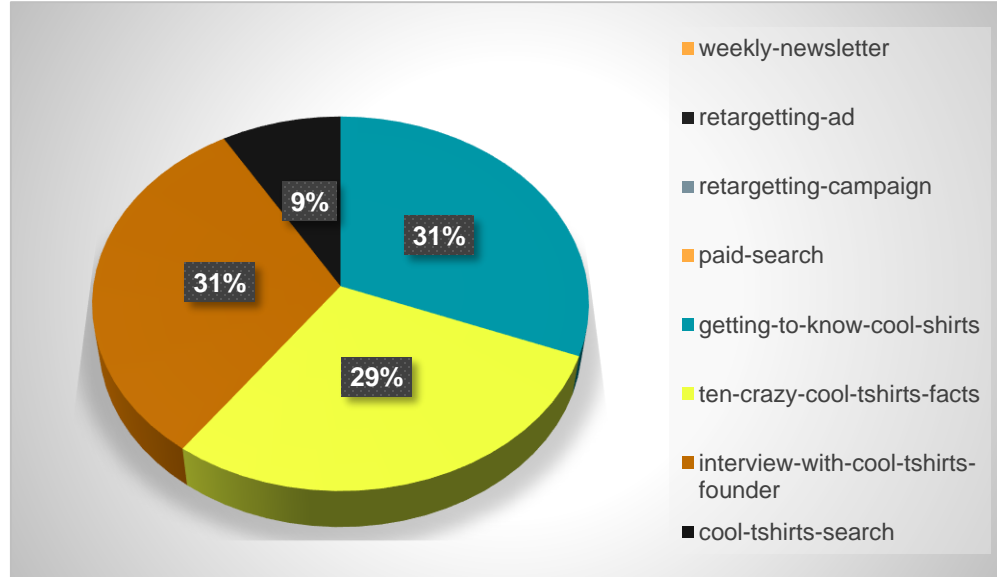
2. What is the user journey? – Last Touches

Interestingly, most of 91% of visitors that came to CoolTShirts did not purchase. Only 6% (see the next slide) of 91% of initial visitors purchased. Two campaigns drove 45% of the last touches

- Weekly-newsletter
- Retargetting-ad

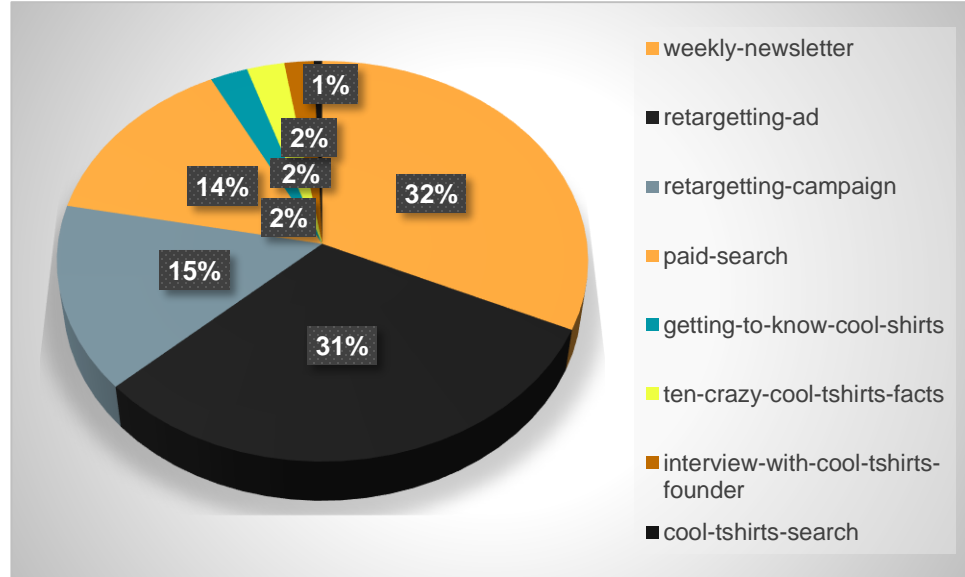| Campaign	Last Touches	Last Touches %
weekly-newsletter	447	23%
retargetting-ad	443	22%
retargetting-campaign	245	12%
paid-search	178	9%
getting-to-know-cool-shirts	232	12%
ten-crazy-cool-tshirts-facts	190	10%
interview-with-cool-tshirts-founder	184	9%
cool-tshirts-search	60	3%
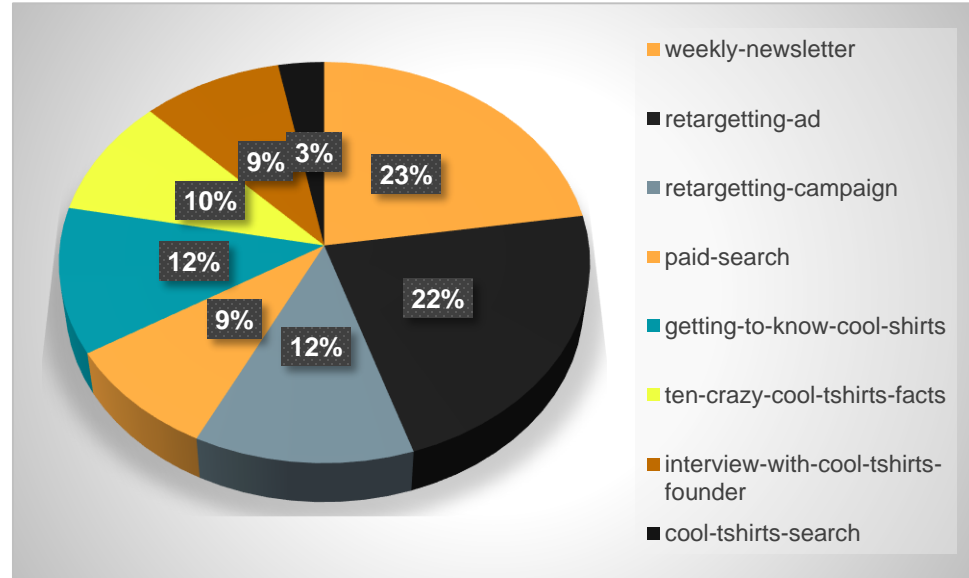
2. What is the user journey? – Purchase

The first two top campaigns below which represent only the subsequent visitors result in 63% of sales. This indicates that CoolTShirts should have different campaign for initial awareness and final sales.

- Weekly-newsletter
- Retargetting-ad

Campaign	Purchases	Purchases %
weekly-newsletter	115	32%
retargetting-ad	113	31%
retargetting-campaign	54	15%
paid-search	52	14%
getting-to-know-cool-shirts	9	2%
ten-crazy-cool-tshirts-facts	9	2%
interview-with-cool-tshirts-founder	7	2%
cool-tshirts-search	2	1%

- weekly-newsletter
- retargetting-ad
- retargetting-campaign
- paid-search
- getting-to-know-cool-shirts
- ten-crazy-cool-tshirts-facts
- interview-with-cool-tshirts-founder
- cool-tshirts-search

3. Optimize the campaign budget

CoolTShirts can re-invest in 5 campaigns. Which should CoolTShirts pick and why?
- Even though top three first touches campaigns only result in 6% of purchase (first time visitors), these campaigns are needed to generate the interests because the 92% of sales are made by the second visitors.
- If CoolTShirts only has the budget for five campaign, two campaigns that produces the highest purchase should be included. Weekly-newsletter and retargeting-ad produce the combined percentage of 63.
- Following five campaigns are recommended with following campaign planning: three first-touches campaigns should be launched first, then followed by two last-touches campaigns

First Touches: getting-to-know-cool-shirts, ten-crazy-cool-tshirts-facts, interview-with-cool-tshirts-founder.
Last Touches: weekly-newsletter, retargeting-ad

Campaign	Source	First Touches	First Touches %	Last Touches	Last Touches %	Purchases	Purchases %
weekly-newsletter	email			447	23%	115	32%
retargetting-ad	facebook			443	22%	113	31%
retargetting-campaign	email			245	12%	54	15%
paid-search	google			178	9%	52	14%
getting-to-know-cool-shirts	nytimes	612	31%	232	12%	9	2%
ten-crazy-cool-tshirts-facts	buzzfeed	576	29%	190	10%	9	2%
interview-with-cool-tshirts-founder	medium	622	31%	184	9%	7	2%
cool-tshirts-search	google	169	9%	60	3%	2	1%