Beusable User Guide

Beusable User Guide Document_v 3.1

NOV 2020

FOUR GRIT

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01. About

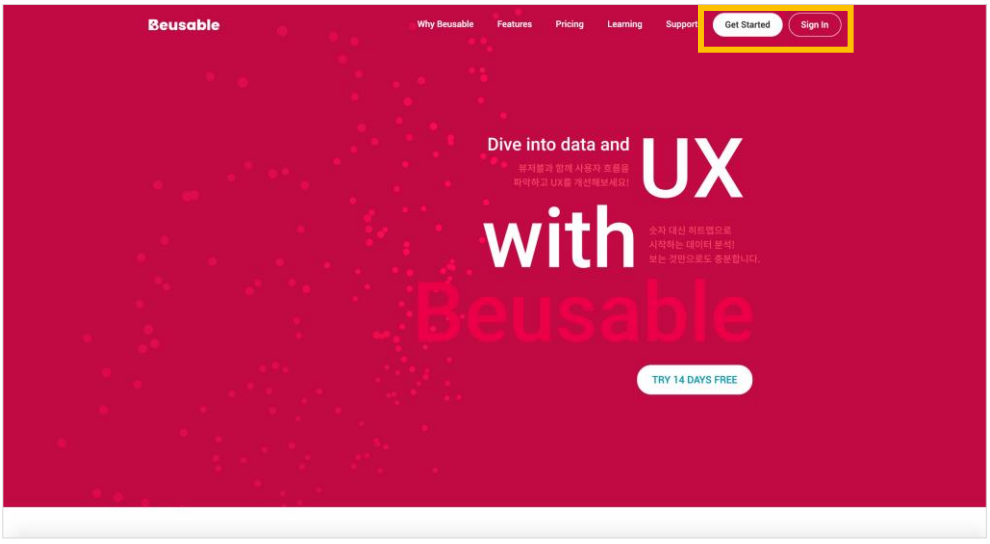
1. About Beusable

01.1.1. Overview

- Beusable is an all-in-one analysis tool. It gives you the access to data and metrics with easy-to-use analysis through visualized reports. With Beusable's qualitative and quantitative analysis, you can build and optimize the user experience.
- Beusable‘s analytics features can be utilized to improve how users interact with your website.
- Beusable analyzes various significant indicators such as clicks, degrees of activity per specific content area, content consumption status per mouse scroll and etc. Also, Beusable provides qualitative user behavior information through a number of infographics (heatmap, gaze plot, session play, graphic, etc.)

Getting Started With Beusable

- Open Beusable home page (https://www.beusable.net) and click Get Started



Beusable user environment

- Beusable supports a wide variety of web browsers such as Internet Explorer, Chrome and etc.
- Chrome is the most recommended web browser for optimal Beusable UI.

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Beusable Features

- Supports concrete data-based solutions for improving user experience
    - Beusable is an analytical tool that visualizes the qualitative user behavior data extracted from the website. Beusable helps establishing more realistic and concrete improvement solutions and also lessening ambiguity and assumptions on user behavior.
- The new way of analyzing user experience
    - Beusable service is specialized for user behavior analytics. Quantitative user metrics such as page views, new users, exit rates and etc are provided, as well as qualitative user information about user's motivation, content consumption, behavior, needs and etc. Qualitative data is visualized on top of the actual website, enabling intuitive understanding of current user experience status. Each feature supports individual user cases and can be applied across any device types including mobile, tablet, and desktop.
    - Beusable is an all-in-one tool that requires no other supplementary tools. There is no need to install additional tools in using Beusable's heatmaps, user metrics analytics, referrer and page conversion path tracking, funnels and etc.
- Easy installation and instant utilization for every department
    - Beusable's various analytics features have easy UI requiring no additional learning process and can be installed fast by inserting just one line of code. While existing "data analytics" is limited to only few professionals, Beusable can meet the needs of designers, marketers, developers, sales operators and etc, supporting every department that is involved to improve user experience.

01.1.2. Contact Us

Beusable contacts

- Contact page: https://www.beusable.net/contact
- Beusable service email: beusable@4grit.com
- Issue reporting button on the lower left corner of Beusable tool.

2. Acquired Data by Beusable

- Beusable can be installed on any web-based service to collect the following data:
    - Page URL accessed by user
    - URL through which user inflowed to the current page
    - Information on user's web browser agent
    - User's browser size (width, height)
    - User's accessed page size (width, height)
    - Screen size of user device (width, height)
    - User IP

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- Page access time of user
- Page exit time of user
- User behavior event within the page

NOTE _ Mobile app support availability

- Beusable can be installed on any web-based service. Therefore, it can be installed on a mobile web app provided in a hybrid format.
- Beusable service for a native app will be available later.

3. User Event Type

01.3.1. Desktop

- Click: Click point. html element, one coordinate based on the element, another coordinate based on the screen, href, and text (excludes entered input).
- Focus: Focused point. html element, one coordinate based on the element, another coordinate based on the screen, href, and text (excludes entered input).
- Mouse hover: Mouse cursor hovered point. html element, one coordinate based on the element, another coordinate based on the screen, href, and text (excludes entered input).
- Mouse move: Move path and pass point of a mouse cursor. html element, one coordinate based on the element, another coordinate based on the screen, href, and text (excludes entered input).
- Scroll: Location of a scroll based on the browser.
- Visibility change: Activation status of a browser/tab.
- Resize: Size of a browser changed/adjusted by user (width, height).
- Exposed: Elements shown on the user screen.

01.3.2. Mobile (Tablet + Phone)

- Touch-end: Point where user's touch behavior ended. html element, element html element, one coordinate based on the element, another coordinate based on the screen, href, and text (excludes entered input).
- Zoom In / Out : The location where the event of expanding or reducing the screen using two touch points occurred.
- Swipe : The location of the event that moves a certain distance horizontally or vertically while touching the screen
- Scroll: Scroll location based on user's browser.
- Visibility change: The activation status of a browser/tab.
- Exposed: Elements shown on the user screen.

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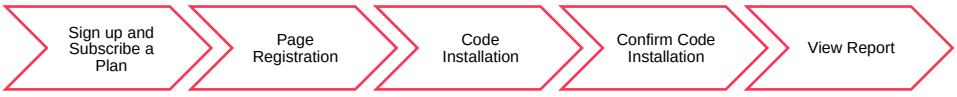
02. Beusable Sign up, Page Registration and Installation

1. Overview

02.1.1. Beusable use process



① Sign up to use Beusable service.
② Register a page URL to view the report. (Beusable is a page-based analysis tool)
③ (In case the code is not already installed) Install the code assigned during Beusable registration to the corresponding page.
④ Confirm Beusable code installation.
⑤ Pages with completed installation can be viewed after PV and events are collected (about 1 to 3 hours).
⑥ PV user data is collected as per the registered plan PV limit and registered page PV limit setting

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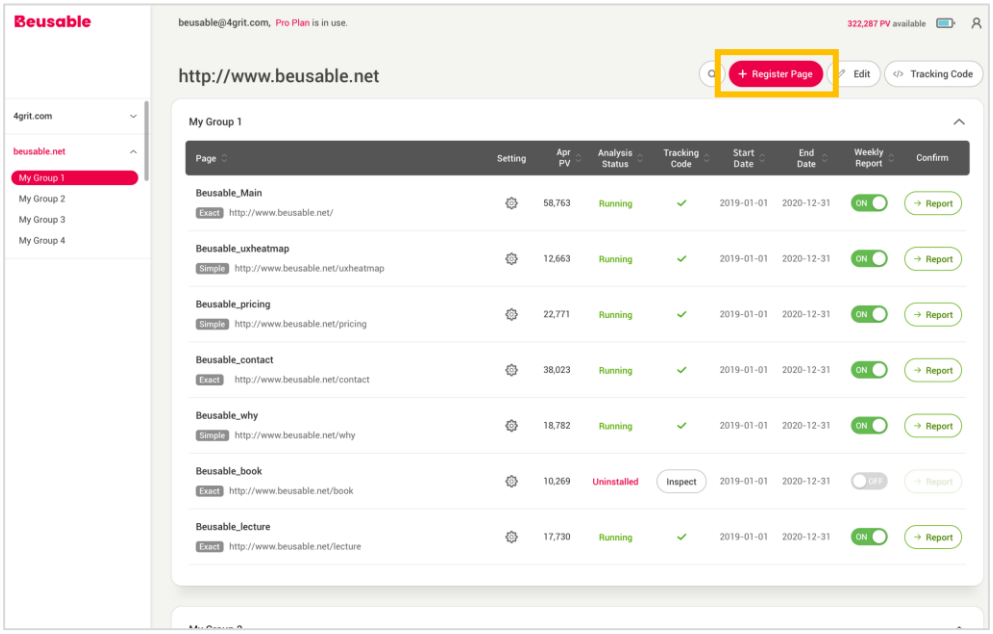
2. Page registration

02.2.1. Page registration



- Register Page button is located at the upper right corner of the page-list management page.
- Pages are automatically classified by their domains.
- Page registration process steps are as follows:

① Analyzing Page Settings: Analysis targeting can be made, by setting the page URL, URL match type and additional page info.

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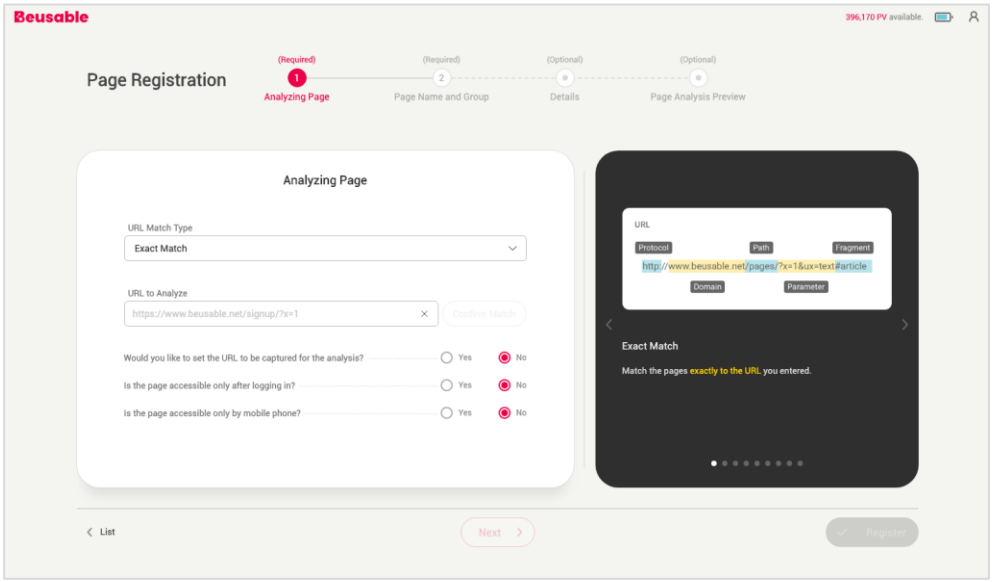
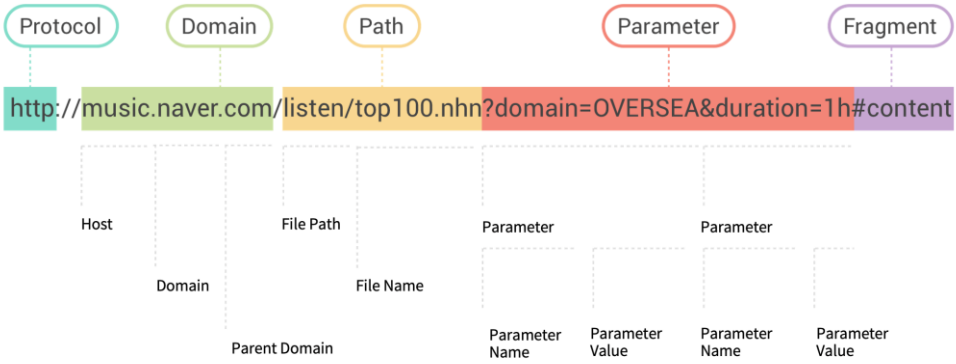


- URL Match Types
  1. Structure of URL



<Structure of URL>

◆ To better understand URL Match Types, let's look into how URL is structured. The URL usually consists of Protocol, Domain, Path, Parameter, Fragment.

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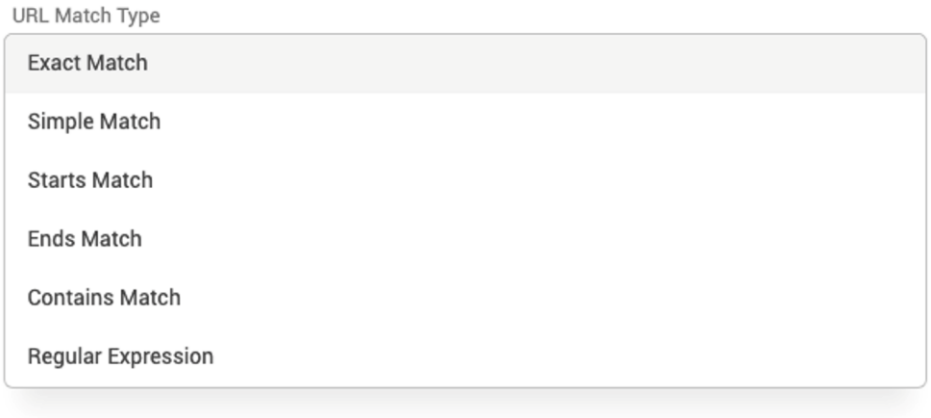
2. URL Match Types



- Exact Match
  - Checks and collect data from pages that matched all the components of the entered URL (Protocol, Domain, Parameter, Fragment).
  - A/B Testing and Session Report features are supported.
- Simple Match
  - Checks and collects data from pages that matches Domain and Path of the entered URL.
- Starts Match
  - Checks and collects data from pages starting with entered string.
- Ends Match
  - Collects data from pages match the domain which ends with the entered string.
- Contains Match
  - Collects data from pages match the domain which contains the entered string.
- Regular Expression
  - Collects data from pages match the domain and the regular expression entered.

NOTE_Recommended Match Type

- In order to include URL variables (Protocol, Host, Parameter, Fragment) Simple Match is recommended.
- For collecting users who entered the exact URL by removing the URL variables, Exact Match is suggested.

NOTE_Before registering as Starts / Ends / Contains and Regular Expression Match Type

- Requires sufficient verification of the site's URL pattern to prevent irrelevant pages' data being collected.

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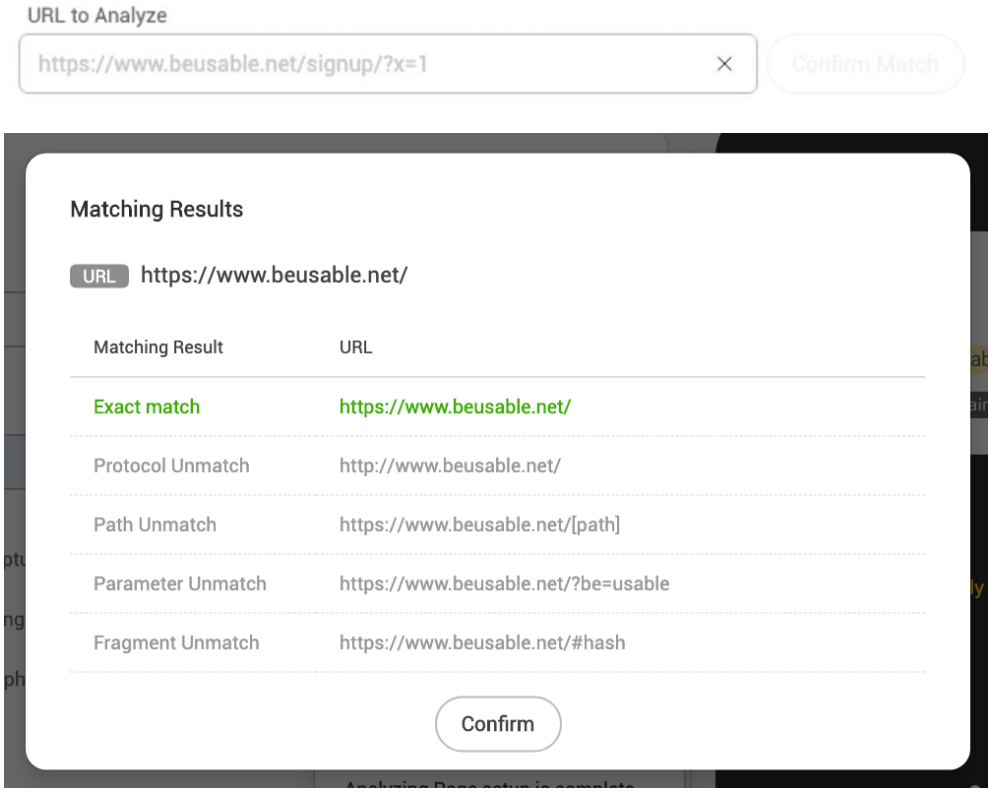
○ URL to Analyze and Confirm Match



1. *URL to Analyze* text field is an area where URL of the page is entered for analysis.
   - ◆ Enter a URL after reviewing the slash (/) at the end of the URL.
   - ◆ An additional URL can be set for screen capture on [Would you like to set the URL to be captured for the analysis?].
2. By clicking the *Confirm Match* button, a sample of matching results is provided for the entered URL and its Match Type.

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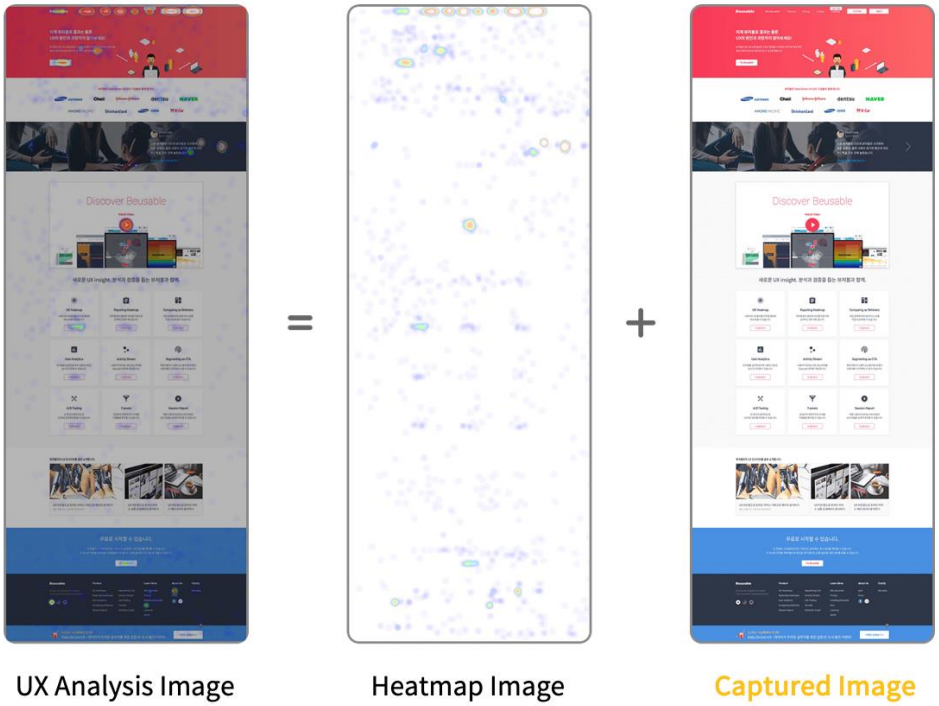
- Would you like to set the URL to be captured for the analysis?

1. Beusable takes a screenshot of the actual page and overlays UX data on it as a form of a heatmap. To set an additional page URL for screen capture, select *Yes* on the option (Capture URL setting) and enter a URL.
2. If the option is set to default (No), the first landing web page of the entered settings (URL to Analyze & Match Type) is captured.



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- Is the page accessible only after logging in?

1. As Beusable cannot access log-in necessary pages, it captures the page of the actual login users when the option is set to *Yes*. As a matter of privacy issue, all the texts are replaced by special characters (texts contained in the image are excluded from replacement).

<Example of text replacement for log-in necessary page >

2. Note
   - In the case of the log-in necessary pages, the screenshot may not be taken normally. Please check if the capture has been taken properly on Beusable report page.
   - When the Log-in necessary page option is set to *Yes*, Page Analysis Preview feature in the Page Registration/Edit is not supported.

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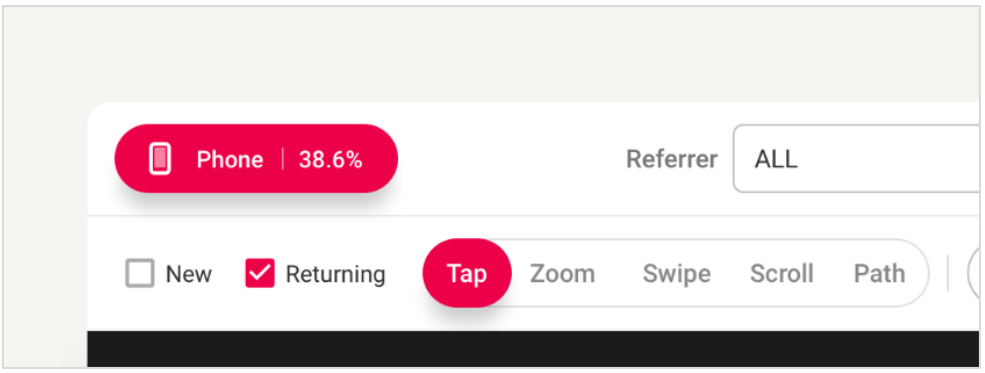
- Is the page accessible only by mobile phone?

1. If the page only supports mobile phone devices (e.g. accessing via desktop is impossible) set the option as *Yes*. A single heatmap of the phone device is provided in an analysis report.



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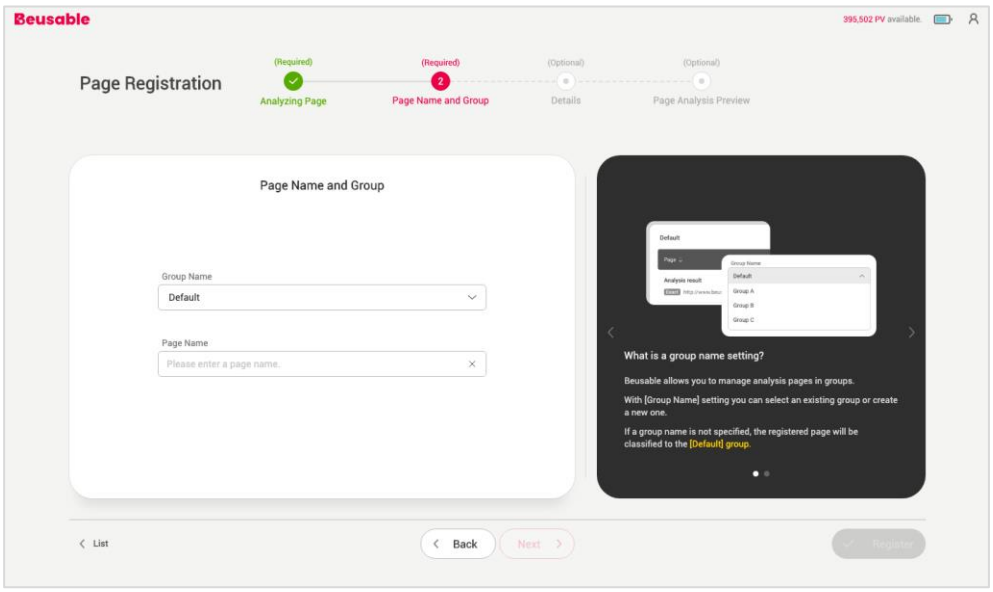
② Page Name and Group Setting: This is the last required step for page registration. Page name and group can be set.



- Group Name
  1. Pages can be organized in groups. The [Group Name] setting can be set by selecting an existing group or by creating a new group.
  2. If a group is not specified, a page will be classified to the [Default] group.
- Page Name
  1. Name the registering page. Set a page name in your convenience of managing analysis reports.

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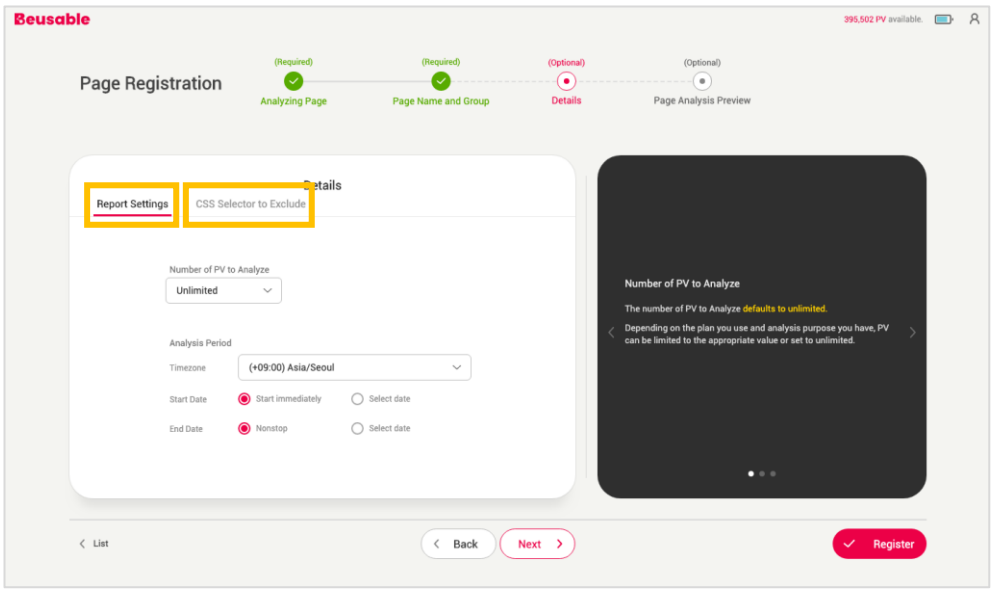
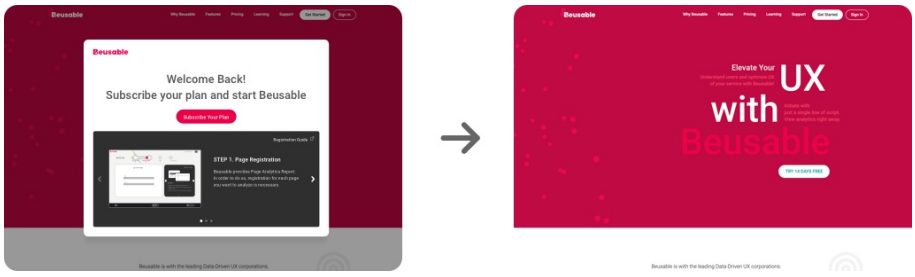
③ Details Settings (Optional): Detailed report settings such as 'PV Cap', 'Analysis Period', and 'CSS Selector to Exclude' can be set.



- Report Settings
  1. Number of PV to Analyze
     - The number of PV to analyze defaults to unlimited. Depending on the plan you use and the analysis purpose you have, PV can be limited to the appropriate value.
     - Please note that, once page registration is completed the number of PV limit cannot be edited.
  2. Analysis Period
     - At the Analysis Period section Timezone and the analysis start/end date can be set. Depending on the plan you use and the analysis purpose you have, an analysis period can be set. The analysis period defaults to *Start immediately* and *Nonstop*.
     - Please note that, once page registration is completed Timezone cannot be edited.
- CSS Selector to Exclude
  1. The screen capture image can be customized, by entering the element's CSS Selector to exclude from the screenshot.



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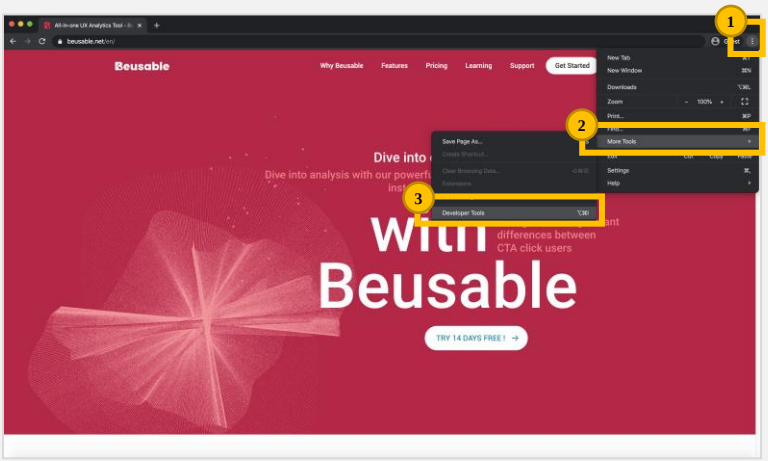
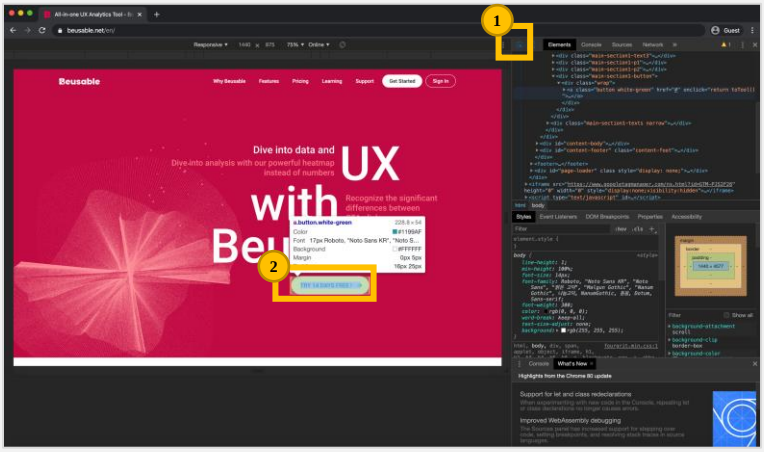
NOTE _ How to find CSS Selector in Chrome

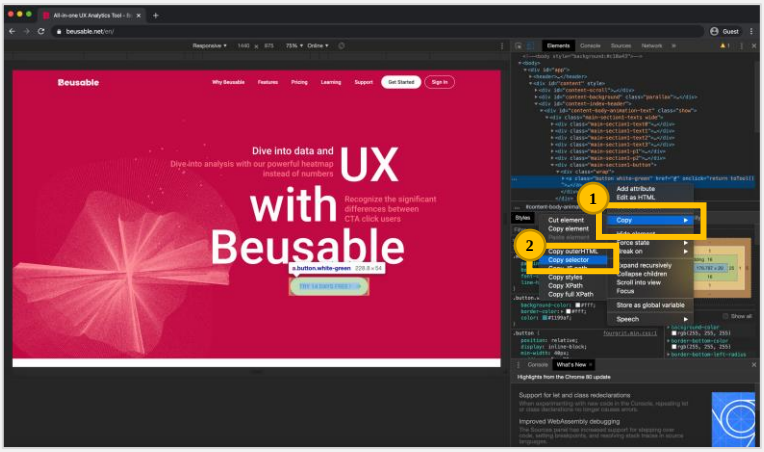
- STEP 01. Open the Developer Tools on the page that contains the elements to be excluded.



- STEP 02. Inspect (click) on an element to exclude in Developer Tools.



- STEP 03. In the Elements tab of Developer Tools, right-click the highlighted element and select Copy > Copy selector.



- STEP 04. Paste the copied CSS Selector to the settings.

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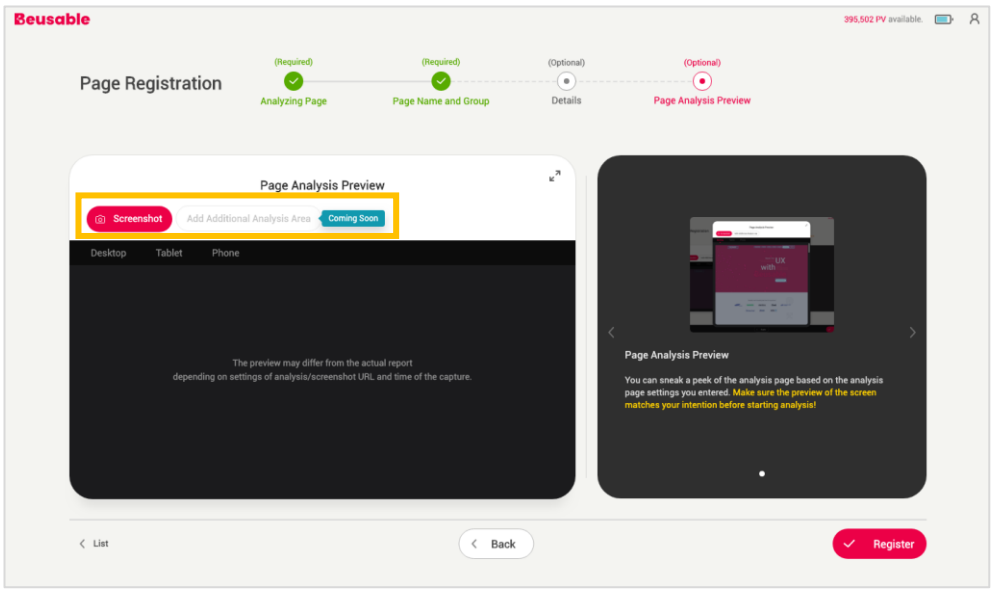
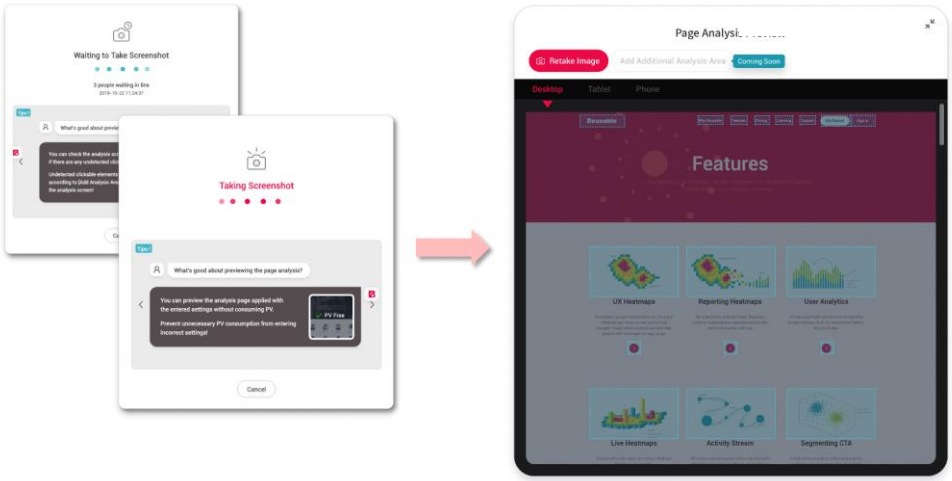
④ Page Analysis Preview (Optional): A preview of the analysis image can be viewed based on the settings made in previous steps. This allows to see if the captured image matches the intended analysis screen.



- Screenshot
  1. As clicking the *Screenshot* button, a preview image is provided after completing [Waiting to Take Screenshot] and [Taking Screenshot] process.



  2. A screenshot may not be taken for pages set as login necessary page, or Starts / Ends / Contains / Regular Expression match type without page capture URL.
  3. Screenshot failures may occur for various reasons, due to internet connection, capture settings, etc. In this case, try again or complete the page registration first and check through [Page Edit > Page Analysis Preview] or [Report].

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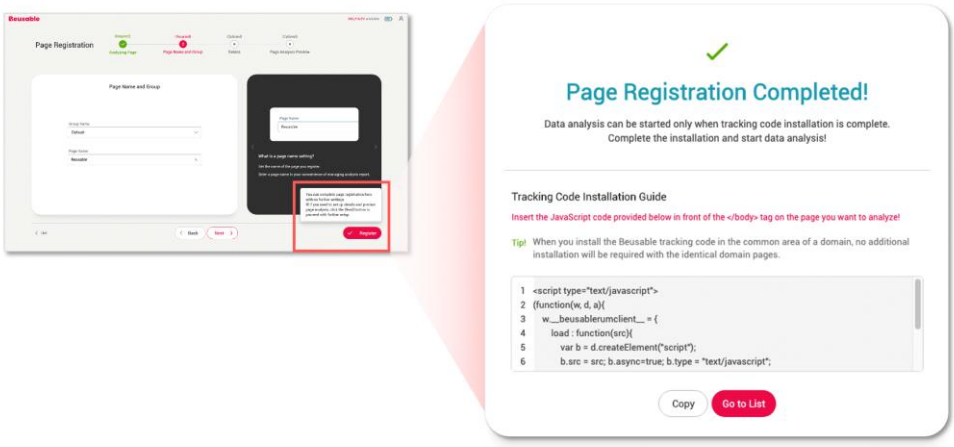
- Add Additional Analysis Area
  1. The feature is currently unavailable and planned to soon to be updated (as of Oct 2019).
  2. Beusable automatically detects all the elements developed as standard and set as analytical elements. This new upcoming feature will allow adding nonstandard developing elements as analytical elements.

⑤ Page Registration Completed: Page Register can be done after setting the required steps, [Analyzing Page] and [Page Name and Group].



NOTE _ Tracking code installation after completing page registration

- Tracking code installation should be completed before starting the page analysis. Please refer to the next chapter on how to install the code.

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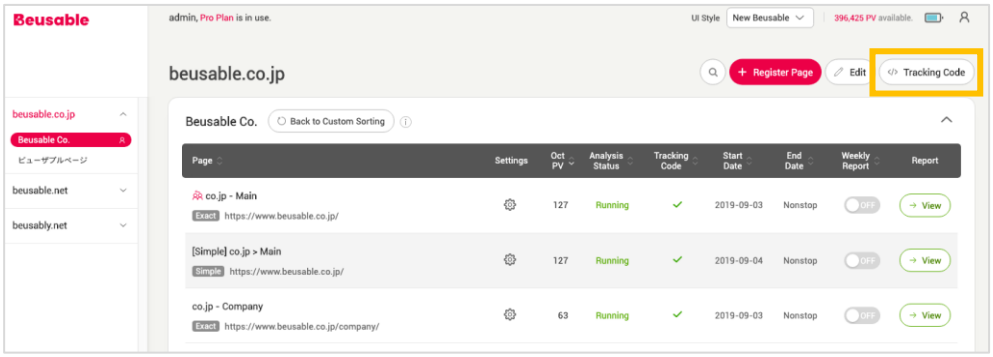
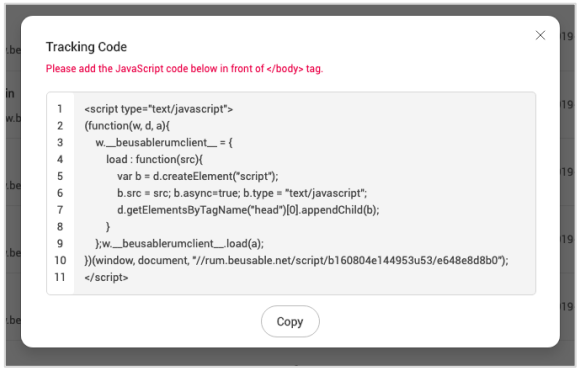
3. Beusable Code Installation

02.3.1. Installing Beusable code



- Identical tracking code is issued per domain.



- Insert the corresponding JavaScript code before the </body> tag of the page targeted for analysis.

NOTE _ How to insert Beusable code to multiple pages with the same domain:

- Beusable code can be installed on multiple pages that share an identical domain name by inserting the code in the Head area or any shared code area such as GNB or footer.
- Note. if the domain name is not identical, different Beusable code will be assigned.

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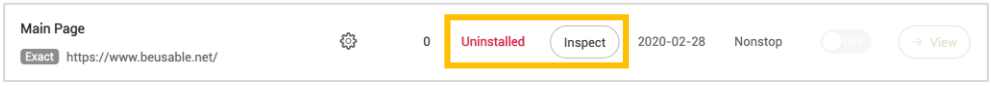
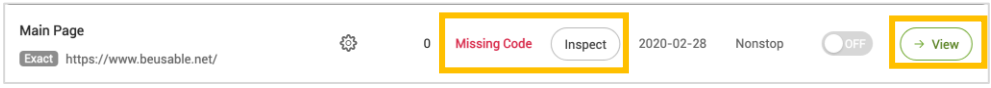
02.3.2. How to confirm code installation

Installation Verification Required – Immediately After the Installation (Red Label)



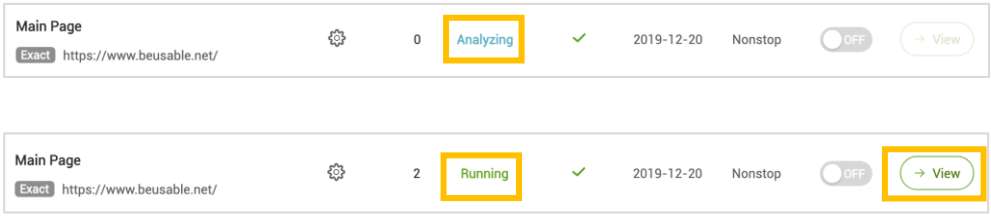
- Immediately after the installation, you can check if Beusable code is installed properly by using Inspect button on the tracking code column.

Installation Verification Required – After Analysis Status Activated (Red Label)



- If *View* button is activated while there is *Inspect* button, it means that the corresponding page did not acquire any PV or that the corresponding page's PV has significantly decreased. In this case, the code installation button or the corresponding page needs to be double checked to see if there is a problem in data acquisition process.

Confirmed Installation Completion (Blue / Green Label)



- When the installation is confirmed, the status column will display either “Analyzing” or “Running” label.
- Once the installation is confirmed and enough PV data is acquired, a report will be available within 1 to 3 hours, and the report *View* button will be activated.

Analysis Termination

- If a set period of the analysis is expired or exhausted the number of PV limit, the analysis will end (label color in purple).

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- If the report is forced to stop, the status column will display “Stop” label (colored in gray).

NOTE_Understanding analysis status of registered reports

- Running: A report is available to be viewed
- Analyzing: Acquiring data to generate a report. The report will be available within 1 to 3 hours
- Stop: Data acquisition has been stopped. The page analysis can be resumed by changing the setting in edit mode.
- Pause: Data acquisition has been paused due to your plan state. Data acquisition will be resumed when PV credit has been refilled.
- Missing Code: An absence of tracking code is suspected. Registered URL and code installation needs to be checked again.
- Uninstalled: A status before tracking code is installed or status, which the code in installed, but no PV has yet been occurred to start data acquisition.
- End (Uninstalled): Analysis has been expired without data acquisition
- Scheduled: Analysis start date is set in the future. Start date can be changed in settings or page edit
- End: Analysis terminated due to PV cap or analysis end date set. Settings of the number of PV to analyze and end date cannot be changed for already terminated pages.

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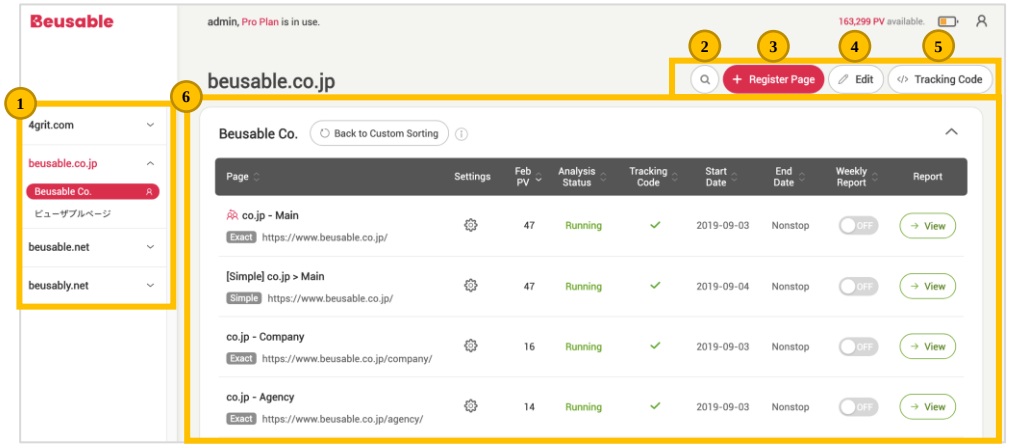
4. Page Management

02.4.1. UI of Page Management



- ①Structure: A registered page will be assigned as one of the following three categories: Domain, Group, Page.
- ② Search: The magnifying glass-shaped button in the upper right corner lets you search for registered pages.
- ③ Register Page: The register page button in the upper right corner allows adding a new page for analysis.
- ④ Edit: The edit button in the upper right corner allows to delete pages or stop an analysis. Moreover, settings of registered pages can be modified. Detailed settings of each page can be edited through the edit button provided in the settings column.
- ⑤ Tracking Code: By clicking the tracking code button on the upper right corner you can see the tracking code allocated to the administrator's account.
- ⑥ List of Groups and Pages: The area provides a list of registered pages. Following information cans be viewed.
    - Group Name - Pages are categorized into groups. When a group is not specified setting defaults to the Default group.
    - Back to Custom Sorting – Registered pages can be rearranged in customized order to easily manage them.
    - Page Name – This is the name of a page assigned by the administrator. Page names are not generated automatically. Page registration will remain incomplete until the administrator directly enters a name for the page.
    - Page URL – The URL of registered page.
    - Report Share – Marked whether a report has been shared with others or you've received sharing.
    - Settings – Settings of registered pages can be managed with this button.
    - PV Count – It is the total accumulated number of page views (=PV=Page View) which have been occurred at the corresponding page URL.
    - Analysis Status – Analysis Status of each registered page is shown.

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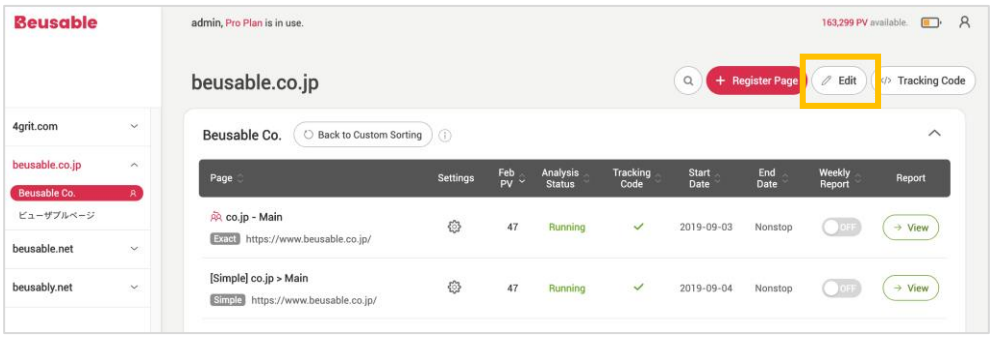
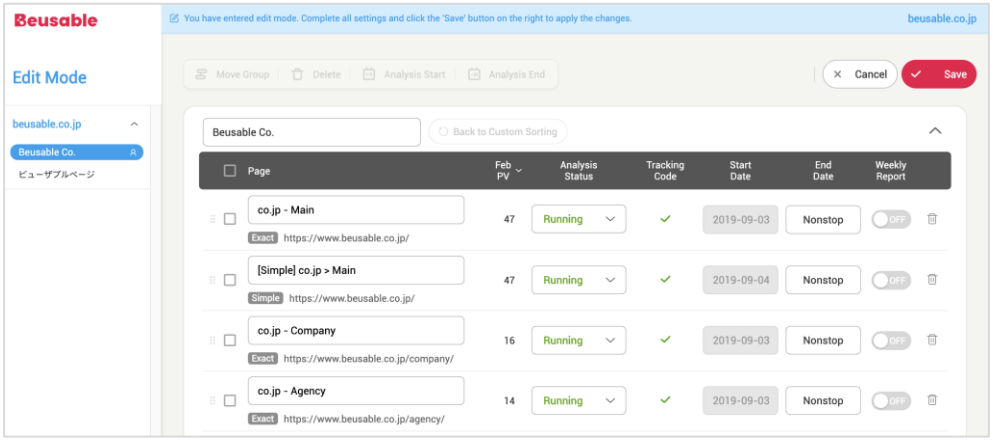
- Tracking Code - The installation of a tracking code can be confirmed. However, if the tracking code is installed as an external file call, the Inspect button may not work. Please contact Beusable Support Team when the analysis status doesn't change even after a PV has occurred.
- Start Date/End Date – The start and end dates of data analysis are displayed.
- Weekly Report – This is a toggle button for activating weekly report subscription of the registered page.
- View – A button to open an analysis report.

02.4.2. Page Management on Dashboard





- *Edit* button on the upper right of the dashboard lets you enter the Edit Mode to manage registered pages.
- Once entered the Edit Mode following items can be managed: group name, page name, an arrangement of pages in a group, analysis status, analysis end date, weekly report, and deletion of pages.

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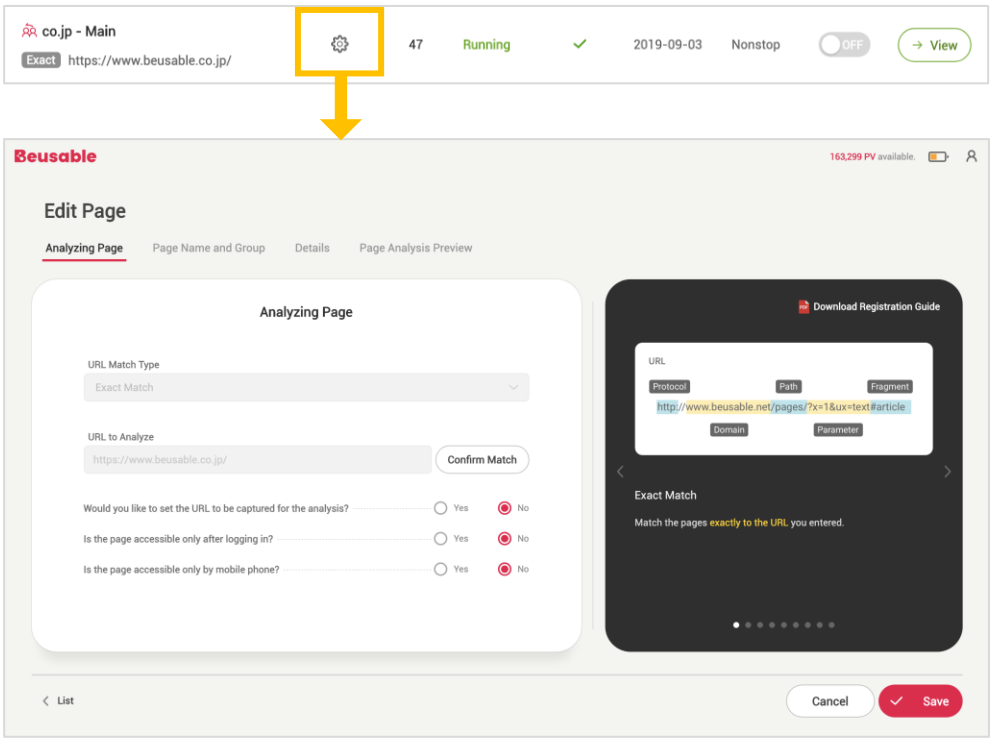
02.4.2. Page Management in Edit Page



- *Edit* button in the *Settings* column lets you enter the Edit Page to manage the detailed settings of each page.
    - Analyzing Page: Settings of the following can be managed; capture URL, whether the URL is mobile-only supported environment, and whether the page is a log-in necessary page.
    - Page Name and Group: A page can be categorized to the existing groups or a new group can be created. The name of the page name can be edited.
    - Details: Settings of the following can be managed except the *Number of PV to Analyze* and *Timezone*. Please note that the start date can only be edited before the preset start date. Once the analysis has commenced, the start date cannot be modified. The end date can be changed until 24 PM by the set date.
    - Page Analysis Preview: The feature is limited when the page status is Running or Analyzing.
- Click the *Save* button to save the changes made, the modification is reflected immediately.

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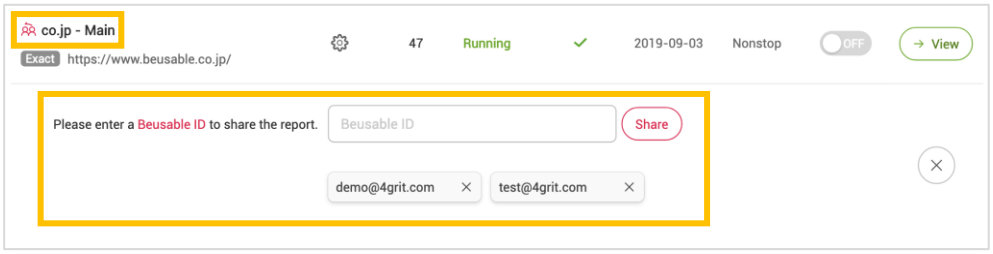
02.4.4. Report Share

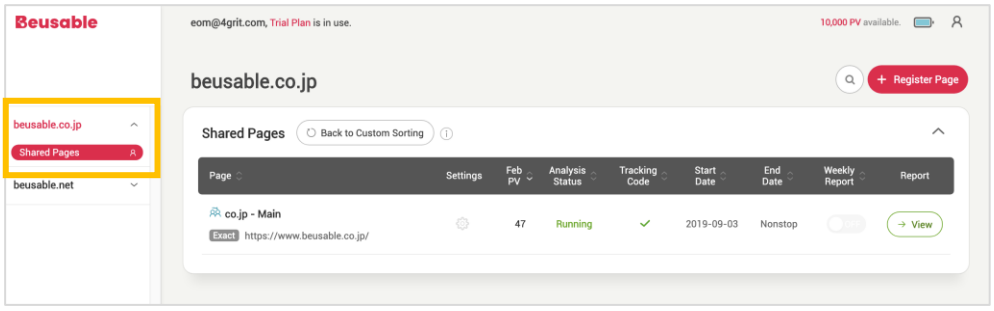
- With *Report Share* feature analysis reports can be shared with other Beusable users.

1. Click the *Share* button in the *Settings* column.

2. Enter a *Beusable ID* of the recipient. As clicking the *Share* button, entered ID will be shown in the list of shared ID list. A sharing page will be marked with a red icon as shown below. Furthermore, to stop sharing click on the *X* button placed next to ID.



3. The recipient of the shared reports can view the pages categorized in a domain on the left side of the screen. Shared reports can only be viewed and all the modification of the settings is restricted.



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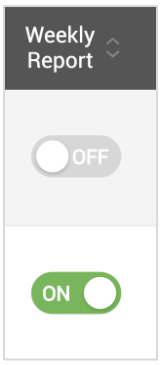
02.4.5. Weekly Report



- Weekly report is a service feature which sends out an email about the significant information of the registered page. All accounts logging in to Beusable can request a weekly summary report for any registered page(s)
- Sending time: Based on Korea Standard Time (UTC+9:00), weekly reports are sent out every Monday, 8:00 am.
- Recipient email address: Weekly reports are sent to an email set for the corresponding account.
- Weekly reports are sent in page units. Sample image of weekly report is as follows:

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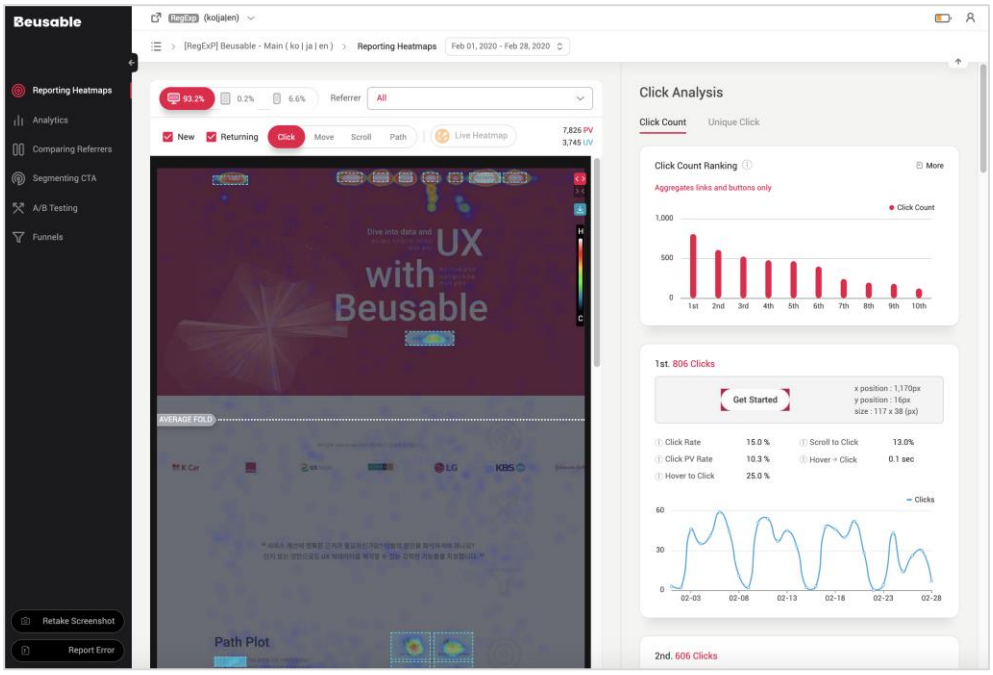
03. Tool Overview

1. Overview

- Beusable's tool page is composed as follows:



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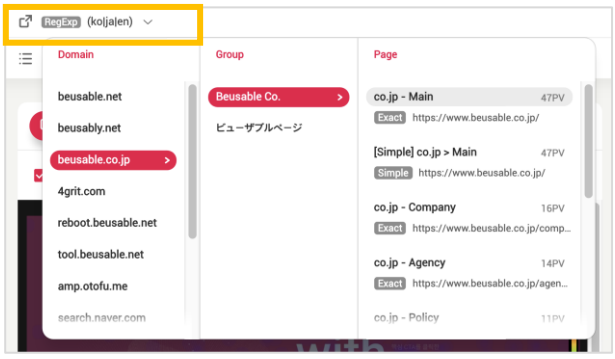
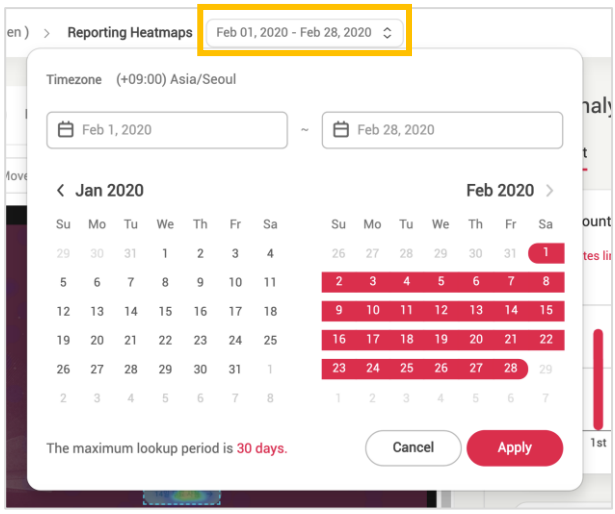
2. Select an URL



- Click the current URL displayed in the top menu bar to switch to other URLs. The drop-down list has 3 categories: domain, group, and page.

3. Set Period



- One can select a time period for data analysis of the selected page.
- The maximum time period you can set is 30 days and can only be set within the last 6 months according to the data storage policy.
- The timezone used in the data query is based on the value set in the User Info.

NOTE _ Time period selection and screenshot

- Page screenshot that was taken on the last day of the selected time period is used.

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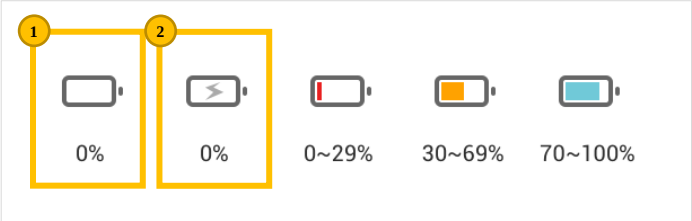
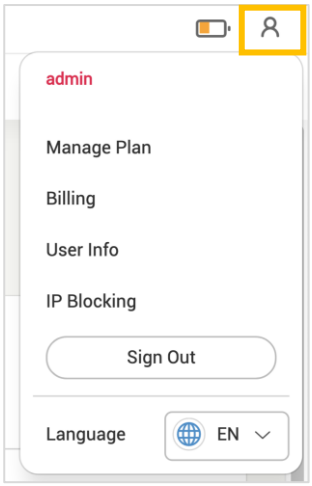
4. PV Balance

- Battery icon indicates the balance of analyzable PVs remaining, depending on the subscribed plan. Move the cursor over to check how many remaining PVs are available for analysis.
- The color of the icon indicates the balance of the remaining PVs.
    - There are 2 cases of PV empty state: ① When you have no subscription history and your PV balanced is 0. ② When you have a plan subscription and the PV balance is empty.



5. Administrator Icon



- Manage Plan: You can manage your subscription.
- Billing: You can manage your billing information.
- User Info: Your account Information can be managed.
- IP Blocking: You can set the IP to exclude from data analysis based on the domain.

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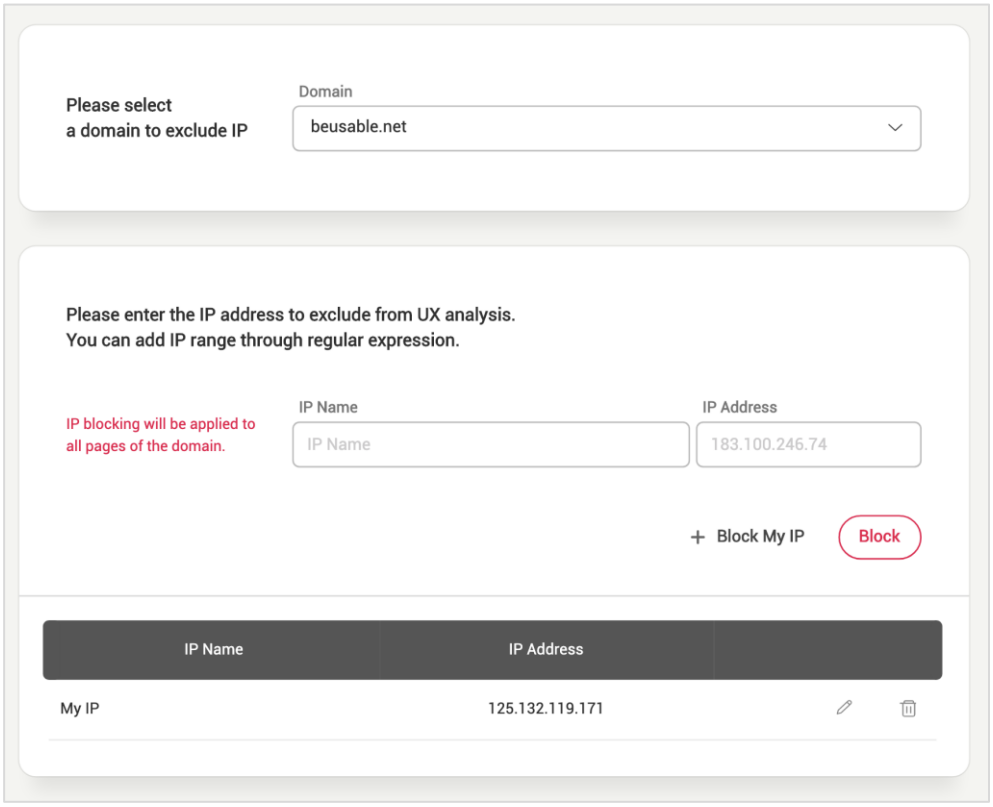

6. Breadcrumb Trail

- Indicate the current page's location within a navigational hierarchy.

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7. Beusable Features Menu

03.7.1. Reporting Heatmaps

- *Reporting Heatmaps* shows the qualitative UX information of users' behavior.

03.7.2. Analytics

- *Analytics* menu shows essential user-related metrics of the page.

03.7.3. Comparing Referrers

- *Comparing Referrers* allows you to compare UX heatmaps between different inflow channels or various segment options and to analyze critical issues and their cause.

03.7.4. Segmenting CTA

- *Segmenting CTA* classifies users who clicked a particular CTA (Call-to-Action) element and users who did not click that particular CTA. This enables comparative analysis between different user groups.

03.7.5. A/B Testing

- *A/B Testing* minimizes the size of development sources and enables easier performance test.

03.7.6. Funnels

- User exploration flow between pages registered under the same domain can be analyzed, and the corresponding conversion/exit rates can be learned. Also, individual user's session report per conversion or exit status shows detailed behavior flow for more accurate analysis.

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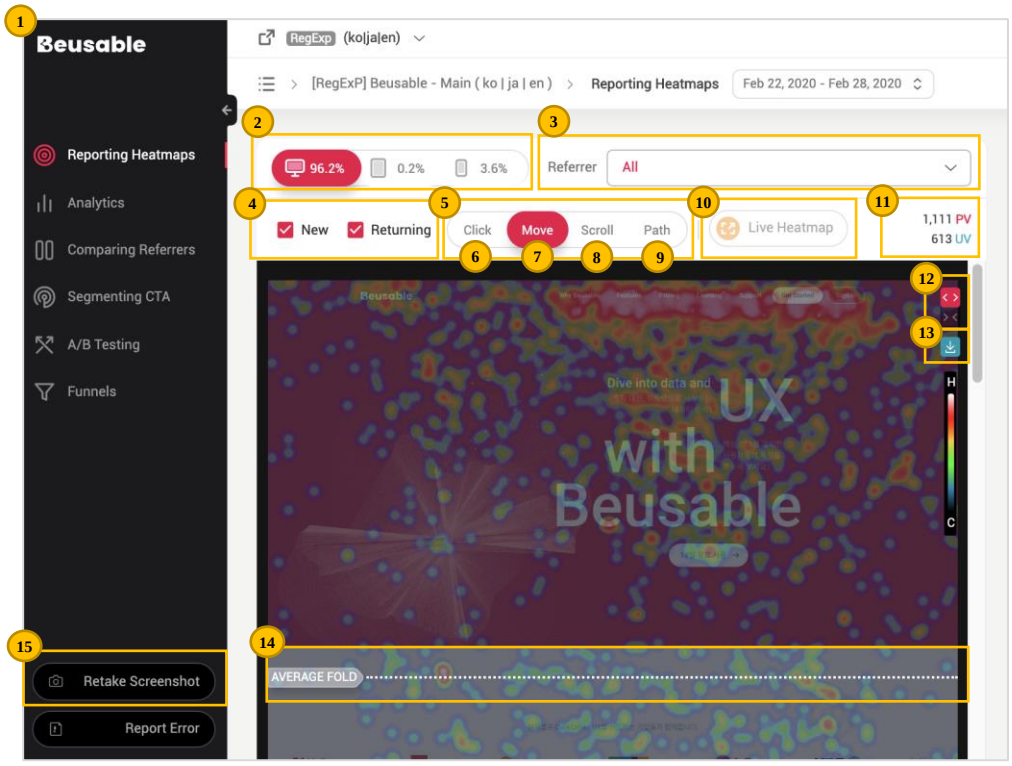
04. Heatmap

1. Overview



[The numbers in the above image can be referred to the following description.]

- With various heatmaps, user behavior can be monitored as if looking through an x-ray. With Click, Move and Scroll heatmaps, users' clicks, moves, behavior paths, and user-density per certain page area can be understood. Also, *Path Plot* shows user behavior flow as if users' mouse moves had been traced.
- You can view heatmaps and analysis report that correspond to users classified according to the options in the upper area of the heatmap. Provided options are: referrer, new/returning users, device type, and live heatmap. One can utilize the heatmap by applying all these different options.

NOTE _ Period selecting and option of heatmap tool

- Changing the selected period in the upper GNB menu of Beusable tool initializes all options applied to heatmap.

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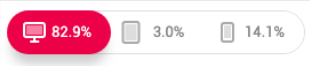
2. Device



- Heatmap and analysis report are provided along with screenshots of Desktop, Tablet, and Phone settings. Device type with the highest proportion is displayed as a default.
- Beusable features made available may vary depending on the selected device type. For mobile device types (Tablet and Phone), *Reporting Heatmaps* feature is not supported regarding *Mouse Move* heatmap.

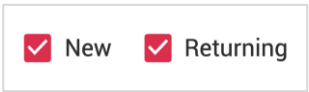
3. Referrer

- In the drop-down list of referrers, the top 10 inflow channels are listed and its composition proportion within the selected period can be viewed.
- Selecting particular inflow channel shows corresponding heatmap and heatmap report per each inflow channel.

NOTE _ Entire inflow channel information

- 'Analytics' menu shows the entire inflow channel information of the site that was not divided into device type.

4. New & Returning Users



- Heatmap reports of new users and/or returning users can be viewed.
- New and returning users are classified based on the browser cookie created by the installed Beusable code (Selected time period is irrelevant to the classification of new and returning users.)

NOTE _ The new and returning users

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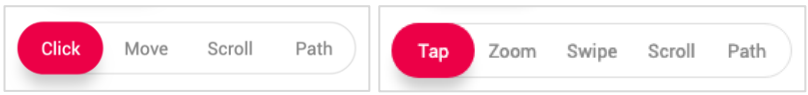
- The new users mean the first users who have visited the site since the Beusable report has been registered.
- The returning users mean the users with previous visit records.
- The new and returning users are divided based on the browser's cookie. Therefore, the new and returning users visit status may vary based on whether the browser's cookie had been deleted.

NOTE _ Understanding the new and returning users

- The new users can be understood as new customers induced from marketing activities while the returning users refer to the users who have been using or visited the service previously.
- To maintain the customers as persistent users, the service operation and management should understand each metrics status to make the new users return. Also, if it is a service with the high rate of returning users, giving a sense of bonding to the service or showing updated content can satisfy the repeatedly visiting users.

5. Heatmap Type



04.5.1. Overview

- User clicks (Click heatmap), mouse movement area (Mouse move heatmap), attention level reflecting the percentage of scroll reach along with the duration time (Scroll-Attention Graph), behavioral flow (Path Plot) and Tap/Zoom/Swipe Heatmap for mobile devices can be viewed for selected options.
- Click (Heatmap) - Click concentration, valid/invalid click area, and more click-relevant metrics.
- Move (Heatmap) - Content exploration status over where users' interests are distributed.
- Scroll (Heatmap, Attention Graph) - User status per scrolled area, efficient content consumption area, and attention status of users per sector.
- Path (Path Plot) - Users' average exploration path, exit/interested status per sector.
- Tap (Heatmap) – Tap concentration, user selection area related indicators.
- Zoom (Heatmap) – User's zoom event occurrence area
- Swipe (Heatmap) - User up/down, left/right content navigation behavior

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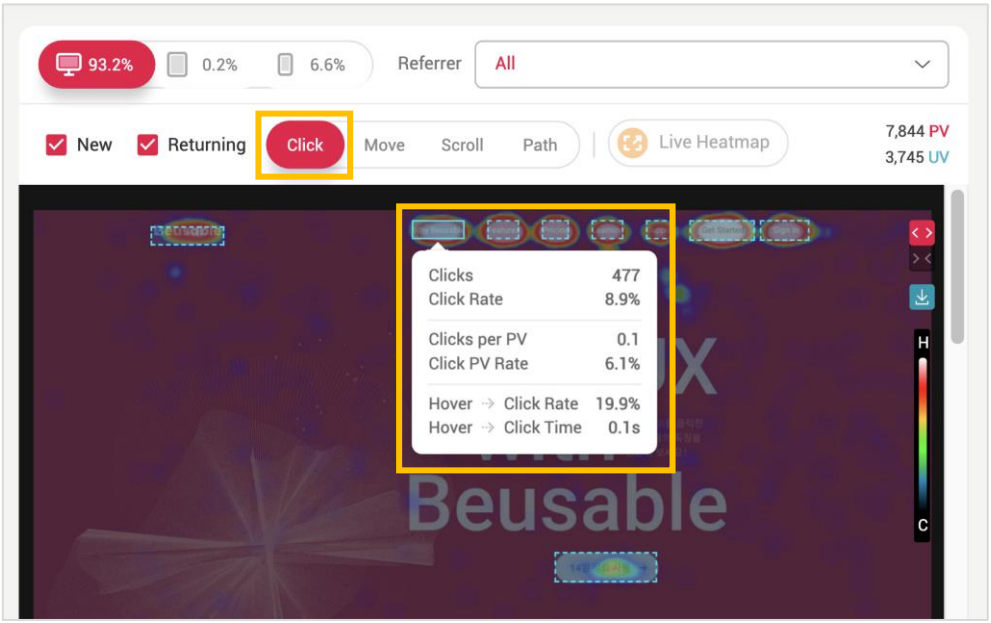
6. Click Heatmap



04.6.1. Overview

- Click heatmap shows where click events occurred throughout the selected page.

04.6.2. Click Layer

- Hovering the mouse cursor over any clickable area such as link, button, or formatting element displays detailed click information on the hovered area.

Clicks

- Clicks reveal user interest level and the dispersion of users' final intention reflected target.
- It is calculated by the cumulated number of click events within the selected time period.

NOTE _ 'Clicks' with content's characteristics

- A clickable content where the page is not converted after the content is clicked instead create a layer or renew a particular area. Therefore, users can repeatedly click that type of content. And this must be taken into consideration when understanding the volume of Clicks.

Click Rate

- Number of clicks divided by the total number of clicks within the page (%).
- Click rate helps you better understand the significance of page contents within the dispersion of user interest and targeted area.

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Clicks per PV

- Number of clicks divided by entire PVs (%).
- Clicks per PV means the average click count to particular content per PV.

NOTE _ Compare the click status in between pages with different amount of PV through 'Clicks per PV.'

- Click status in between pages with different amount of PV can be compared. For instance, when the PV has been changed due to applying segmentation options to heatmap, 'Click per PV' can be referred to analyze the click level correctly.

Click PV Rate

- Click PV (Unique Click) divided by entire PVs (%)
- Click PV rate represents the percentage of PV that clicked a particular content. It is known as *Click PV* or *Unique Click*.

NOTE _ Understanding and utilizing 'Unique Click'

- When single PV clicked same content multiple times, the effect to 'Click PV' of that content is flat as 1.
- The actual size of PV which clicked repeatedly clickable content can be understood. Such content create a new layer or renew a particular area rather than converting the page.
- Examples of repeatedly clickable content:
- Content that does not convert a page and changes a particular area of the page (previous/next button, color theme option button, etc.).
- Format-form content that does not convert a page (Text input box, checkbox, radio button, etc.)
- Pop-up link or button content that does not convert a page (A new window link).
- With Scroll data, Click PV Rate metrics can be more comprehensively understood. The Scroll data can be viewed from the scroll heatmap or the Reporting Heatmap menu's scroll chart.

Hover to Click Rate

- Clicks divided by hovers (%)
- Hover to Click Rate shows the ratio of the number of actual interest-driven choices (clicks) to the detected user interest level.

NOTE _ Understanding 'Hover to Click Rate'

- Even though the hovering behavior can be unconsciously done without user's intention, the reported interpretation states that about 80% of user's actual gaze overlaps the mouse cursor movement. Therefore, it appoints enough credibility to the 'Hover to click rate' to be understood as a ratio of between the purpose-driven behavior and shown interest level regarding a particular content or an area.

Hover to Click Time

- *Hover-to-click time* means that the time user spent before clicking the content after hovering mouse cursor over the corresponding content. It reflects the time taken for users to consume and understand the content with their eyes and to decide whether to click the corresponding content.

NOTE _ Understanding 'Hover to Click Time'

- During this time difference, a user could decide to click while a cursor-hovering right after experiencing the perception > understanding > determination process. Or he could come back to click after strayed away from the content to explore other content.
- If the content was clicked with a short hover-to-click time, it means the content is strongly related to the user's interest or intention. However, if the user clicked contents after quite some time, it indicates that the user may be experiencing difficulties in recognition, perception that the content is not informative enough to induce to click. Reviewing the reason behind longer hover-to-click time can improve user's conversion rate by improving content when recognition or perception was problematic and adding new information which suits user's interest and

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intention. Such method could be the following. First, review and study the possible reasons for the user's hesitation before clicking. Then if the cause lies in user's recognition and understanding, improve the context of content and add new content corresponding to the users' actual purpose.

04.6.3. Legend of Click Heatmap

- (Where the click event didn't happen in the corresponding page) < (Where the most click events happened in the corresponding page)
- Black < Blue < Green <Yellow < Red < White
- Contents with the largest number of clicks will be displayed in color white or red.

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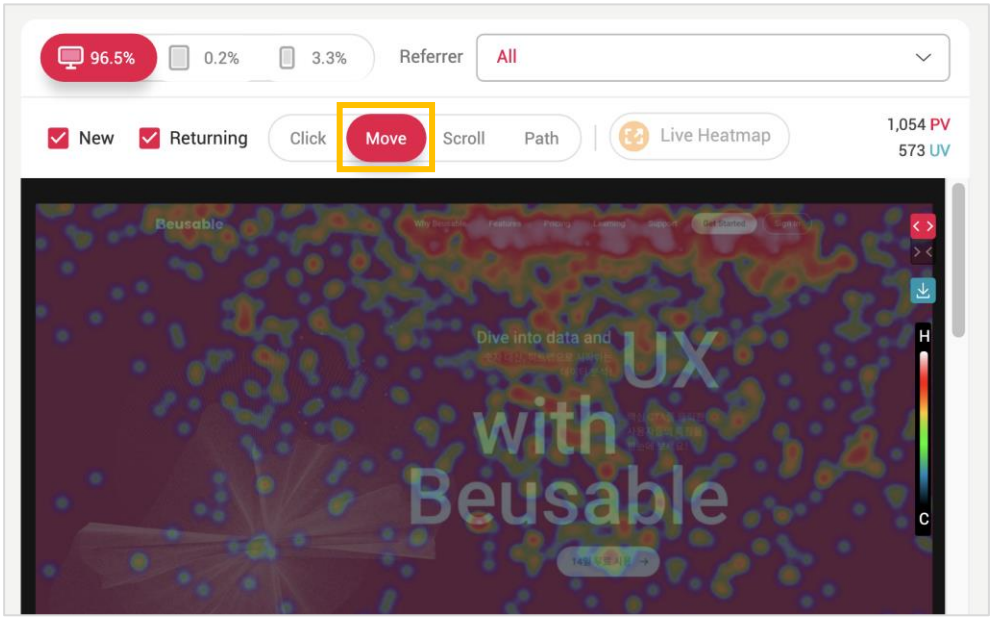
7. Mouse Move Heatmap



04.7.1. Overview

- *Mouse Move Heatmap* shows the heatmap of users' mouse movement. The degree of heatmap can be referred to the colors of the *Move Heatmap* legend.

NOTE _ Mouse move heatmap of tablet and phone

- Move heatmap in a Mobile (Tablet and phone) environment is generated based on the detected touch events. Regard the touch events that includes user's' finger movement; the moving path from the initial touch point to the terminal touch point substitutes the desktop's mouse cursor moves.

04.7.2. Legend of Mouse Move Heatmap

- (Where move event didn't happen in the corresponding page) < (Where move event happened to the corresponding page)
- Black < Blue < Green <Yellow < Red < White
- Contents with the largest number of clicks are displayed in color white or red.

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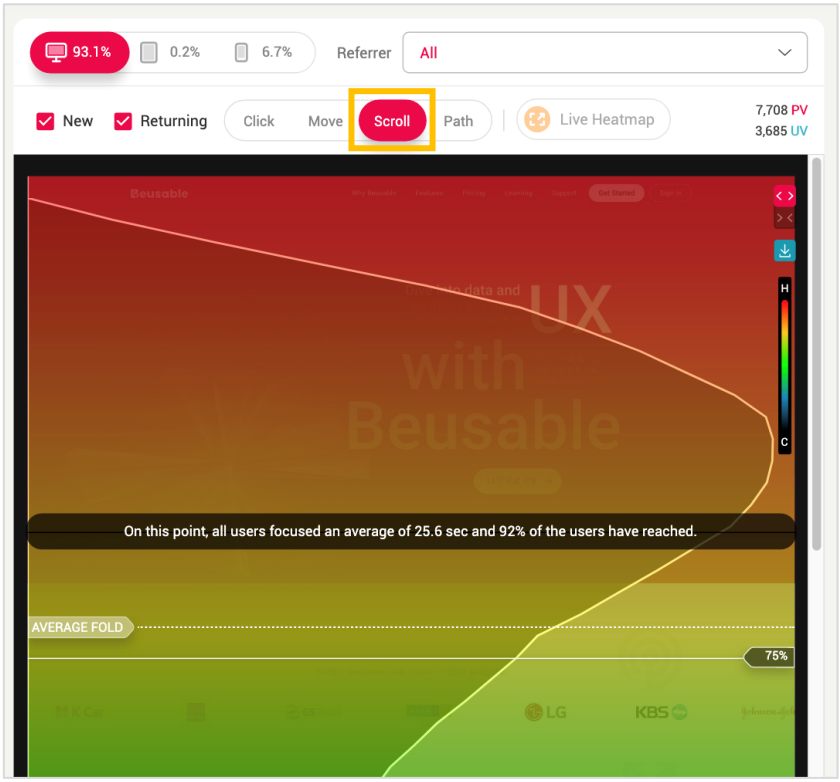
8. Scroll Heatmap & Attention Graph

- Scroll heatmap and attention graph can be viewed in scroll heatmap screen. Hovering the mouse cursor over a specific area within the heatmap/graph area will show scroll-reach height information and user attention level (dwell time=duration time).



04.8.1. Scroll Heatmap Overview & Legend

- Scroll heatmap represents in colors the size of PV that reached to the certain page height.

NOTE _ Attention level information with the user-retention level of scroll heatmap.

- From 'Attention Graph' and 'Move Heatmap', how much PV has reached to certain content and how strongly users had focused to certain content can be understood.

Legend of Scroll Heatmap

- (Point reached to 0% PV) - (Point reached to 100% PV)
- Black < Blue < Green < Yellow < Red
- Location that marks the highest user page-reach rate (%) is colored in red.

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04.8.2. Attention Graph Overview

- Attention graph displays where user attention is high.
- Attention = Focus Level = Reflects users' (Reached size x Average duration time)
- Its x-axis represents the attention level of users. The value is calculated considering the location of user-focused area and the duration time of users, based on the exposed screen area.

NOTE _ Understanding attention graph

- The point with the highest value in the x-axis represents the most focused area by the users within the corresponding page, and this point can be relatively compared to other area's attention value.
- Considering the scroll-reached rate metric and 'Move heatmap' together helps to understand the attention graph to get an insight regarding the actual size of users who reached to the corresponding area or the mouse move occurrence level.

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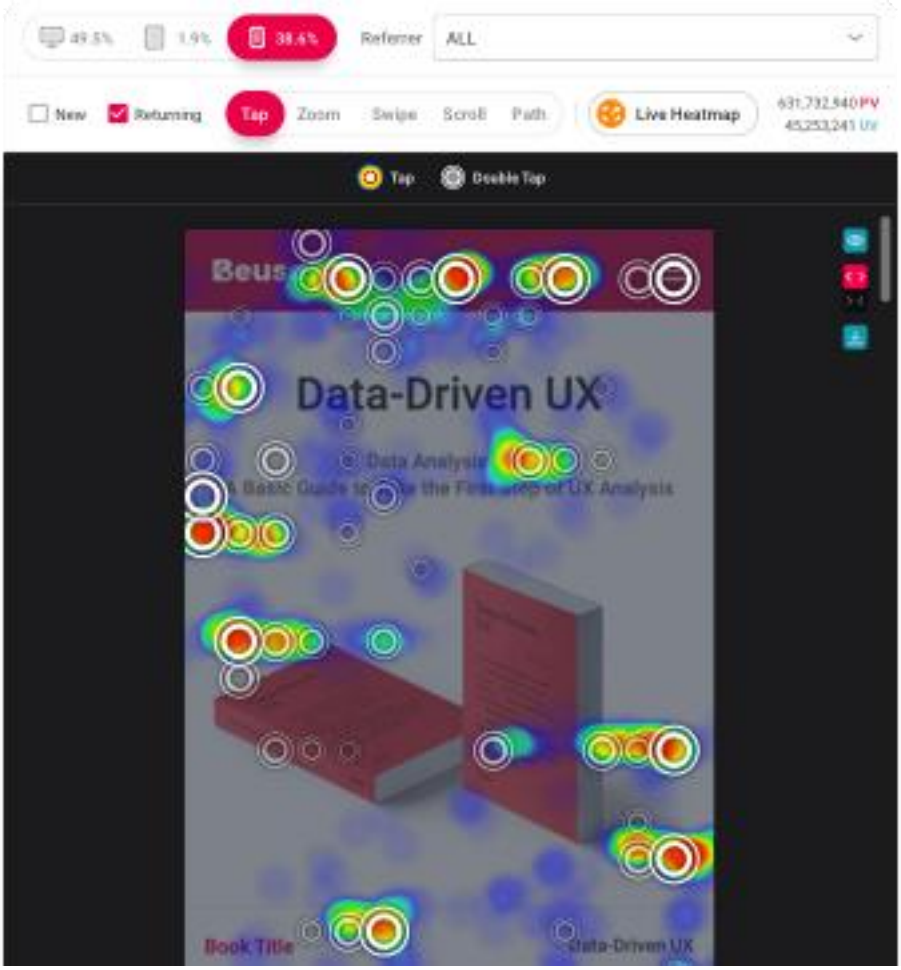
9. Tap Heatmap

04.9.1. Overview



- Tap heatmap shows where Tap/Double Tap events occurred throughout the selected mobile page. The degree of heatmap can be provided by referring to the legend.

04.9.2. Tap Layer

- Hovering the mouse cursor over any area where tap events can occur such as link, button, or formatting element displays detailed tap information on the hovered area.

Taps

- Taps reveal user interest level and the dispersion of users' final intention reflected target.
- It is calculated by the cumulated number of tap events within the selected time period.

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Tap Rate

- Number of Taps divided by the total number of taps within the page (%)
- Tap rate helps you better understand the significance of page contents within the dispersion of user interest and targeted area.

Tap PV Rate

- Tap PV divided by entire PVs (%)
- Tap rate helps you better understand the significance of page contents within the dispersion of user interest and targeted area.

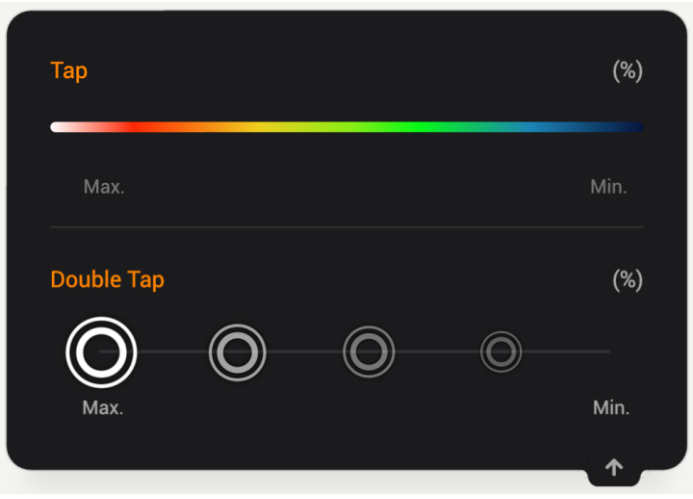
Scroll to Tap

- Tap PV divided by PV the scroll reached (%)
- Scroll to Tap Rate shows the ratio of the number of actual interest-driven choices (Taps) to the screen that reached the user.

Dbl. Tap Rate

- Number of Double Taps divided by the total number of taps within the page (%)
- Dbl. Tap Rate represents the proportion of Double Tap events that occurred in the content out of the distribution of all Double Tap events.

04.9.3. Legend of Tap Heatmap



- Tap Heatmap
  - (Where tap event didn't happen in the corresponding page) < (Where tap event happened to the corresponding page)

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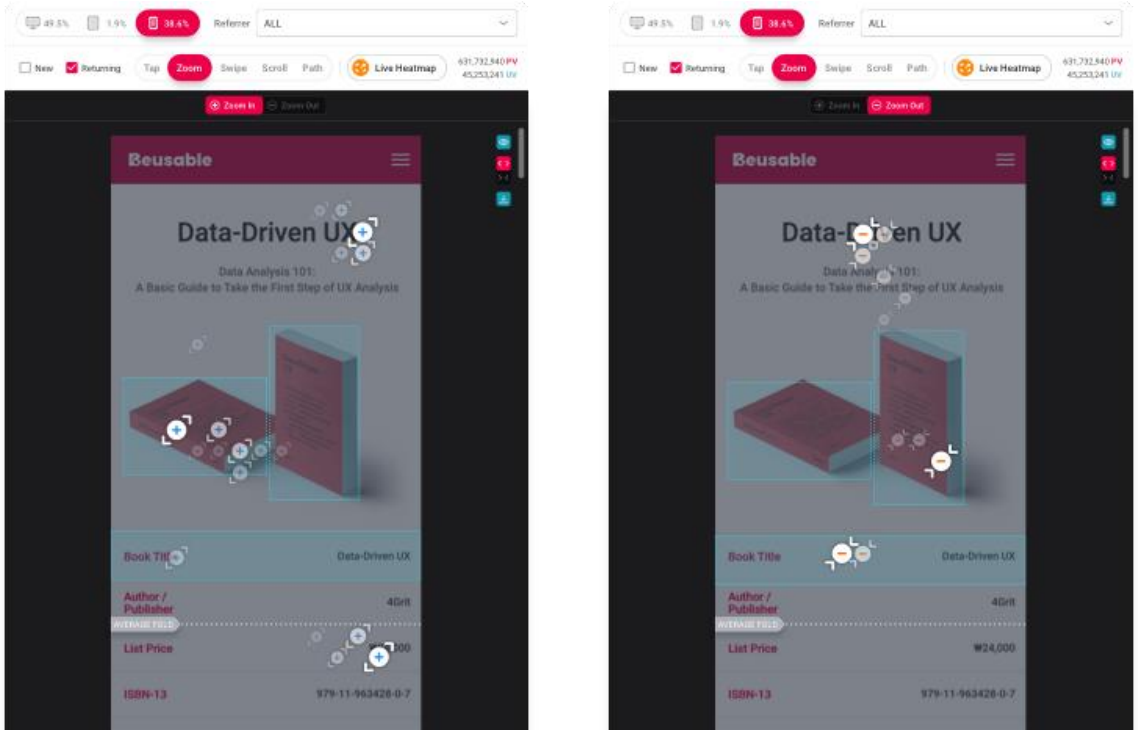
- Black < Blue < Green <Yellow < Red < White
- Contents with the largest number of clicks are displayed in color white or red.

- Double Tap
  - (Where double tap event didn't happen in the corresponding page) < (Where double tap event happened to the corresponding page)
  - The degree of event occurrence is displayed through the 5-level transparency of the double tap icon.(100~80%, 79~60%, 59~40%, 19~1%)

10. Zoom Heatmap

04.10.1. Overview



- Zoom heatmap shows where Zoom In/Out events occurred throughout the selected mobile page. The degree of heatmap can be provided by referring to the legend.

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04.10.2. Zoom Layer

- Hovering the mouse cursor over any area where zoom events can occur such as link, button, or formatting element displays detailed zoom information on the hovered area.

Zoom In

- Zoom In reveal the distribution and scale of content that users are interested in and zoomed in.
- It is calculated by the cumulated number of zoom in events within the selected time period.

Zoom In Rate

- Number of Zoom In divided by the total number of Zoom In within the page (%)
- Among all Zoom In events, you can check the weight of the Zoom In event that occurred in the content.

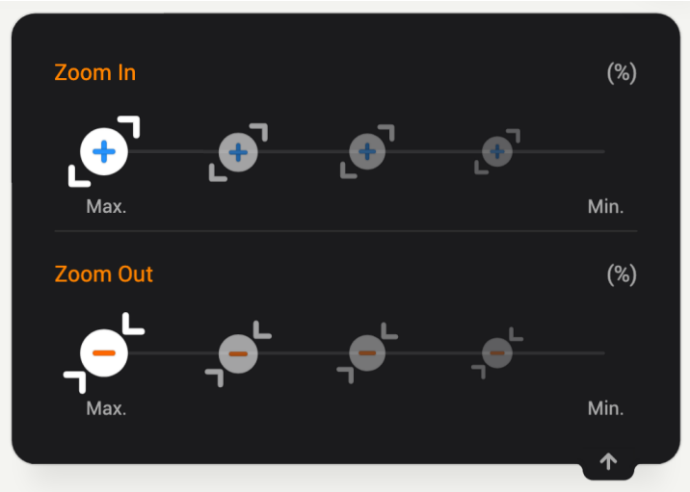
Zoom Out

- Zoom Out reveal the distribution and scale of content that users are interested in and zoomed out.
- It is calculated by the cumulated number of zoom out events within the selected time period.

Zoom Out Rate

- Number of Zoom Out divided by the total number of Zoom Out within the page (%)
- Among all Zoom Out events, you can check the weight of the Zoom Out event that occurred in the content.

04.9.3. Legend of Zoom Heatmap



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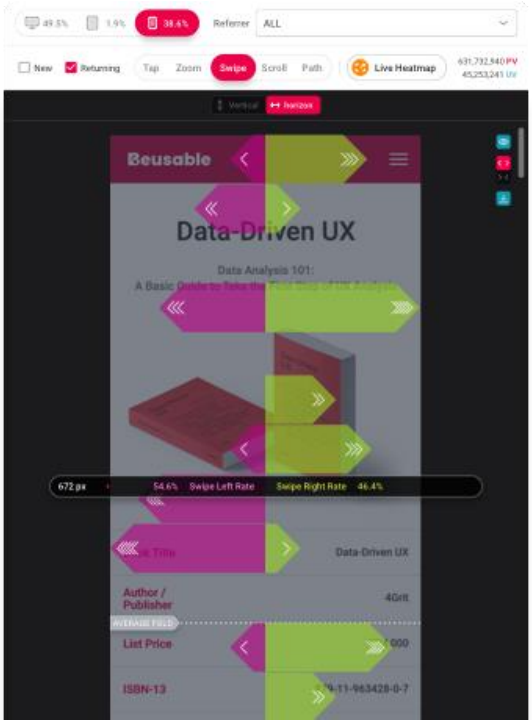
- The degree of event occurrence is displayed through the 5-level transparency of the zoom in/out icon.(100~80%, 79~60%, 59~40%, 19~1%)

11. Swipe Heatmap

04.11.1. Overview



- Swipe heatmap shows where swipe events occurred throughout the selected mobile page. The degree of heatmap can be provided by referring to the legend.

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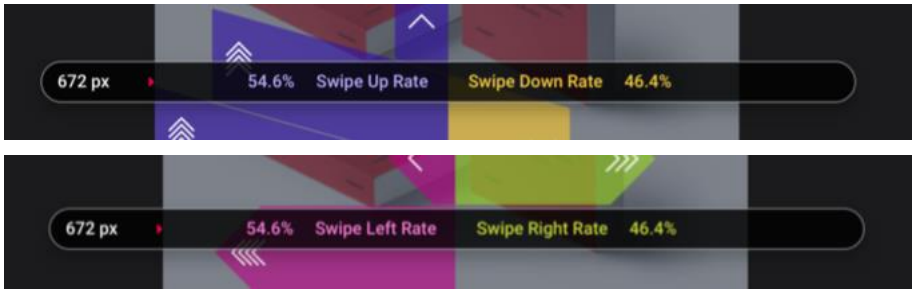
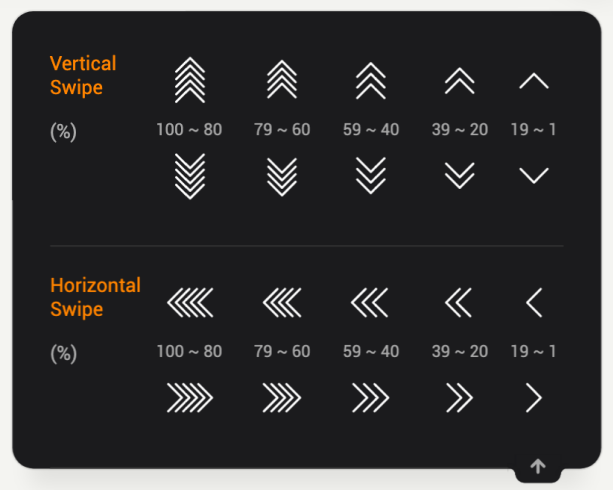
04.11.2. Swipe Layer



- Hovering the mouse cursor over area, you can see the swipe direction and percentage caused by the user by screen height.

04.11.3. Legend of Swipe Heatmap



The degree of event occurrence is displayed through the 5-level transparency of the swipe icon.(100~80%, 79~60%, 59~40%, 19~1%)

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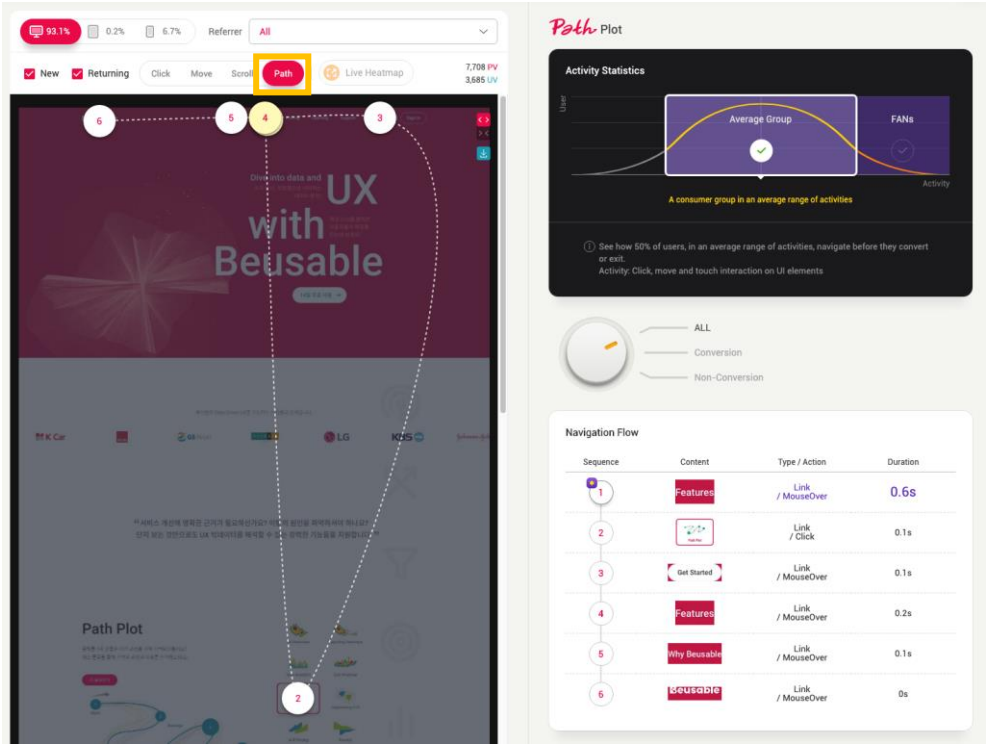
12. Path Plot

04.12.1. Overview



- Path Plot shows the normalized Gaze Plot which represents the entire users' gaze path. Also, information related to the user's exploration flow, duration time and the main event occurred is provided..
    - Number: The number at the center of each circle means the sequential order of user's behavior.
    - Location of a circle: Based on a data equalization, Path Plot data are selected in order of where the behavior is most dense per each navigation order.
    - Node: If more than one node is provided with overlapping layers, the node is colored in yellow and one can identify the overlapping nodes by hovering the mouse cursor over to display a tooltip. Furthermore, each node can be moved through drag and is repositioned after a certain period of time.

NOTE _ Viewing Path Plot

- The related information of Path Plot can be viewed from the report in *Reporting Heatmaps* menu.

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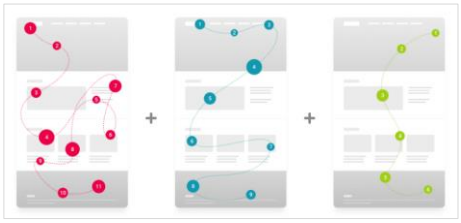
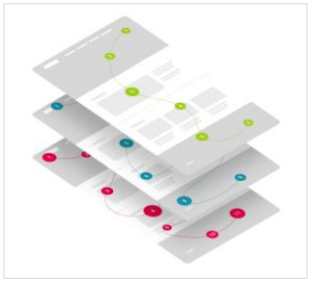
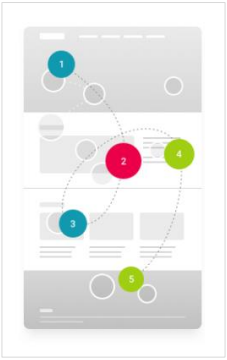
Path Plot Generating Process



① Beusable aggregates every user's behavioral information such as a behavior-duration time, element, sequential order, action, etc.



② Beusable processes the aggregated data through statistical process.



③ Beusable extracts a single representative behavior flow based on the integration of the aggregated data.

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13. Live Heatmap

04.13.1. Overview

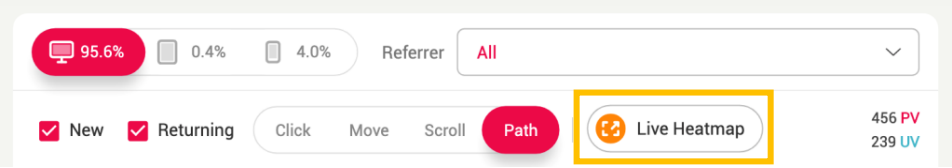
- Clicks, mouse moves and heatmap results of the hidden menus or layers that appear by user interaction (mouse clicks or hovers) can be viewed.

NOTE _ Setting period

- Data view via Live Heatmap is available from today to last 7 days, 14 days and 30 days.
- Browse URL when running Live Heatmap
  - Exact Match Types: browse on the registered URL page
  - Other Match Types: browse on the captured URL page
    1. When you set the capture URL: browse on the captured URL page
    2. If you do not set the capture URL: The first matched URL is automatically specified on the captured image and Live Heatmap page

04.13.2. Live Heatmap

① Click Live Heatmap button.



② Live Heatmap allows you to view the heatmap of the content area that generates hidden menus or layers.

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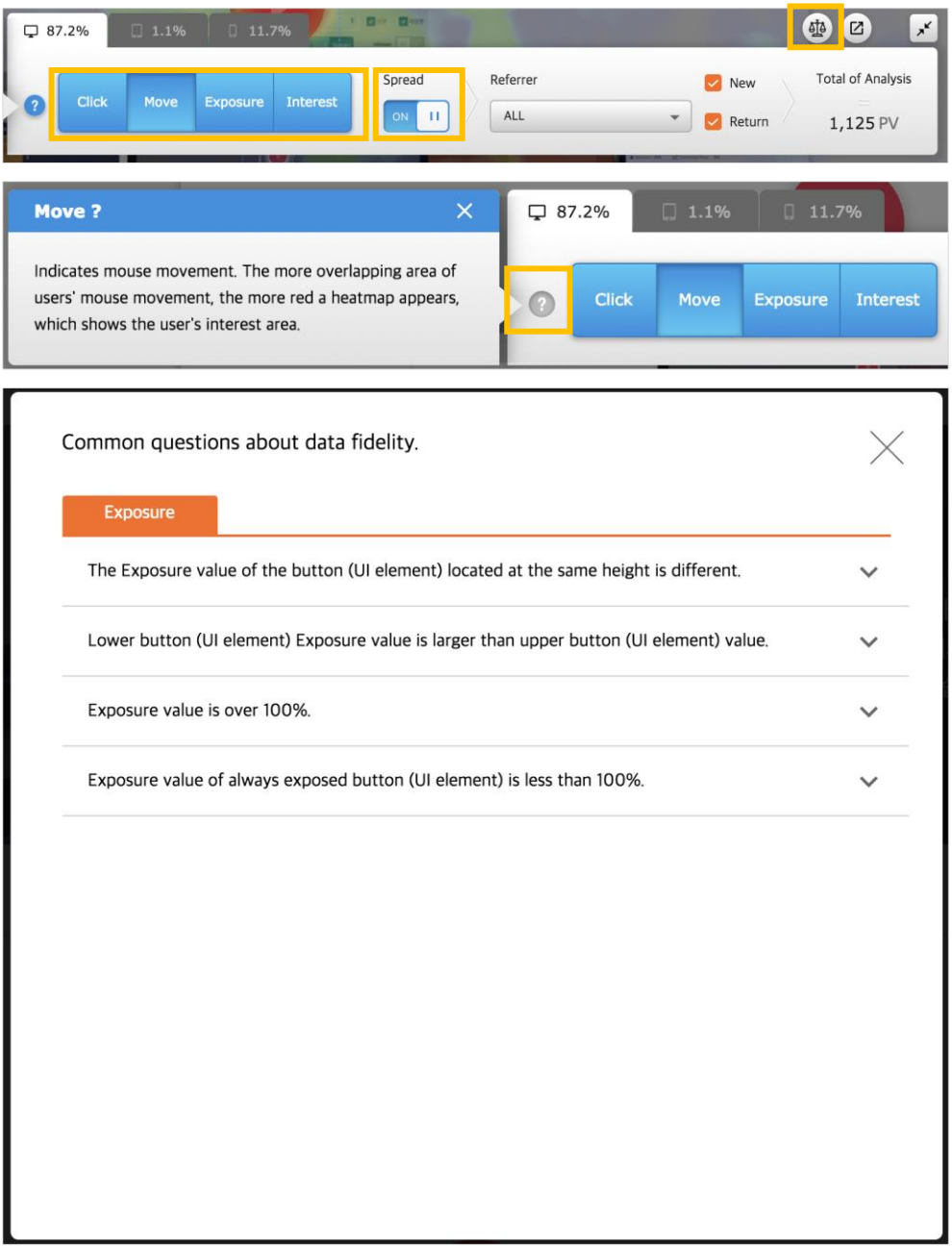
04.13.03 Live Heatmap Buttons



- Click Question mark icon to view brief description of each heatmap.
- Click Scale icon to view Data Fidelity FAQ.

Click

- Represent the heatmap based on where the click occurred. The degree of the heatmap can be determined by referring to the color of the legend.

NOTE_ Mobile(Tablet/Phone) Click Heatmap

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- The click heatmap in mobile (Tablet, Phone) environment is based on touch event to perform click. Click point is replaced as the touch events on the mobile, the point where the touch ends.

Move

- Represent the heatmap based on where the mouse movement occurred. The degree of the heatmap can be determined by referring to the color of the legend.

NOTE_ Mobile(Tablet/Phone) Move Heatmap

- The move heatmap in mobile (Tablet, Phone) environment is provided based on touch events in which movement occurs. The points of the path between the touch start point and the touch end point replace the mouse movement points

Exposure

- Covered content Exposure PVs divided by the entire PVs (%)
- Represents the heatmap based on how much of that content is actually exposed relative to the total number of page visitors.

NOTE _ Exposure Data Collection Targets

- Data is represented only for linked elements or 'A', 'AREA', 'INPUT', 'BUTTON', 'SELECT' tagged elements.

Interest

- Covered content Hover PVs divided by Covered content Exposure PVs (%)
- Represents the heatmap based on how many users were interested and viewed the exposed content. The degree of heatmap can be understood by referring to the colors of the content interest heatmap.

NOTE_ Interest figure in Mobile (Tablet, Phone)

- The Interest tab is disabled since the hover data cannot be measured.

NOTE _ Interest Data Collection Targets

- Data is represented only for linked elements or 'A', 'AREA', 'INPUT', 'BUTTON', 'SELECT' tagged elements.

Spread

- Click / Move / Interest / Exposure ranks from 1 to 50 are shown for each CTA.

NOTE_ Spread

- CTA rankings are limited to the top 50. The ranking after that is shown as 50.

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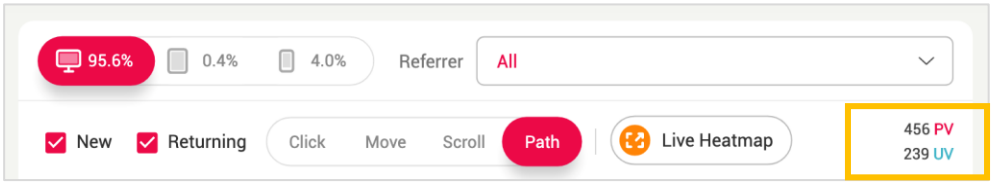
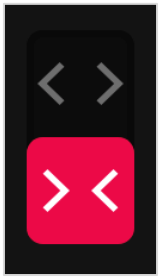
14. PV / UV

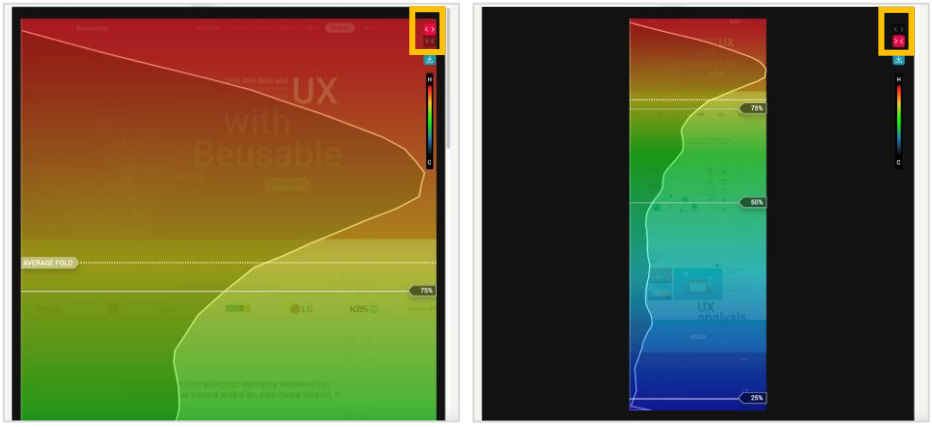
- Provides PV and UV data according to the set segments.



15. Scale Button

- *Screen Fit* features fit the page of the selected URL either vertically or horizontally in the heatmap analysis area.





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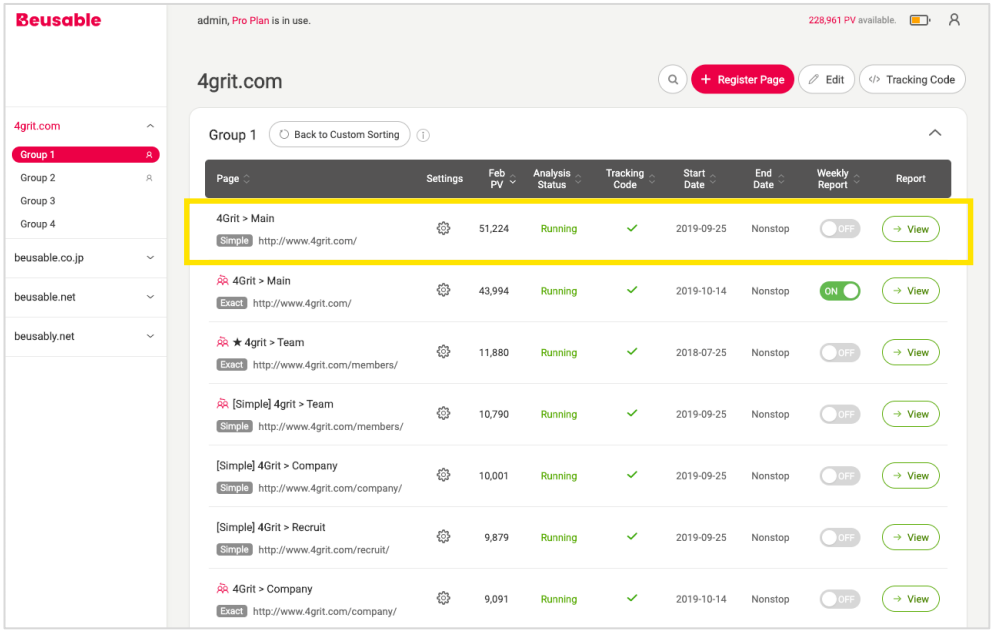
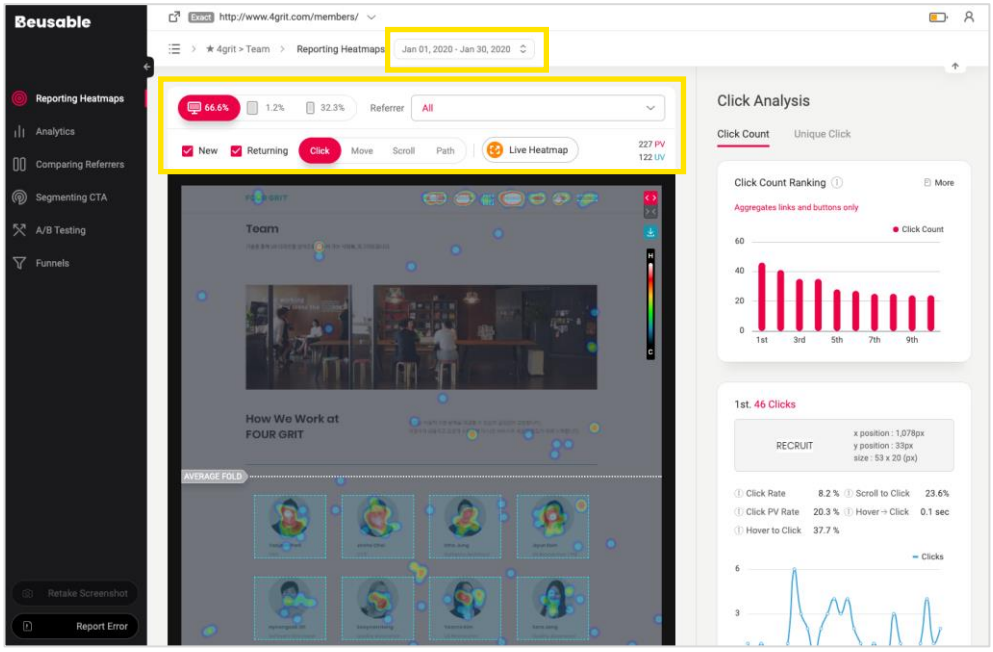
16. Heatmap Downlad

- How to Download Heatmaps
  - ① First, open the Beusable report to download heatmaps.



  - ② Please set the data lookup value to download. (e.g. lookup period, referrer, user type, etc.)



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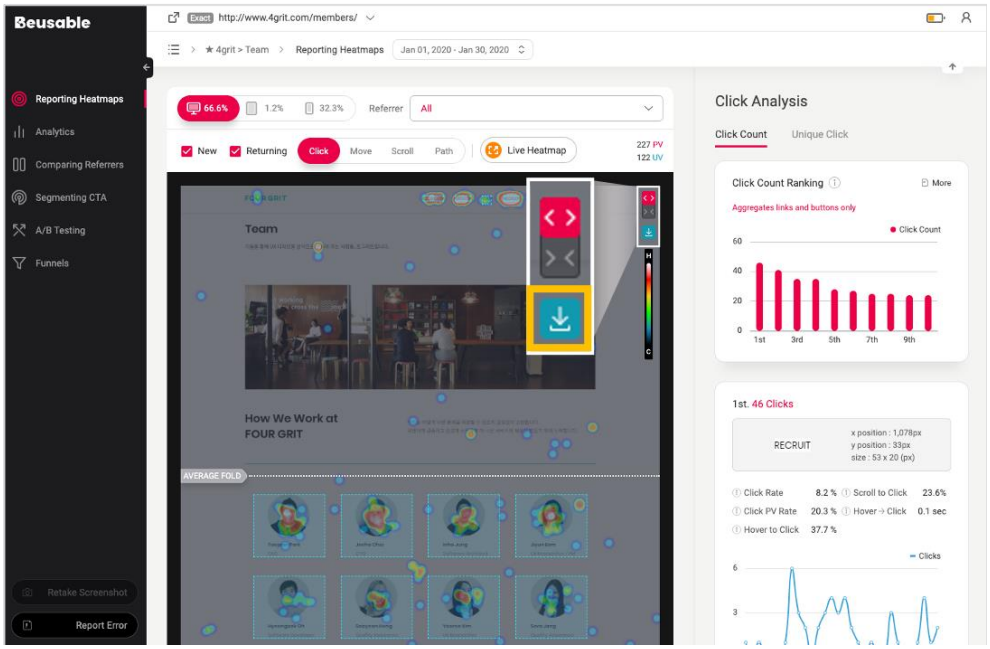
- ③ Click 'Download' button located at the top right corner of the heatmap viewport.



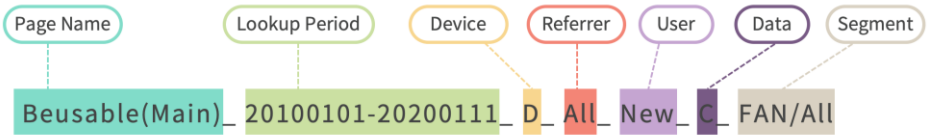
NOTE

- The heatmap download feature is available in the menus below, where Beusable heatmaps are provided.
- 1) Reporting Heatmaps, 2) Comparing Referrers, 3) Segmenting CTA, 4) A/B Testing

- File Name Configuration

  - A heatmap image filename is created with the following configuration:

    * Segment info is only provided when additional segmentation is applied in Path, A/B Testing and Segmenting CTA.



<Example of Image Filename>

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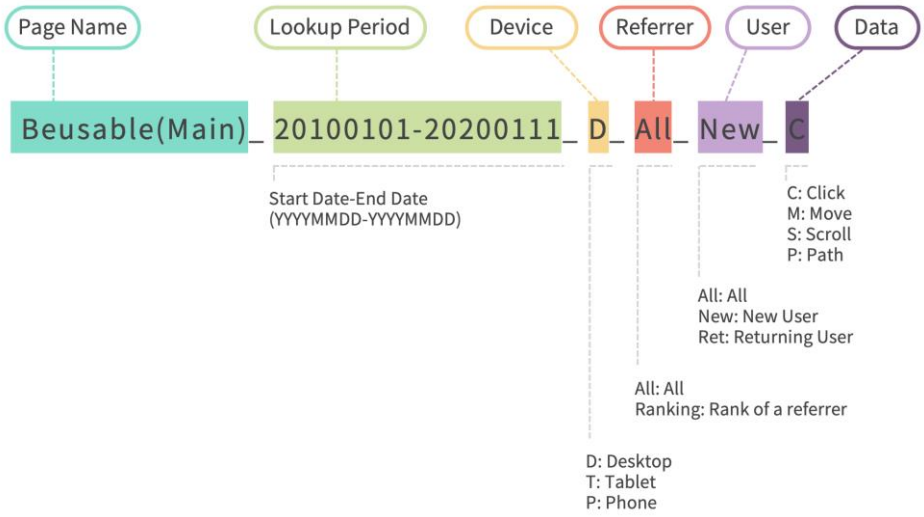
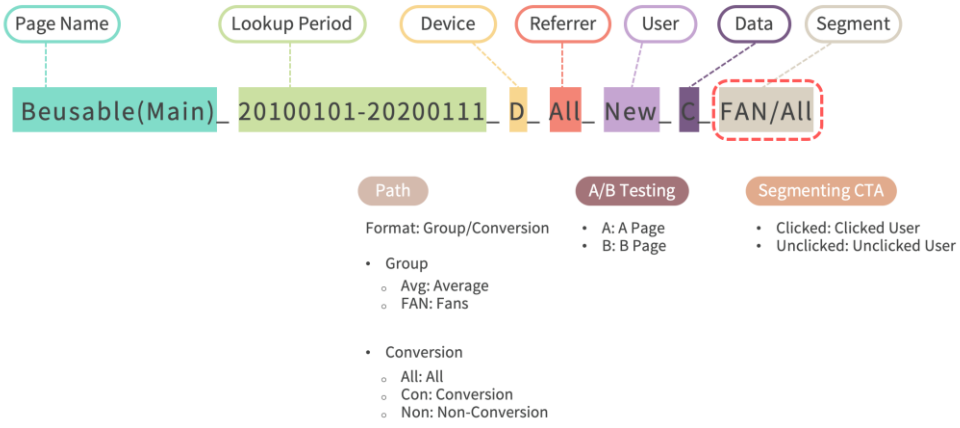
- When you download a heatmap, the file name is created based on the following criteria. (Case without additional segments set)



- When additional segmentation has been set in Path, A/B Testing, or Segmenting CTA, the file name is created based on the following criteria.



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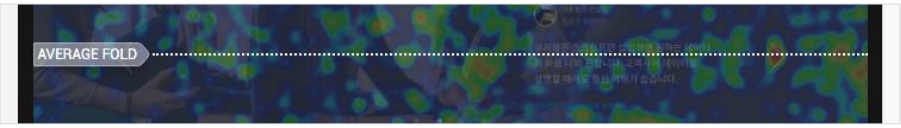
17. Average Fold



- Every heatmap is displayed with its average fold.
- The average fold line represents the average height of the entire user's default screen height.

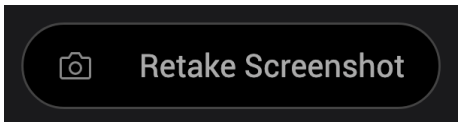
NOTE _ Understanding ‘Above the Fold’

- 'Above the fold' represents the exposed area in default without any scrolling action on a web page. The area below the 'Above the fold' is called 'Below the fold.’
- 'Above the Fold' is affected by the resolution of the screen. Also, it can be used as criteria to determine whether the user explored the page additionally (mouse/scroll movement, clicks, etc.).
- Understanding additional page-exploration status of the users can guide better composition arrangement between important CTA contents and conversion-inducing contents.

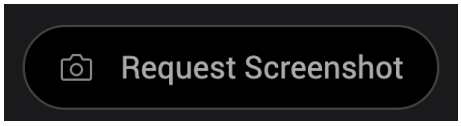
18. Captured Image

- The report which is running updates the captured image every day.
- Given screenshot is captured on the last date of the set time period.

04.15.1. Retake Screenshot



- If a given screenshot is not identical to the actual screen, you can try retaking the screenshot. Screenshot capturing can only capture the screenshot of the day when the screenshot retaking is requested.



- *Retake Screenshot* feature is not available on pages that can only be accessed after log-in. For log-in necessary page *Retake Screenshot* button may appear as *Request Screenshot*. As you request to retake screenshot a follow-up email will be sent.

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04.18.2. Contents With Limited Screen Capture

- Scrolling contents within a <Div> container element
- Pages developed with Scroll-Lock (When only the content can be explored by scrolling or button clicking action due to page fixation)
- Pages developed with Parallax Scrolling
- Display: Pages developed with Flex CSS feature (Variable size-height/width)
- Dynamic contents changing due to Ajax (Server call)
- Pages developed with SPA method

NOTE _ How to analyze contents with limited screen capture

- Live Heatmap can be used to analyze contents limited to the screen capture.
- With Live Heatmap features, one can learn Click, Move, Exposure and Interest data on an actual web page.

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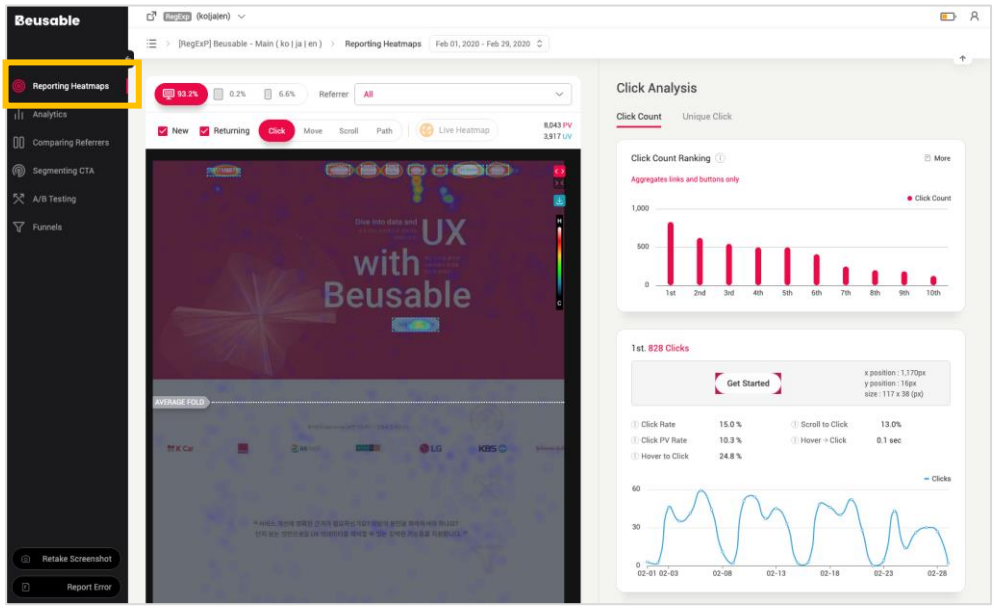
05. Reporting Heatmaps

1. Overview



- *Reporting Heatmap* summarizes the essential statistical information from the heatmap into an analysis report.
- Information on *click heatmap* and *mouse move heatmap* statistics can be understood along with the click heatmap's click layer or the following explanation. (05.1.1. Common Statistical Information on Mouse Click / Move)
- Information on *Tap, Zoom and Swipe heatmap* statistics can be understood along with the tap, zoom, swipe heatmap's layer or the following explanation. (05.2.1. Common Statistical Information on Tap, Zoom)

05.1.1. Common Statistical Information on Mouse Click/Move

- Clickable elements such as links and/or buttons are ranked. The top 10 contents of the user's click/mouse movement event are provided by default, to learn of all the elements information click on *View More* button.

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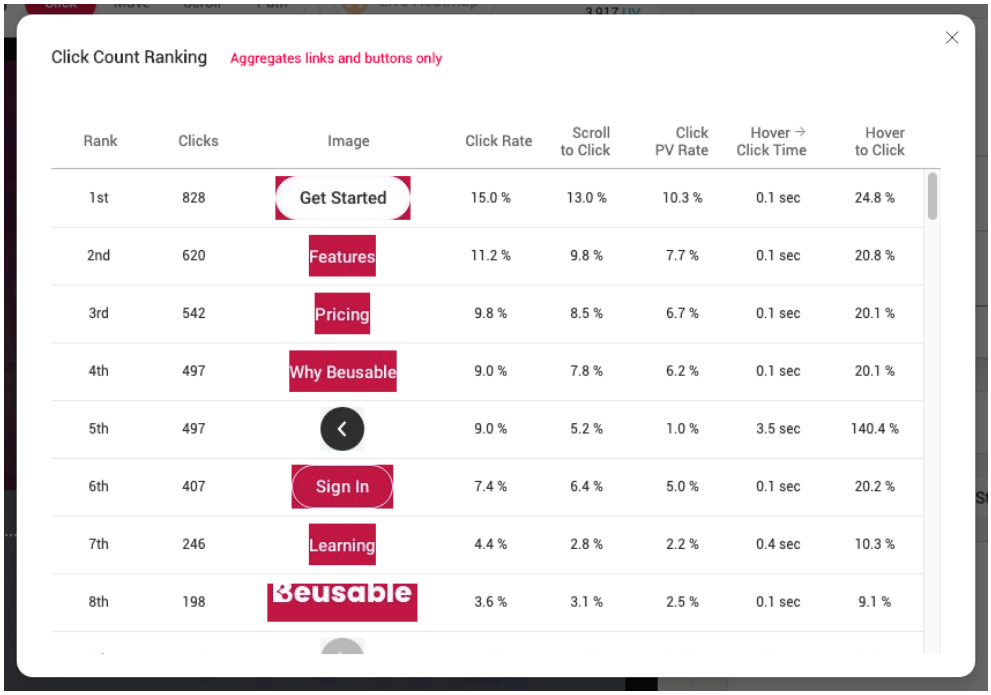
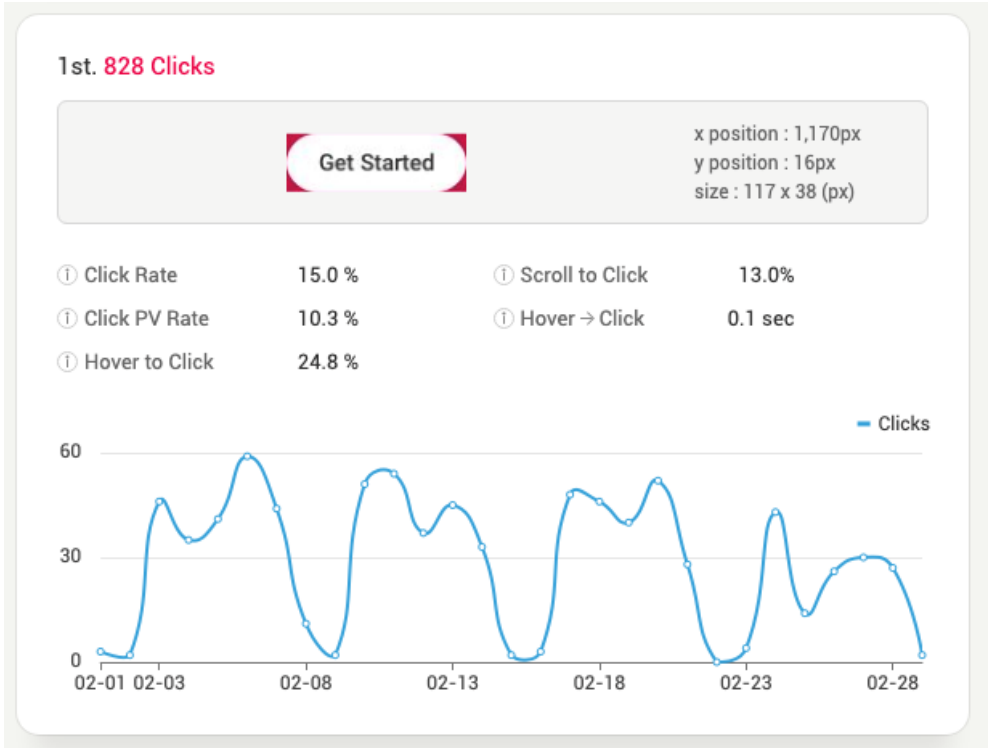


- Information on ranks, images of the elements, locations and sizes, data and history of mouse clicks and/or moves is provided.
- When a thumbnail image of the element in the statistical ranking list is clicked, its location is displayed in the heatmap area on the left.



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Click Rate

- Click rate represents the ratio of click count to the entire click counts.
- Amongst the entire click events within the page, the proportion of how many clicks occurred on the corresponding content can be understood.
- Click rate can help to understand the level of interest scattered over a particular area compared to the dispersed user's interest level.

Scroll to Click

- The ratio of PV to the scroll-reached PV.
- *Scroll to Click* represents the ratio of a content's click count to the number of users who scrolled to that content. The scroll reaching percentage of a content at particular location is affected by a different UI composition rather than the characteristics of the content per se. Therefore, with *Scroll to Click* metrics, one can compare two differently located contents' click levels fairly.

NOTE _ Understanding Scroll to Click

- The content with relatively higher 'Scroll to Click' rate means the content has a higher click rate when it is exposed to the users.
- The content with relatively lower 'Scroll to Click' rate means the content has a lower click rate when it is exposed to the users.

Click PV Rate

- *Click PV Rate* is the ratio of the PV which clicked a certain element in the page to the entire PV, being also called *Unique Click*.
- The actual number of PV which clicked the corresponding content can be viewed. The repetitive clicks are excluded from *Click PV rate* to precisely understand the number of PV with click event and the number of PV without click event, amongst the entire PV size.

NOTE _ Applying 'Click PV Rate'

- The repetitive clicks are excluded to aggregate the unique clicks. The analysis and statistic metrics based on the number of unique clicks are aggregated under a premise that the influence of the PV which clicked the corresponding content is accounted as one even though that the PV clicked the same content repetitively.
- 'Click PV rate' metrics can be utilized to view the number of actual PV in case the user repetitively clicked a certain content which does not convert a page.

Hover to Click Time

- It is the average time taken for click event to occur since the hover event.
- *Hover to Click Time* represents the time taken for a user to "click" since he or she had hovered the mouse over the content. This could imply the time user needed to understand the content after hovering a cursor in order to finally make a decision to click.

Hover to Click

- The ratio between the click count occurred after hovering and the entire hover count.
- *Hover to Click* means the ratio between the hover counts that converted to clicks and the number of entire hover counts.

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- The level of click event derived by user's interest or purpose and the user's interest dispersion level observed through the cursor-hovering activity can be compared.

History

- Click tendency of the corresponding element within the selected period.
- The changing behavioral count per corresponding element or content over the user's custom selected period is shown as a line graph.

NOTE _ Understanding the history graph and the added or deleted content.

- If there is a newly added content or an element, the history graph of the behavioral (click/mouse move) count will only display the data since the date that element was added. And because the heatmap is created based on the last day of the selected period, the information of an element or a button which was deleted in the middle of the selected period will not be displayed. Therefore, these facts need to be taken into account before understanding the click or mouse move ranking information.

05.2.1. Common Statistical Information on Tap, Zoom

- Tapable elements such as links and/or buttons are ranked. The top 10 contents of the user's tap, zoom event are provided by default, to learn of all the elements information click on *View More* button.

- Information on ranks, images of the elements, locations and sizes, data and history of tap and/or zoom is provided.
- When a thumbnail image of the element in the statistical ranking list is clicked, its location is displayed in the heatmap area on the left.

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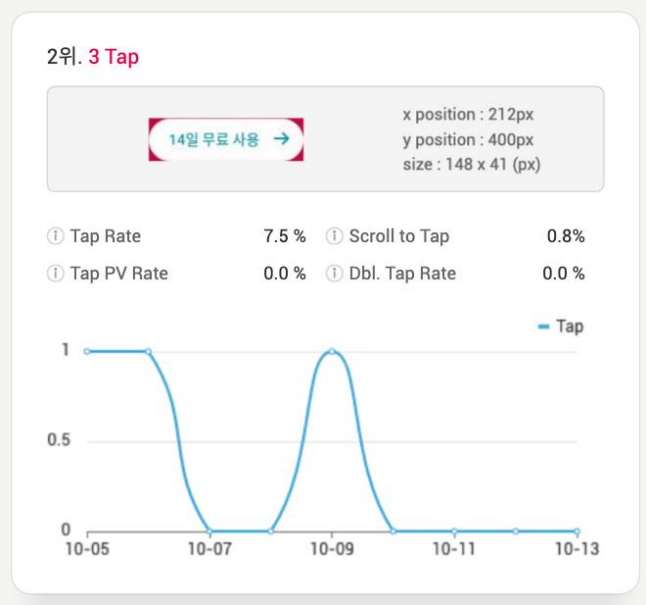
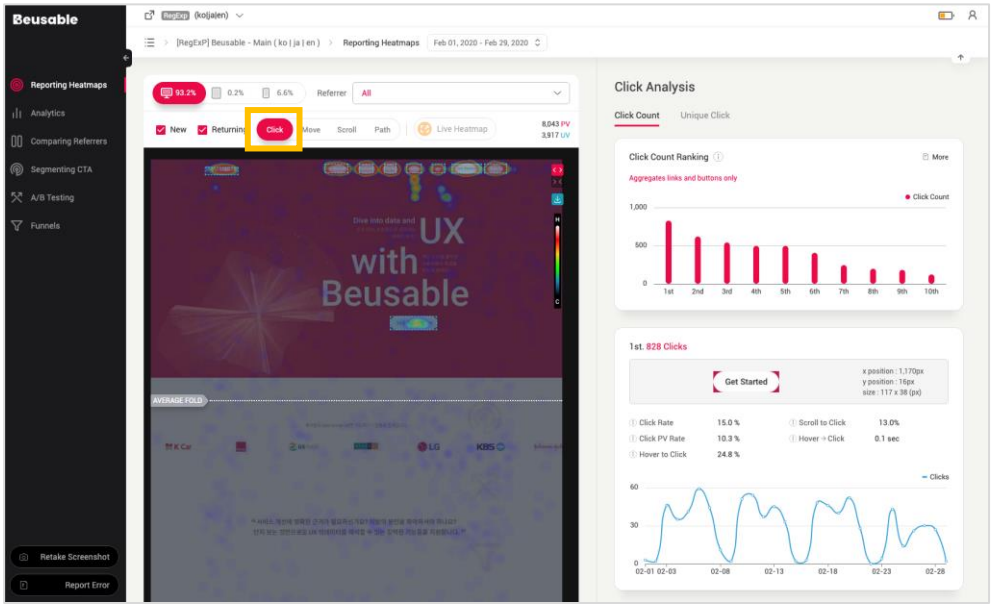


2. Reporting Heatmaps - Click Heatmap



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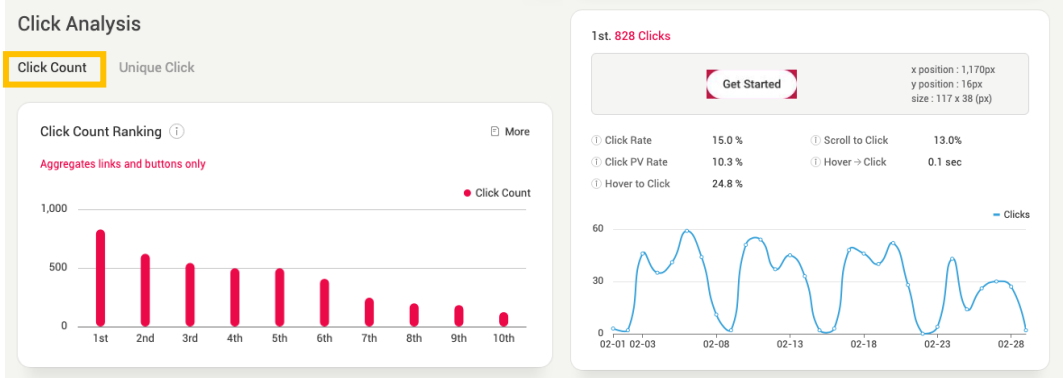
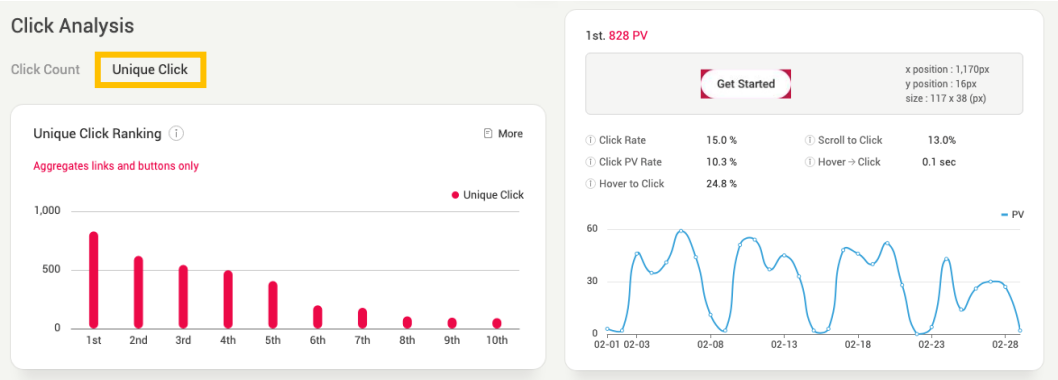
05.2.1. Click Statistics – Click Count



- Based on the total number of clicks within the page, the 10 top ranked contents with the most click counts are provided under the *Click Count* tab.
- *Click Count* statistic aggregates and analyzes link and button elements only.

05.2.2. Click Statistics – Unique Click



- *Unique Click* tab shows the 10 top ranked contents based on their actual click counts. The actual click counts or, unique click, reflects the content consumption status across the page. “Unique click” differs from “click count” as it excludes the repetitive clicks of an identical PV.
- The click count statistic aggregates and analyzes link and button elements only.

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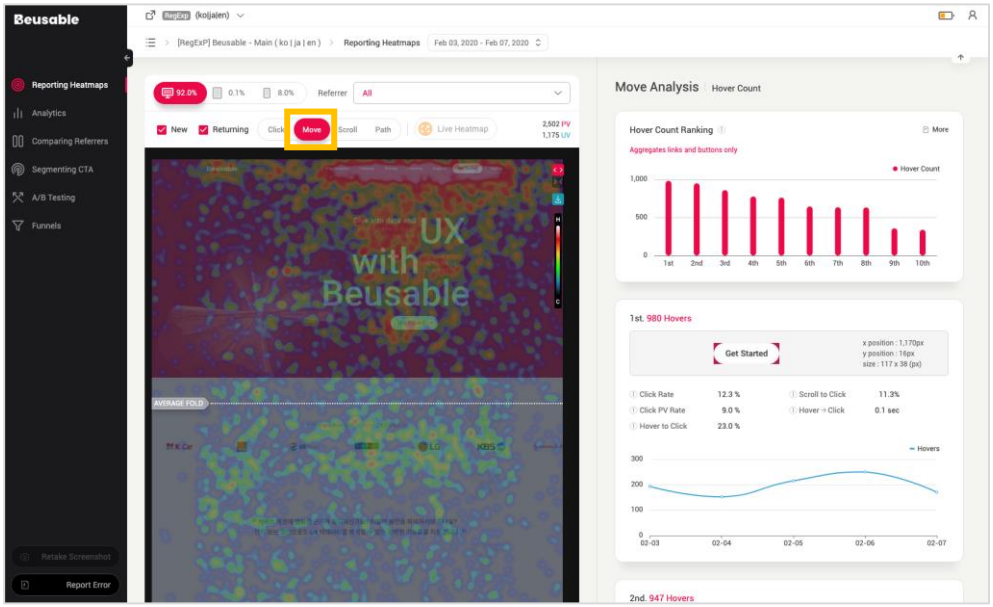
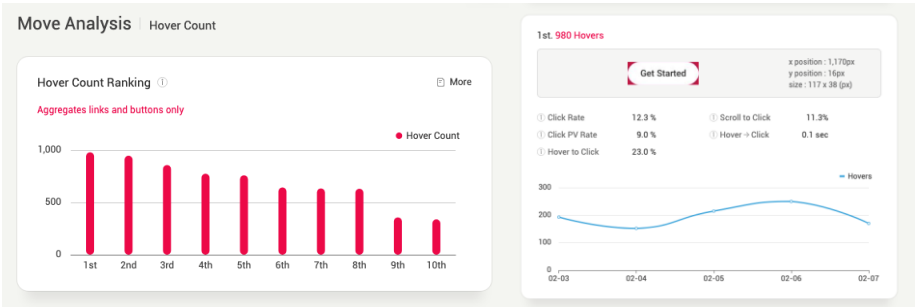
3. Reporting Heatmaps - Mouse Move Heatmap



05.3.1. Mouse Move Statistics – Mouse Hover Count



- Within the page, the ranks between the top 10 most mouse-cursor hovered contents are provided under *Hover Count* tab.
- Only clickable contents such as links, buttons and/or formatting elements are aggregated for Hover count ranking.

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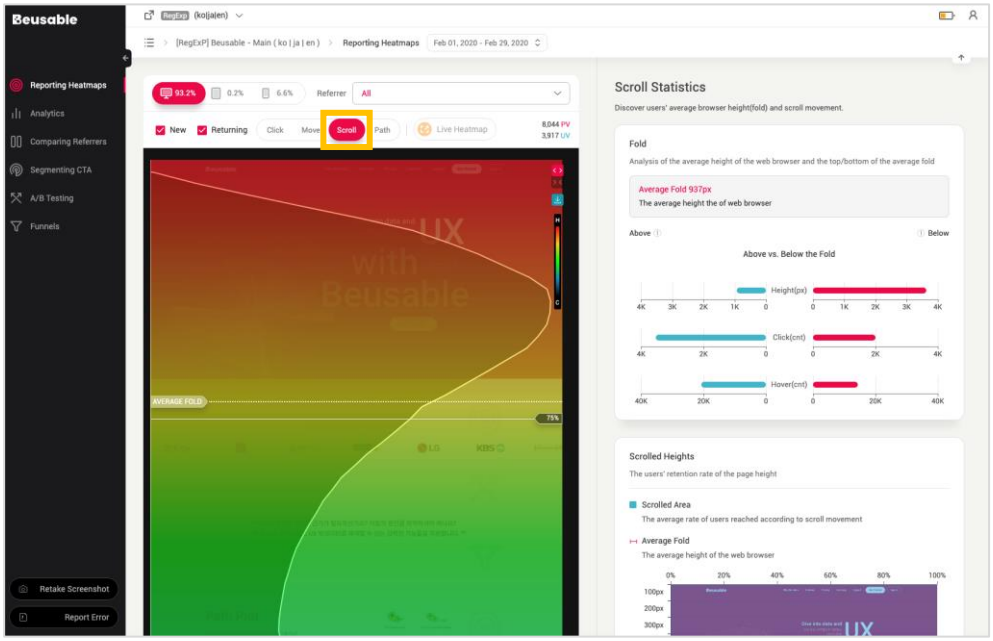
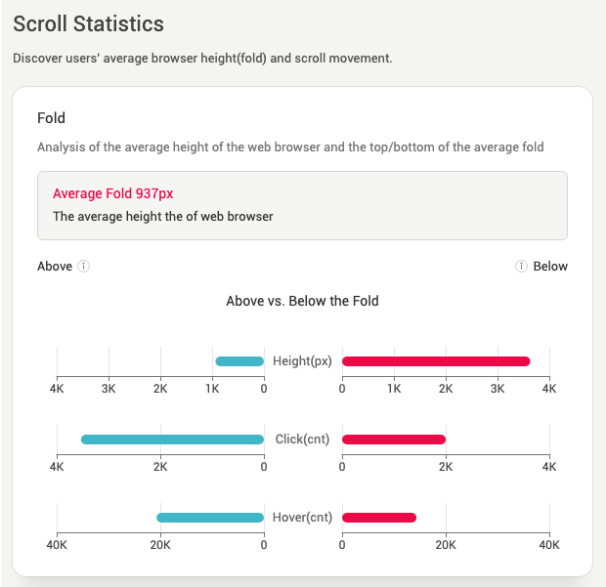
4. Reporting Heatmaps - Scroll Heatmap



- Scroll heatmap shows users' exit rate per scrolled height and the corresponding analysis information on areas above and below the average fold.

05.4.1. Scroll Move Statistics – Fold



- To review the page in overall, compare the activity levels between the default screen and the screen that needs to be scrolled to be viewed. Then understand the consumption level of clickable content.

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Average Fold

- User activity level can be compared between above and below the average fold.
- To review whether the content is being consumed efficiently across the page, compare the activity level of each area.

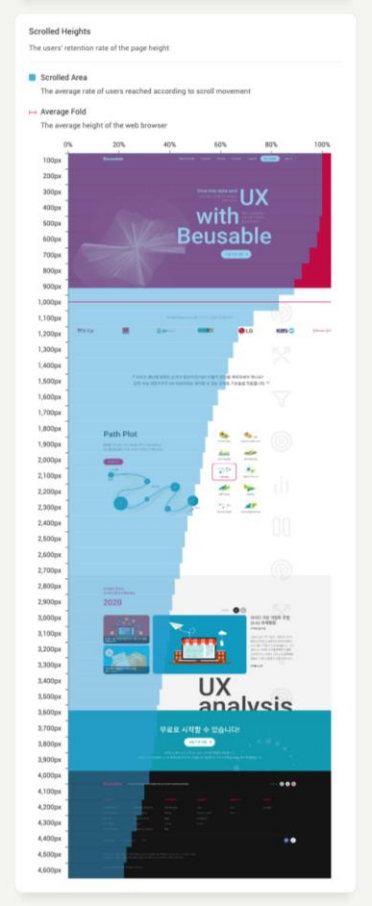
Height

- Screen height information shows the height ratio between the area shown in default and the area needs to be scrolled down to be reached.

Click & Hover

- *Click* and *Hover* metrics represent the content consumption levels within the area above and below the fold.
- If the content consumption (Click, Hover) rate below the fold area is significantly lower than that above the fold, it means that the entire contents within the page are not being provided and consumed efficiently. In this case, reviewing the amount and length of the entire content is recommended.

05.4.2. Scroll Move Statistics – Reached Ratio



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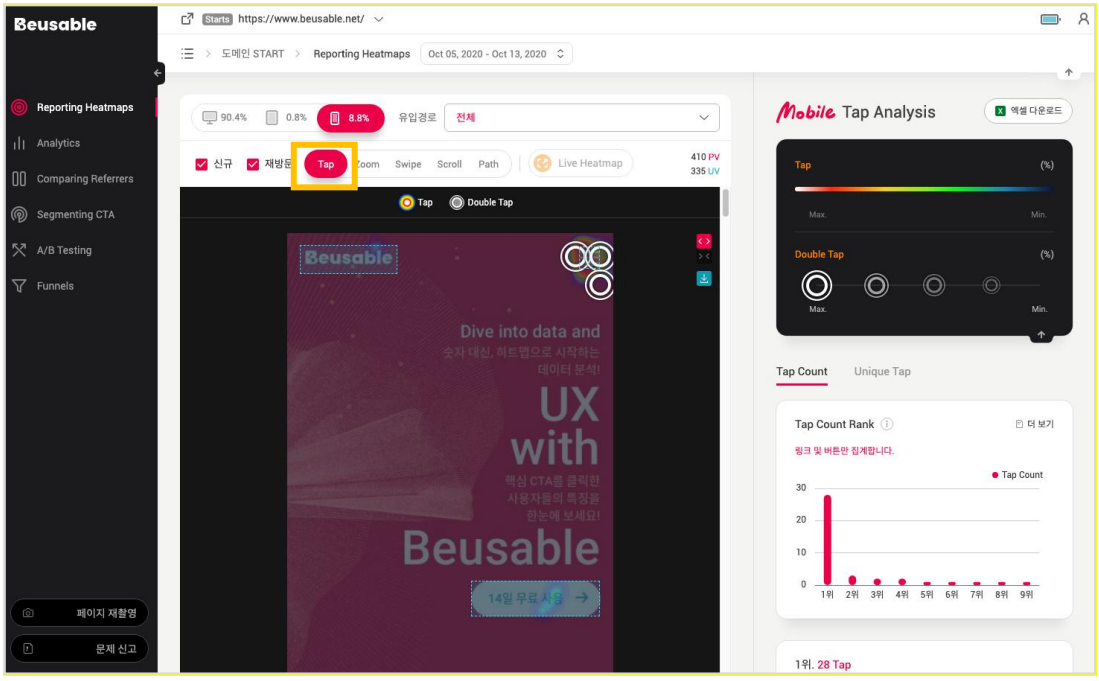
- The content reach rate is marked per scrolled page height. The size of exposed users can be figured with the graph per particular height.
- Considering Scroll heatmap and Scroll Move statistics together, the level of a specific content consumption per scrolled height can be understood.
- By looking at the difference between each of the user reached ratio per height, one can understand the scroll-pausing rate per height and therefore plan the management strategy for more efficient content composition and arrangement.

5. Reporting Heatmaps - Tap Heatmap



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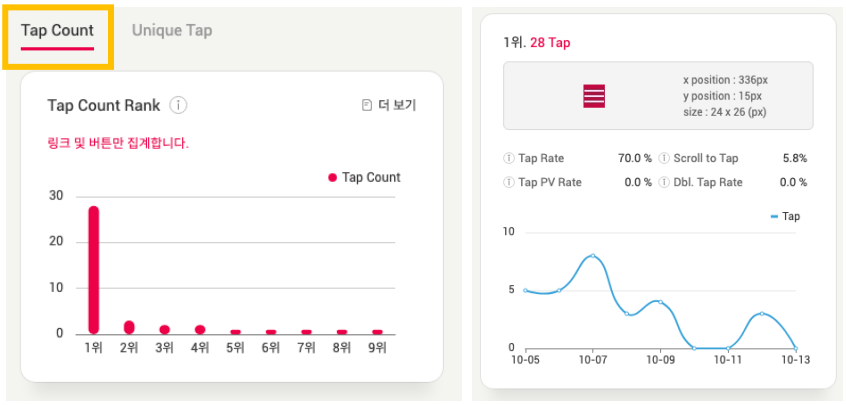
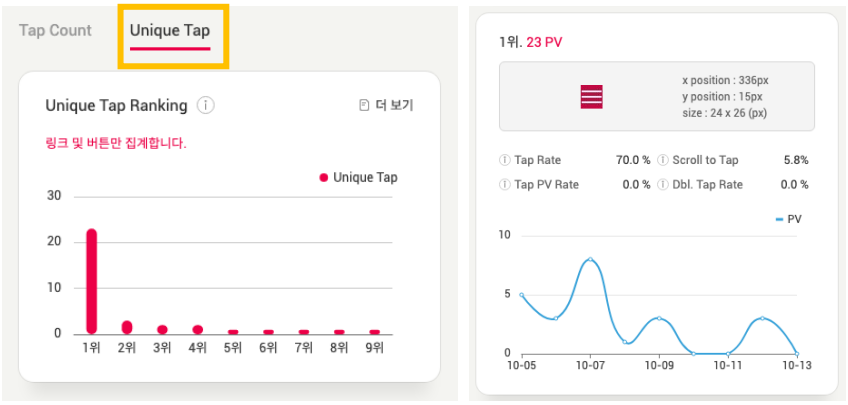
05.5.1. Tap Statistics – Tap Count



- Based on the total number of taps within the page, the 10 top ranked contents with the most tap counts are provided under the *Tap Count* tab.
- *Tap Count* statistic aggregates and analyzes link and button elements only

05.5.2. Tap Statistics – Unique Count



- *Unique Tap* tab shows the 10 top ranked contents based on their actual tap counts. The actual tap counts or, unique tap, reflects the content consumption status across the page. “Unique tap” differs from “tap count” as it excludes the repetitive taps of an identical PV.
- The tap count statistic aggregates and analyzes link and button elements only.
-

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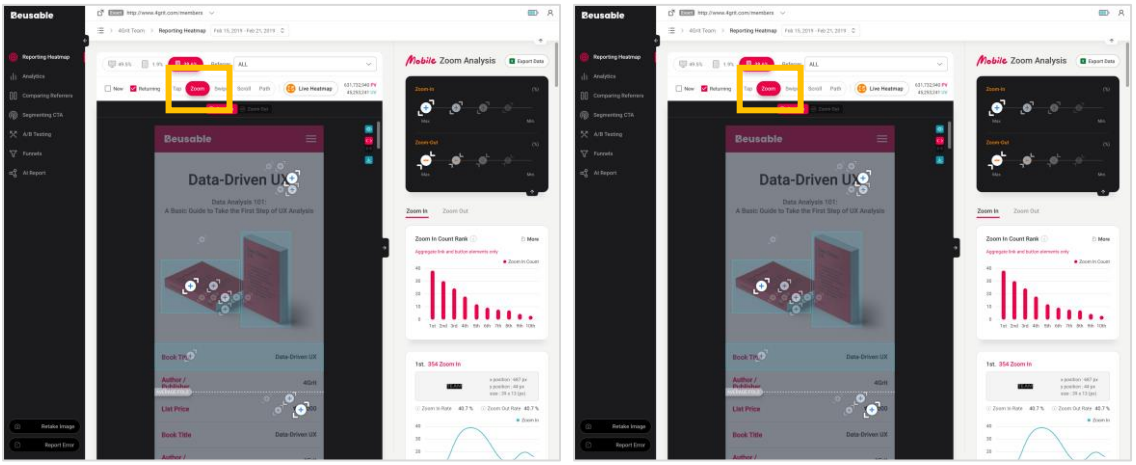
6. Reporting Heatmaps - Zoom Heatmap



05.6.1. Zoom Statistics – Zoom In Count

- Based on the total number of zoom in within the page, the 10 top ranked contents with the most zoom in counts are provided under the *Zoom In Count* tab.
- *Zoom In Count* statistic aggregates and analyzes link and button elements only

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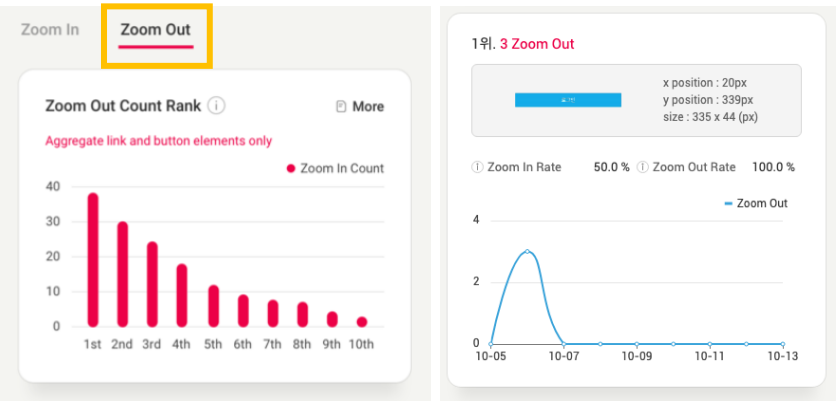
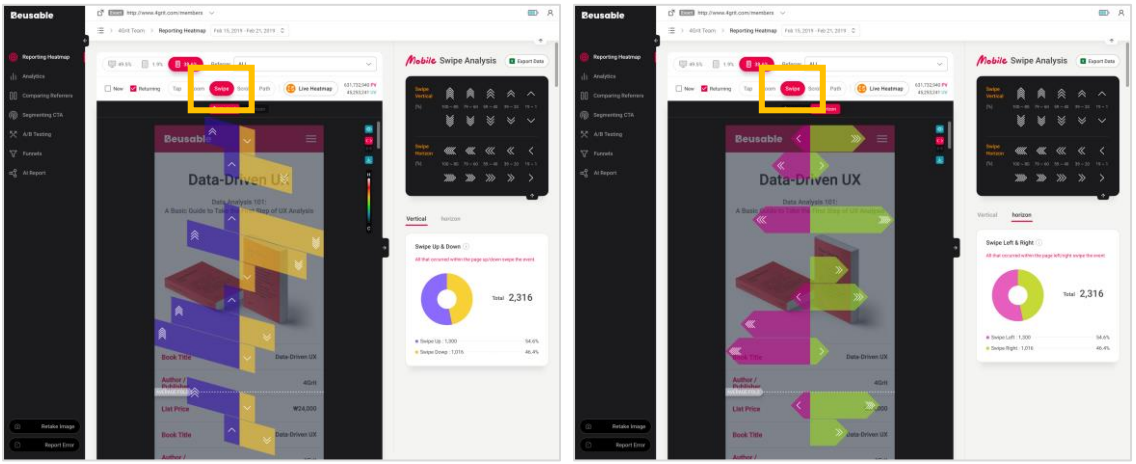
05.6.2. Zoom Statistics – Zoom Out Count



- Based on the total number of zoom out within the page, the 10 top ranked contents with the most zoom out counts are provided under the *Zoom Out Count* tab.
- *Zoom Out Count* statistic aggregates and analyzes link and button elements only

7. Reporting Heatmaps - Swipe Heatmap



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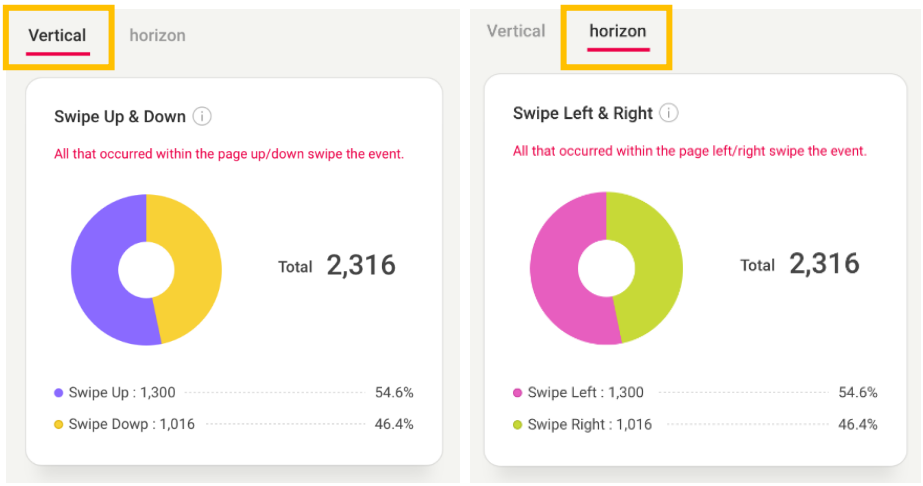
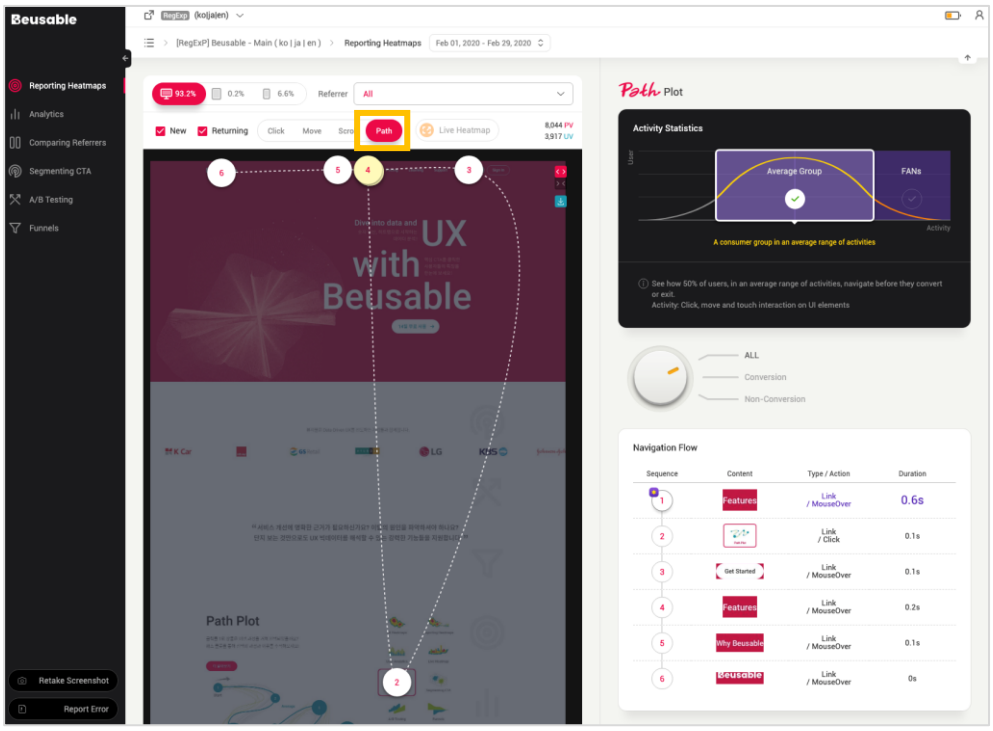
05.7.1. Swipe Statistics – Vertical/Horizon



- Total up/down, left/right swipe events occurring within the page are counted.

8. Reporting Heatmaps - Path Plot



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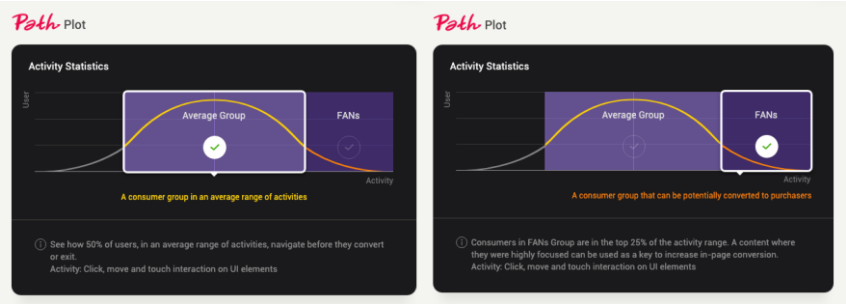
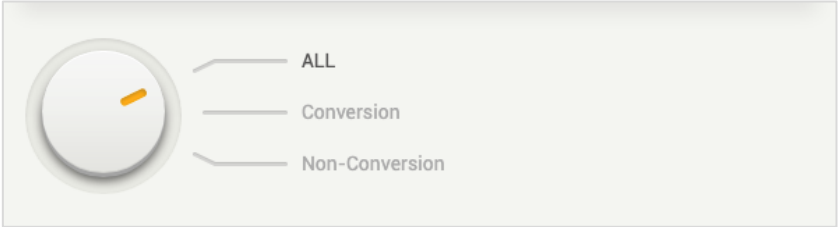
- Path Plot helps you better understand the detailed navigation flow of users.

05.8.1. Activity Statistics





- Users are segmented into two groups, average and FANs, according to their activity(click, move and touch interaction on UI elements) range.
- Users with average groups and FANs groups can be further segmented based on their conversion.
- Segments information on Activity Statistics are as follows:
  - Average Group: The average group is about 50% of users whose activity size on the page is within the average range.
  - FANs Group: Users in the FANs group are in the top 25% activity range.
  - ALL: Represents all the users(who has converted and not converted) of the selected group.
  - Conversion: Segments the users in the group who have converted within the page.
  - Non-Conversion: Segments the users in the group who have not converted within the page.

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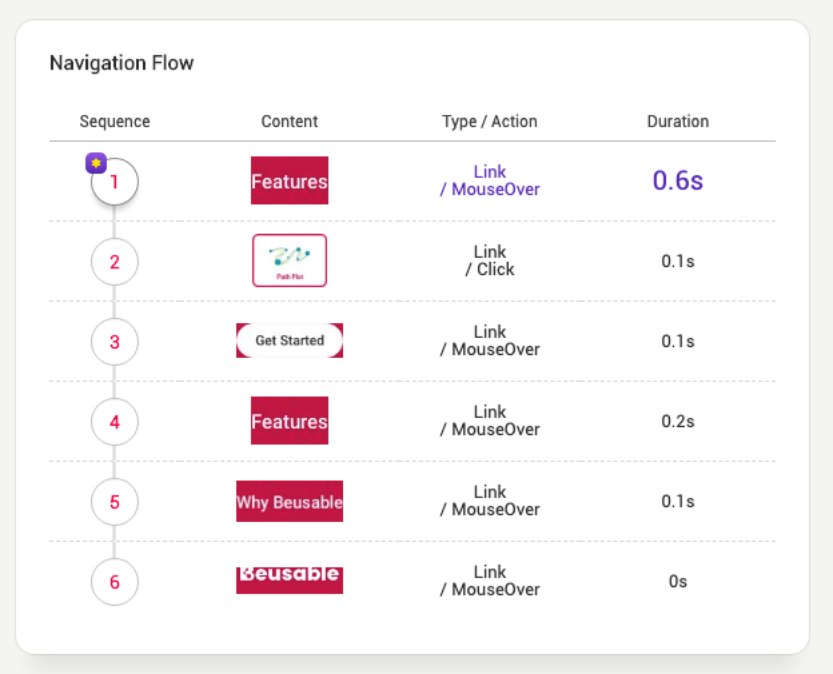
05.8.2. Navigation Flow



- The navigation flow of user according to the segments set on Activity Statistics is presented in sequential order.
- Each column of navigation flow represents as follows:

  - Sequence
    - Navigation flow of user is presented in sequential order.
    - Hovering the mouse cursor over a sequence highlights the selected element on a left side of the *Reporting Heatmaps* page.
    - Click on each sequence to view the associated flow before and after the selected node.
  - Content
    - Thumbnails of the contents corresponding to each sequence are provided.
  - Type / Action
    - Type: It represents the HTML tag info of the content.
    - Action: A type of user interaction that has occurred most frequently on the content can be learned
  - Duration Time
    - It represents the average activity time of users who stayed at the corresponding order of an activity.

NOTE_Elements with limited info

- Elements located outside the captured area: For elements that are not in the captured area, such as carousels and interaction elements, thumbnails may not be provided.
- Elements that cannot fetch coordinate values: If a page configuration change within a set period cannot bring coordinate value for the element, navigation flow is provided excluding the corresponding node (element).

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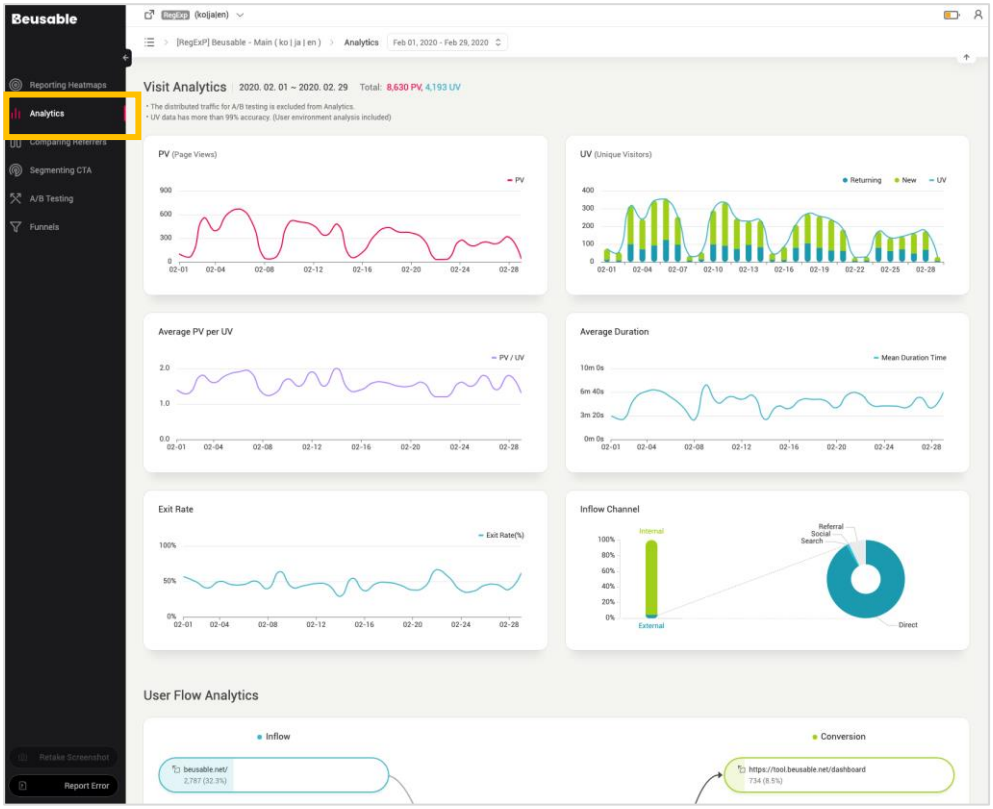
06. Analytics

1. Overview



- *Analytics* feature provides the essential information for UX analysis.
- UV data has an error range within 1% (Including user environment analysis).

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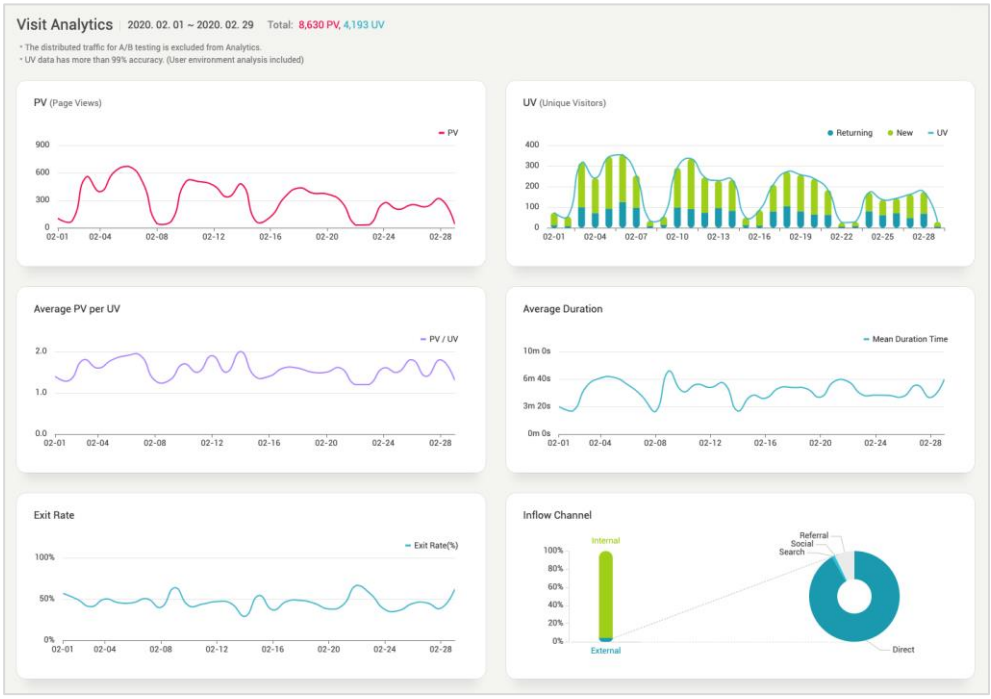
2. Visit Analytics



- User analysis helps understanding the basic analysis of page visits.

06.2.1. PV (Page View)

- Page view represents the view count of the corresponding page by the users.
- 1 PV (=Page View) is equal to 1 visit. However, since page view count aggregates every repetitive visit made by a single user, the page view count does not coincide with the number of users.

NOTE _ Understanding PV

- PV metrics is a fundamental concept used as a standard in measuring the page's traffic or popularity. Unique Visitors metrics can be referred to exclude the repetitive visits of the users and to understand the actual number of users.
- If there is no additional mouse cursor event (moves, clicks, scroll) happened within 30 minutes, the session ends. If user's mouse event was paused for more than 30 minutes then restarted, a new session starts. Therefore, the new session creates a new Page view count.

06.2.2. UV (Unique Visitors)

- *Unique Visitors* metrics represents the actual number of visitors regardless of their repetitive visits.
- When one user visits a page more than twice, multiple Page View (PV) count occurs to one Unique Visitor (UV) count. PV count means the number of visits while UV indicates the number of users. PV and UV should be aggregated separately because if one user revisits the page within the selected time period that user is assigned with two or more visit counts.

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New & Returning Users

- For more detailed statistics for new and returning users, you can select options provided in the heatmap tool. (Please refer to the new and returning user's information from [04. Heatmap] for more details.).

06.2.3. Average PV per UV

- Average PV per UV = PV / UV
- The *average PV per UV* metric accounts only the revisits within one day.

NOTE _ Understanding the average PV per UV

- 'Average PV per UV' reflects the smoothness of the page exploration flow or the activeness in the use of page content. If a one user repeatedly visits the page, that user's interest or the will to explore the page can be said stronger than those who did not revisit the page.
- Therefore, when a unique visitor(UV)'s average page view(PV) count is high, it indicates the individual visitor has visited the page more than once, which can be interpreted as a result of a smooth page exploration or active use.

06.2.4. Average Duration Time

- Average duration means the dwell time of users on a page.
- How much time users have invested in the consumption of the page content and exploration can be understood.

NOTE _ Understanding the average duration time

- The average duration needs to be considered with the possible influences of the outlier's extreme duration values.
- If 30 minutes have passed without any movement of the user, the visit session automatically expires.

06.2.5. Exit Rate

- Exit rate explains the status and tendency of the un-converted users, who did not convert via a link/button on a page, amongst the entire user (PV).

06.2.6. Inflow Channel

- The inflow channel can be distinguished into internal (same domain) and external (different domain). The external inflow channel can be categorized as following:
- Referral (General Inflow)
    - General inflow means when the user inflowed from a page through an external link in a different site (that is not the corresponding URL).
- Social (Social Network Inflow)
    - Social network inflow means when the user inflowed from an SNS channel. SNS channels could be YouTube, Facebook, Twitter, Instagram, LinkedIn, Tumblr, Blog, Cafe, and more.
- Search (Search Engine Inflow)

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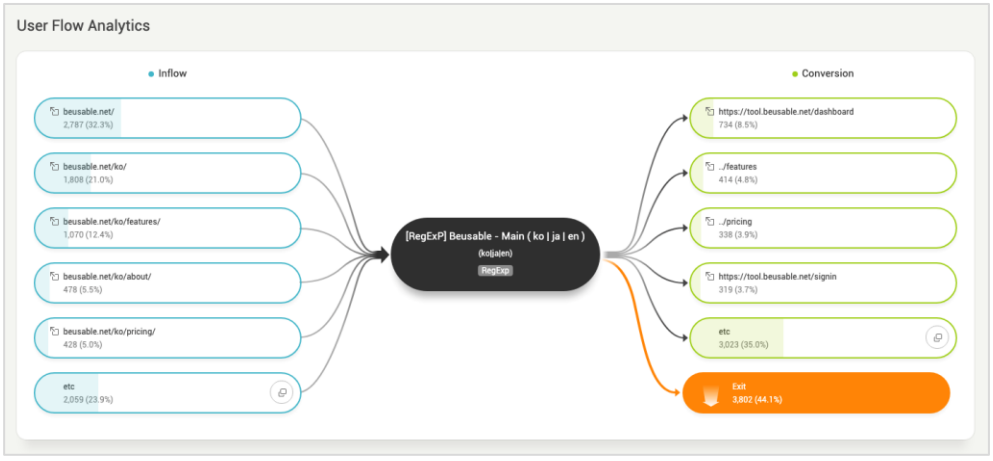
- Search engine inflow means when a user inflowed from a search engine. Users who clicked the search result from the search engines such as a google, Yahoo, Bing, Baidu, SO(360Search), Naver, Daum, Zum are included.

- Direct (Direct and Other Inflows)
  - Direct inflow means when a user directly entered the corresponding URL or inflowed using the browsing feature like home, favorite, etc. Or the inflow user volume from a non-trackable link in an email, advertisement, or a document is classified as a direct inflow.

NOTE _ Understanding internal / external channel

- The inflow from an internal page can be referred to understand the exploration flow of the users in between pages by utilizing the funnels feature in Beusable. Understanding in between page exploration path can be referred to know what information and experience were gained from the previous page.
- Analyzing the inflow channels from an external source predicts the performance and efficiency of a particular marketing action.

3. User Flow Analytics



- Understand the rank of the page's inflow channels and its conversion paths.

06.3.1. Inflow – Inflow Channel

- *Inflow* shows the ranks of inflow URLs of the page.
- In case of a page with more than 5 inflow paths, clicking the *View More* button in etc. item displays all the paths of users.

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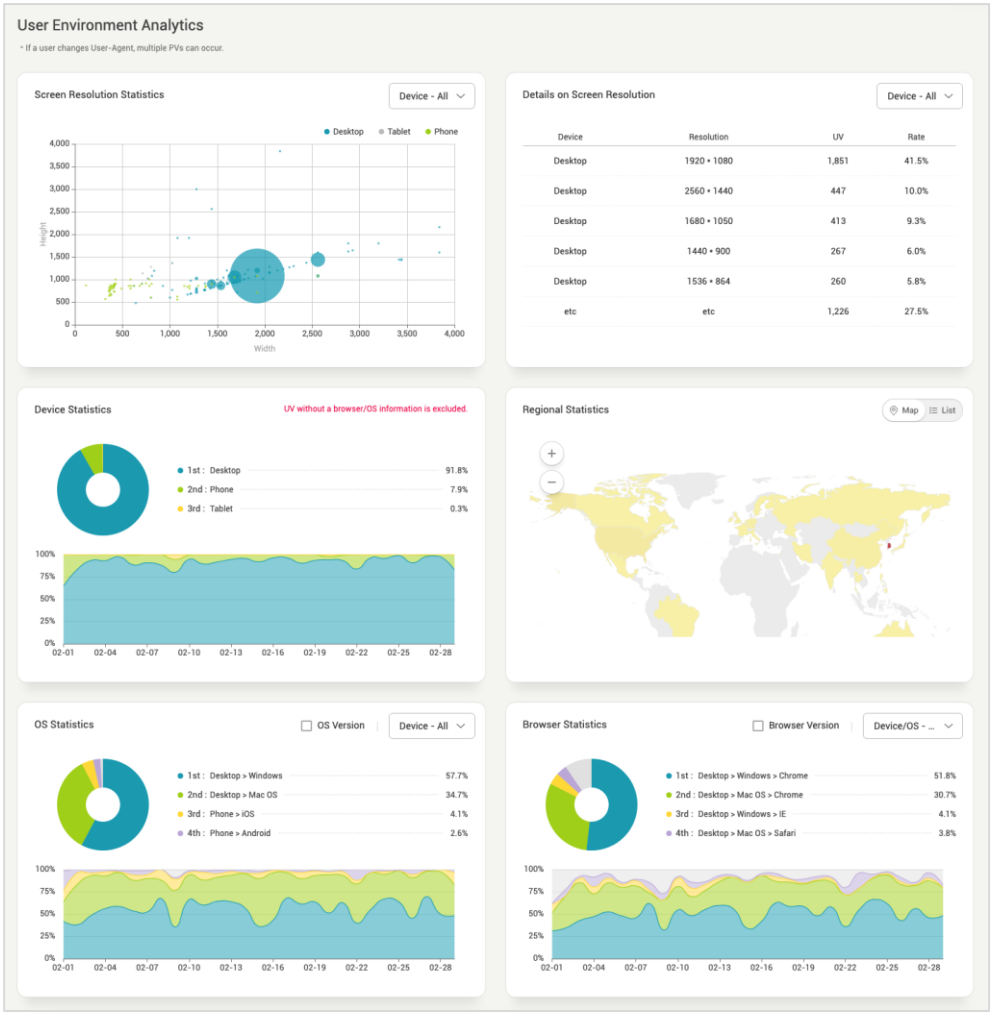
06.3.2. Conversion – Page Conversion Path

- *Conversion* means that a user transferred to another page through the content provided in the current page.
- The URL rank converted from the page can be viewed.
- In case of a page with more than 5 conversion paths, clicking the *View More* button in etc. item displays all the converted paths of users.

4. User Environment Analytics



- Understand the user's environment such as region, device, screen, and etc.

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06.4.1. Overview

- Analysis on users' browsing environment shows the information on the page visitors' browsing environment such as region, device type, and screen size.
- User environment analysis data shows the numeric data and ratio data based on UV count.

06.4.2. Regional Statistics

- Regional statistics show in which country the unique-visitor was at the time when he or she accessed the page.
- Regional statistics can be viewed in two forms: a map and a list through tab transition. Each country is colored in different shades depending on the ratio of the unique visitors (UV). Hovering the mouse over a particular country area shows the unique visitor (UV) ratio indicated in the tooltip box.

06.4.3. Screen Resolution Statistics

- This shows the users' various default screen resolution and size distribution.
- The resolution distribution can be classified and then viewed per device type.
- Information on the monitor resolution influences the location of the average fold. Also, it can be utilized as a basis to predict the default landing page's viewport and determine the necessity of responsive UI.
- Check if the site UI is optimized when the users accessed with the most distributed monitor resolution. Or, consider how users' viewports change per relatively higher and lower monitor resolution.

06.4.4. Details on Screen Resolution

- The monitor resolution distribution information can be viewed with numeric values and ratio data in detail.

06.4.5. Device / OS / Browser Statistics

- Device / OS / Browser statistics show the information on users' browsing environment that can be accessed to the corresponding URL.

Device Statistics

- Device type is classified as Desktop, Tablet, and Phone.
- Checking Page View (PV), Unique Visitors (UV) and the inflow paths of the date when there is a sudden increase or decrease in the number of users in a particular device type can help understand the type of users who accessed to the page, or their browsing environment information and intention.

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OS / Browser Statistics

- Checking the version classification helps to understand the OS statistics in detail by indicating the user's browser version.
- OS and browser information are specific information on users' browsing environment along with the device type. This information can be utilized to test the optimization level of system or to decide priorities in between whether to support an application in particular environment or not.

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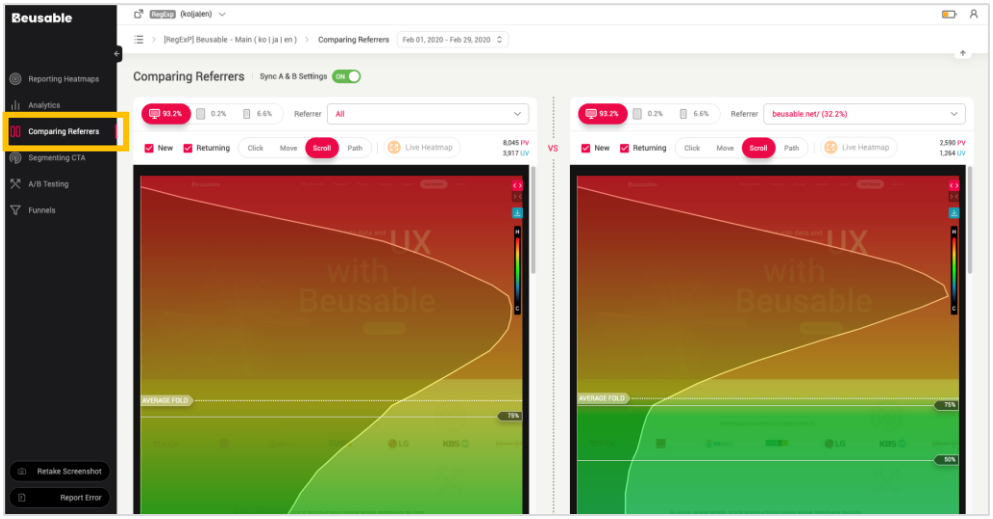
07. Comparing Referrers

1. Overview



- *Comparing referrer* (referrer = http referrer) feature displays heatmaps of two selected referrers and their UX status. By comparing these heatmaps of different referrers, user interest, behavior, and content exploring flow per each inflow paths can be understood.

NOTE _ Comparing Referrers by various segments

- 'Comparing Referrers' features compares the user's behaviors (Click, Move, Scroll, Tap, Zoom, Swipe and Path Plot) not only per each referrer but also per various segment options.

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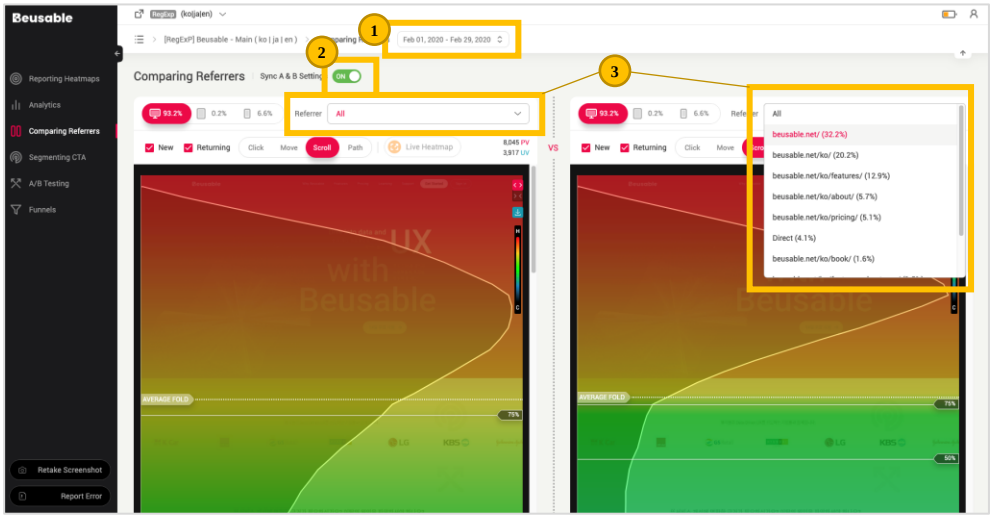
2. Comparing Referrers

07.2.1. How to Compare Referrers



① Set the time period of the heatmap report that you want to compare and analyze.

② Activate the *Sync* toggle.

③ Set each heatmap with the desired segment.

- Deactivating sync toggle allows selecting different segmentation options such as whether to include the new and returning users and device type for each heatmap.

NOTE _ Tip for analysis: compare to the entire referrers (All)

- One can compare a referrer to the entire referrers. Within the HTTP Referrer bar, select ALL from the drop-down menu to compare a single referrer to the referrers as a whole.

NOTE _ Tip for analysis: compare identical referrers

- One can assign the same referrer to both sides of the comparing referrer heatmap. The same referrer can be compared to itself using the click heatmap, the mouse move heatmap, the scroll heatmap, and the path plot. Also, the heatmaps can also be analyzed per different device type. For instance, comparing a click heatmap of the same referrer per desktop device type and mobile device type can help to study the influence of device type on consumption of the content efficiency and drive insights.

NOTE _ Notice

- Changing the selected period initializes the chosen segment options and values on both heatmaps on the right and left.
- Live Heatmap feature is not supported in *Comparing Referrer* feature.

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3. Comparing Heatmaps

07.3.1. Click Heatmap

- Click heatmap compares users' final destination within the page.

07.3.2. Mouse Move Heatmap

- Mouse move heatmap comparison can compare user interest and/or differences in content by funnel.

07.3.3. Scroll Heatmap & Attention Graph

- Scroll heatmap and attention graph compare user activity level, exposure level of content, and attention level.

Comparing Scroll Heatmap

- The results of a user's mouse scroll reflect the degree to which the content of the top area has affected the user and the user's willingness to explore.
- Therefore, by comparing the scroll heatmap for each referrer, you can learn the difference in the impact of the content in the top area on users, or the difference in willingness to navigate within the page.

Comparing Attention Graph

- Comparing attention graph compares the difference between the areas where users have focused.
- The contents consumed for a long time by many users can be diagnosed. Also, the difference of the areas in which users are interested as well as the consumption pattern can be understood.

07.3.4. Tap Heatmap

- Tap heatmap compares users' final destination within the mobile page.

07.3.5. Zoom Heatmap

- The zoom heatmap compares content that has driven users' attention.

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07.3.6. Swipe Heatmap

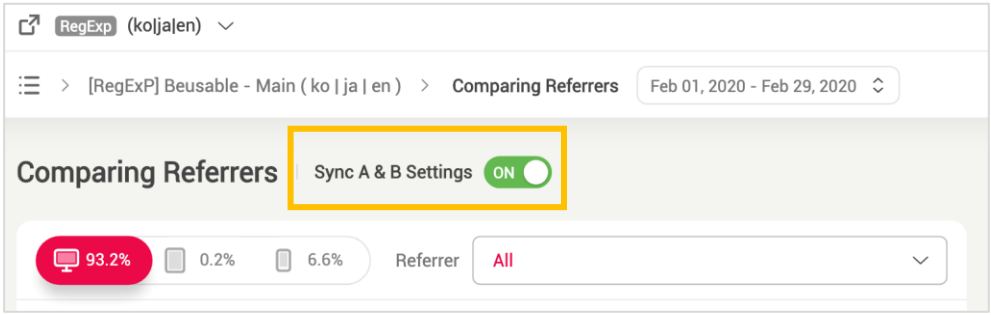
- The swipe heatmap compares the user's up/down and left/right content browsing experiences by section and content.

07.3.7. Path Plot

- Activity stream compares the content exploration flow.
- The difference between the content exploration flow and duration time can be analyzed per referrer where investigation is required.
- Also, by comparing the number of circles in each path plot, the number of meaningful activities per each referrer can be compared. Moreover, comparing the number of meaningful activities enables to analyze the level of user's motivation for exploring the page per each referrer.
- The location of each circle can be compared per each referrer in the path plot to see the difference between the most attention-attaining content.

4. Sync Toggle

07.4.1. Overview



- Sync Toggle is provided in Comparing Referrers features.
- Activating the *sync* toggle synchronizes the control of the left and the right heatmaps.

07.4.2. Synchronized Functions by Activating the *Sync* Toggle

- Whether to include the new and/or returning users.

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- Selected device type.
- Selected heatmap type
- The mouse scroll movement in both heatmaps.

NOTE _ Unsynchronized comparison example: New users VS Returning users

- The UX heatmap of the new and the returning user of the same referrer or an entire referrer can be compared. With click heatmap, the interest level distribution between the new and the returning users within the same referrer can be viewed. Comparing the new and the returning user's interest level of distribution can build the improvement plan to increase conversion rate. Comparing the new and the returning users per referrer can reduce the confusion in user experience by assigning the target audience per each content area. Other than comparing the new and the returning users per referrer, comparing the move heatmap, scroll heatmap, and activity stream can analyze the user experience between the new and the returning users in more detail.

NOTE _ Unsynchronized comparison example: Click heatmap VS Mouse move heatmap VS Attention graph

- An identical referrer's click heatmap, move heatmap, and attention graph can be compared. The click heatmap reflects the final destination of the user's interest while the move heatmap reflects the distribution of the user's interest. And the attention graph reflects where many users' attention had stayed, or where the user had focused.
- If the most clicked area in click heatmap is different from the most mouse cursor reached area in move heatmap, it is highly likely that the users are experiencing confusion in exploring page. It is most likely that the users tend to behave with a click and etc. at where the users are most interested. However, if there is no clickable element provided within the area where the users are interested, the area where the users clicked most and the area where the user's mouse cursor reached the most can be different from each other. Like so, the users might explore other areas of the same page or pause their exploring or exit the page if there is no clickable element within the area where the users are interested.
- If the area where the users are most interested in the mouse move heatmap and the area where the attention of the users stayed the most in the attention graph are significantly different from each other, it means that the mouse cursor movement and the duration time are not proportional to each other. Or if the attention value is significantly low or high relative to the scroll reached rate, it indicates the reached scroll was not led to the actual user's interest. Those cases can be when the users had reached but skipped fast or when a few users reached but paid attention for a long time.
- Relocating the behavior triggering element such as a clickable element to the area where the user's interest was dispersed the most through comparing various heatmaps could extract specific improvement plan such as increasing the conversion rate.

NOTE _ Unsynchronized comparison example: Scroll heatmap VS Mouse move heatmap VS Path plot

- The scroll heatmap, move heatmap, and the path can be compared. Scroll heatmap shows whether the content was exposed to a user or not. Comparing move heatmap and stream shows whether every content's inclusive area was delivered to the users. The Scroll heatmap, move heatmap, and the path can be compared per the new and returning users and per device types.

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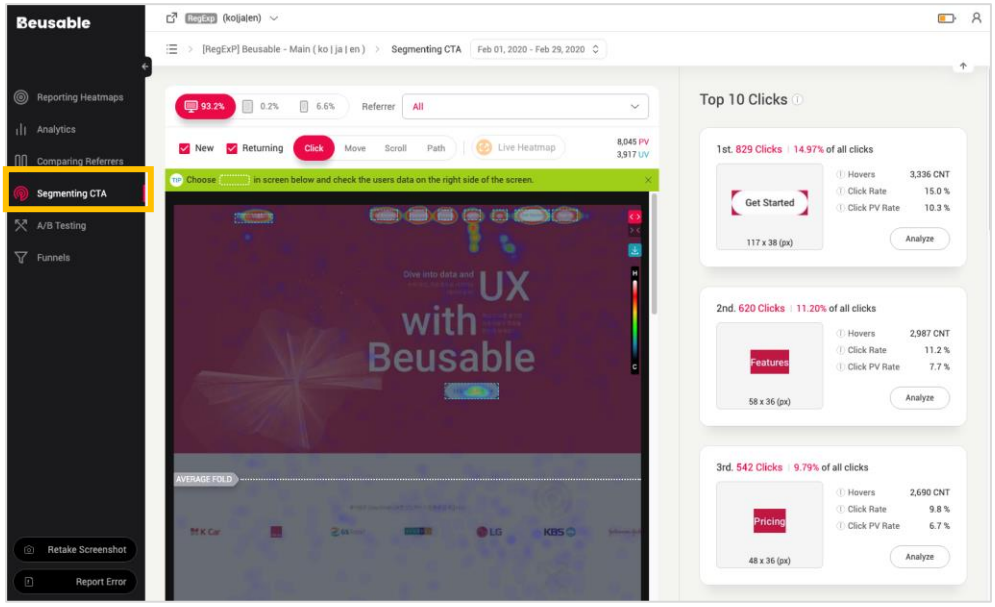
08. Segmenting CTA

1. What is CTA?



- Buttons that induce user behavior (e.g. click) within a page is called CTA (Call-to-Action).
- Depending on the purpose of each website, buttons or links such as banner, buy, sign up, download, contact, etc can be classified as CTAs.
- CTA is an important element that can convert users into potential customers. Conversion rate is more likely to increase when CTA is used to create synergy in combination with other components.

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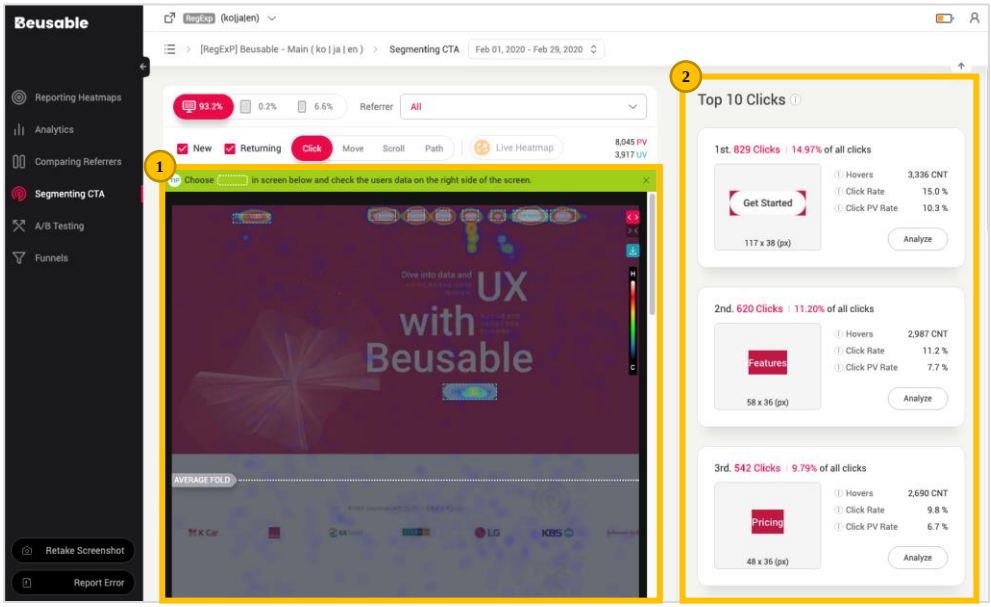
2. Using Segmenting CTA

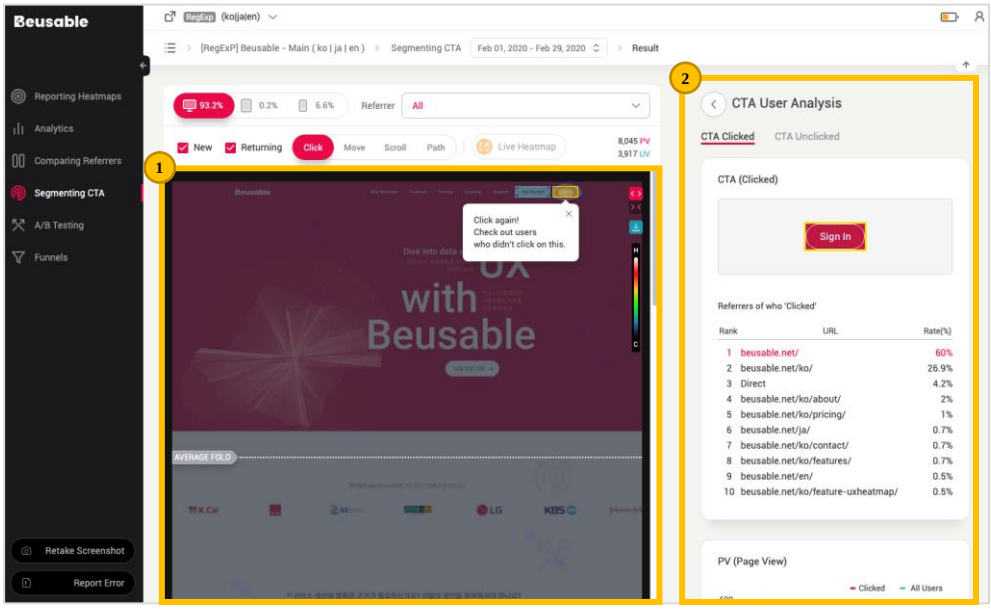
08.2.1. Selecting CTA for Analysis



① Click one of the clickable area (CTA) from the heatmap for analysis.

② Or you can simply click *Analyze* button of one of the top 10 CTA elements listed on the right.

08.2.2. Analyzing Users Who Clicked the Selected CTA



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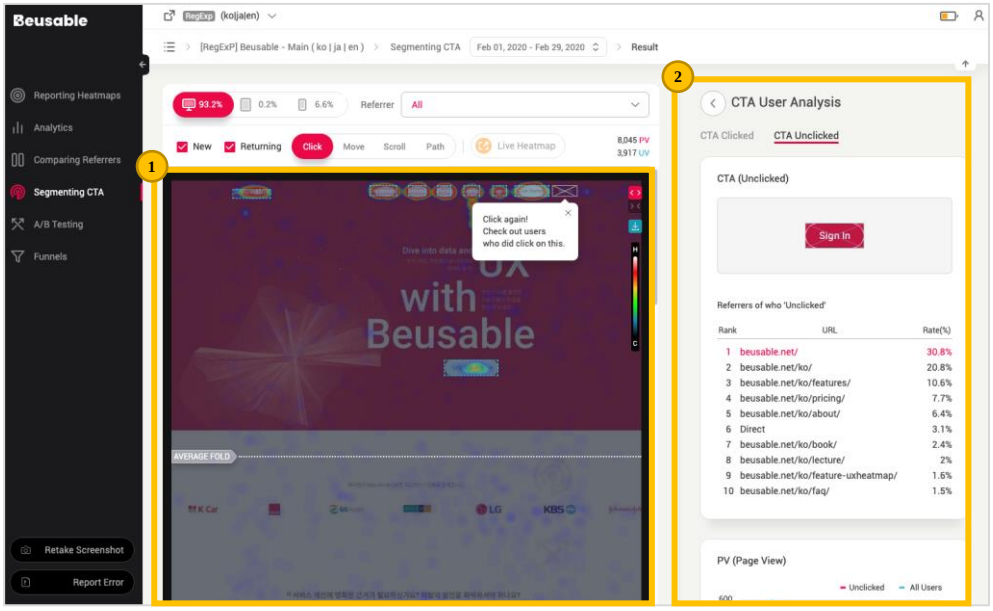
① As you select a CTA element either from the heatmap or by clicking *Analyze button*, the heatmap is reconstructed based on users who clicked the selected CTA. Selected CTA will be emphasized in yellow.

② Corresponding analysis report on users who clicked the selected CTA is displayed on the right.

08.2.3. Analyzing Users Who Unclicked the Selected CTA



① As you click again the selected CTA element that is highlighted in yellow, the heatmap is reconstructed once again based on users who did not click the selected CTA. This time the CTA will be emphasized in black marked X.

② Corresponding analysis report on users who did not click the selected CTA is displayed on the right.

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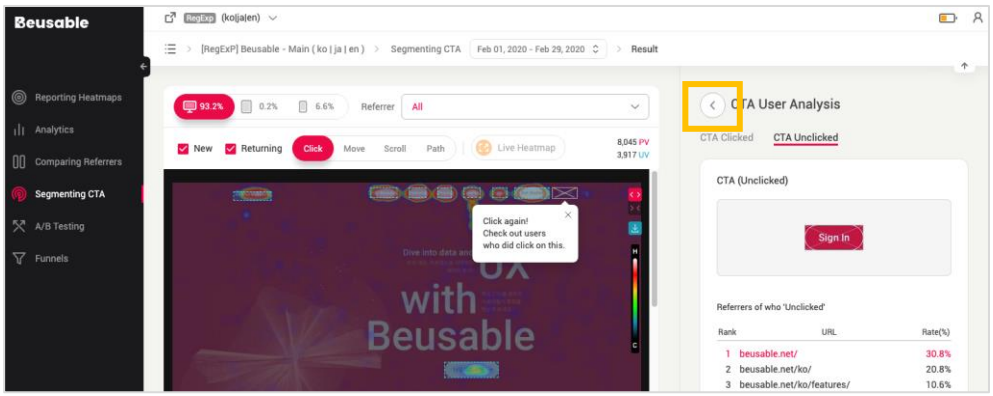
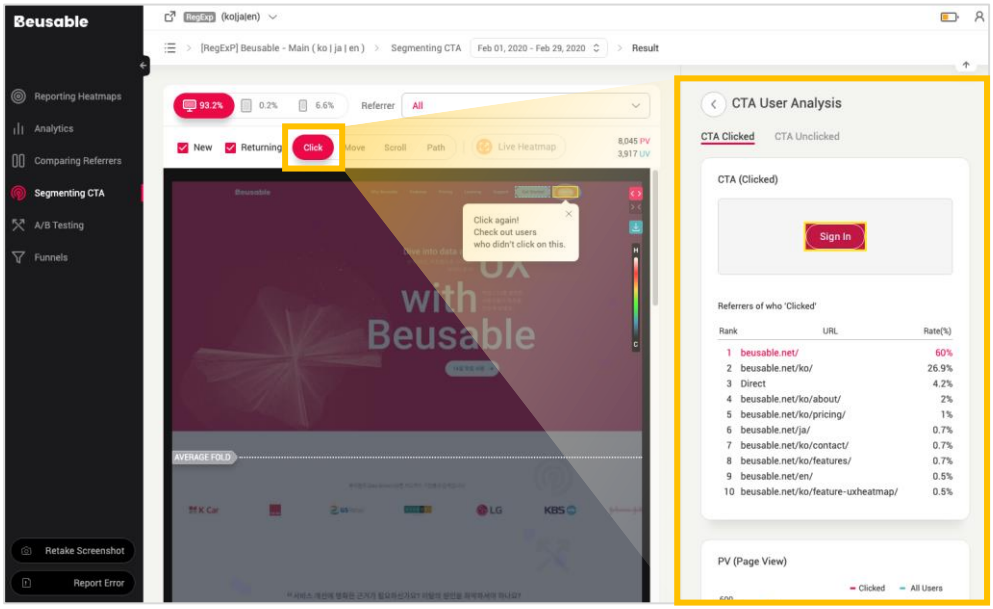
08.2.4. Return to Entire Users Heatmap



- As you click the *Go Back* button on the right side of the heatmap of the selected CTA (either clicked-users and unclicked-users), you will be redirected to the heatmap and analysis report on entire users.

3. User Statistics Report



- Information on users who clicked the selected CTA or on users who did not click the selected CTA can be compared to that of the entire users.

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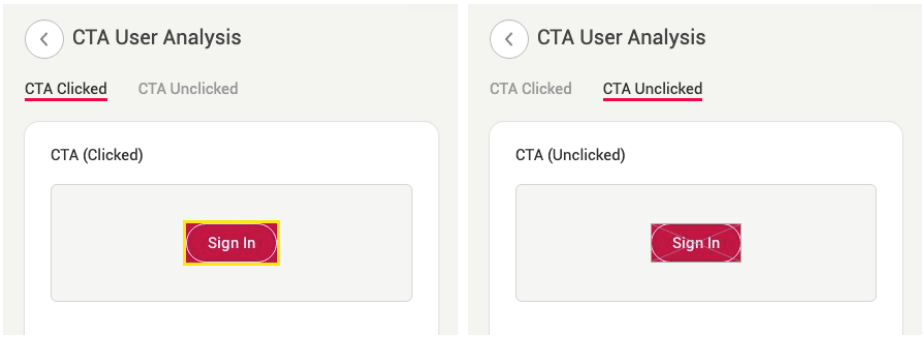
08.3.1. CTA Selection Status



- You can see whether the current statistics report is based on the users who clicked the selected CTA or on the users who did not click on the selected CTA. If the report is generated on the basis of users who clicked the CTA element, you will see bold outline in yellow (black outline marked X for users who did not click the CTA).

08.3.2. Inflow Channels

Referrers of who 'Clicked'

Rank	URL	Rate(%)
1	beusable.net/	60%
2	beusable.net/ko/	26.9%
3	Direct	4.2%
4	beusable.net/ko/about/	2%
5	beusable.net/ko/pricing/	1%
6	beusable.net/ja/	0.7%
7	beusable.net/ko/contact/	0.7%
8	beusable.net/ko/features/	0.7%
9	beusable.net/en/	0.5%
10	beusable.net/ko/feature-uxheatmap/	0.5%

Referrers of who 'Unclicked'

Rank	URL	Rate(%)
1	beusable.net/	30.8%
2	beusable.net/ko/	20.8%
3	beusable.net/ko/features/	10.6%
4	beusable.net/ko/pricing/	7.7%
5	beusable.net/ko/about/	6.4%
6	Direct	3.1%
7	beusable.net/ko/book/	2.4%
8	beusable.net/ko/lecture/	2%
9	beusable.net/ko/feature-uxheatmap/	1.6%
10	beusable.net/ko/faq/	1.5%

- Overall top 10 inflow channels of the users who clicked (or did not click) the selected CTA element is available as a list.
- Inflow channel patterns can be understood according to user types (CTA-Clicked and CTA-Unclicked).

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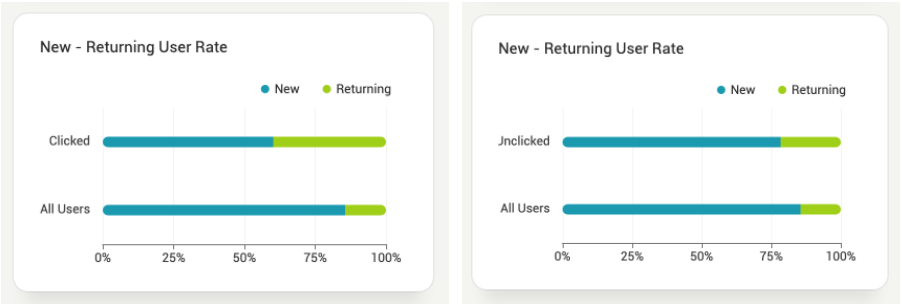
08.3.3. PV & UV

- Sizes of users who clicked (or did not click) the CTA element and of entire users can be compared.

08.3.4. New & Returning User Rate



- Amongst UV (Unique Visits) that clicked (or did not click) the corresponding CTA element, the rate of the returning users in that UV population can be understood in comparison to the new users. Also, you can examine aspects of users who clicked (or did not click) the CTA by comparing the ratio between the new and returning users with the entire users.

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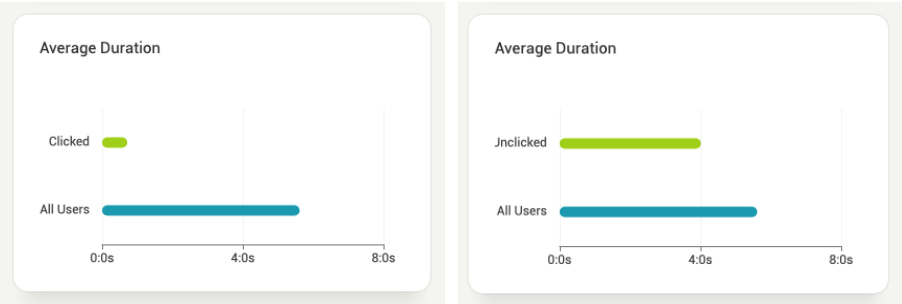
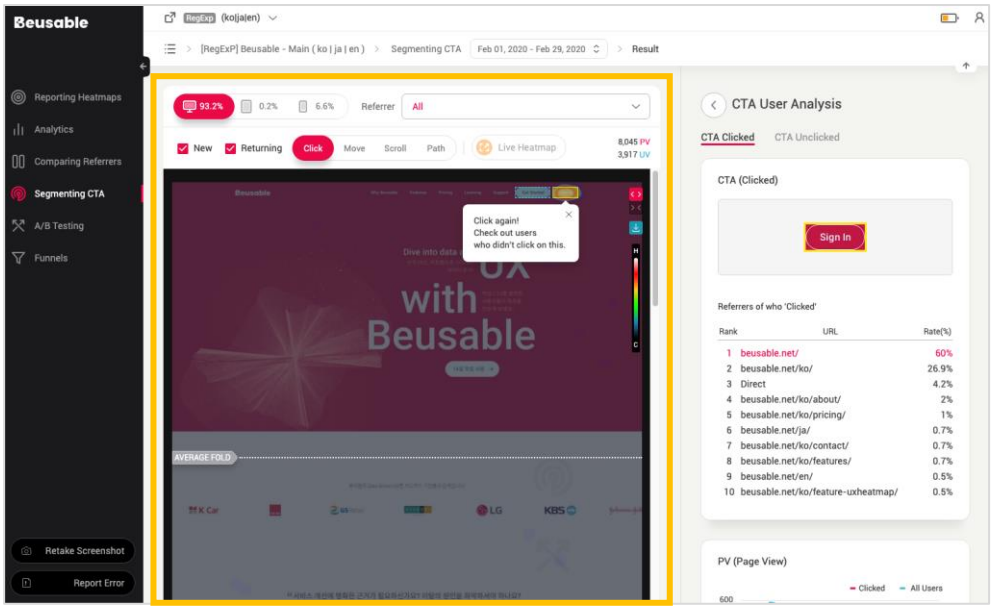
08.3.5. Average Duration



- You can view the average duration of visits made by the users who clicked (or did not click) the selected CTA. This can be compared with the average length of visit of the entire users to understand the length of time status of that particular CTA element.

4. Heatmap



- On a default page of Segmenting CTA (when no CTA selected), only the Click heatmap of entire users is provided.
- When a certain CTA element has been selected the corresponding heatmap and Path Plot on users who clicked (or did not click) are displayed.

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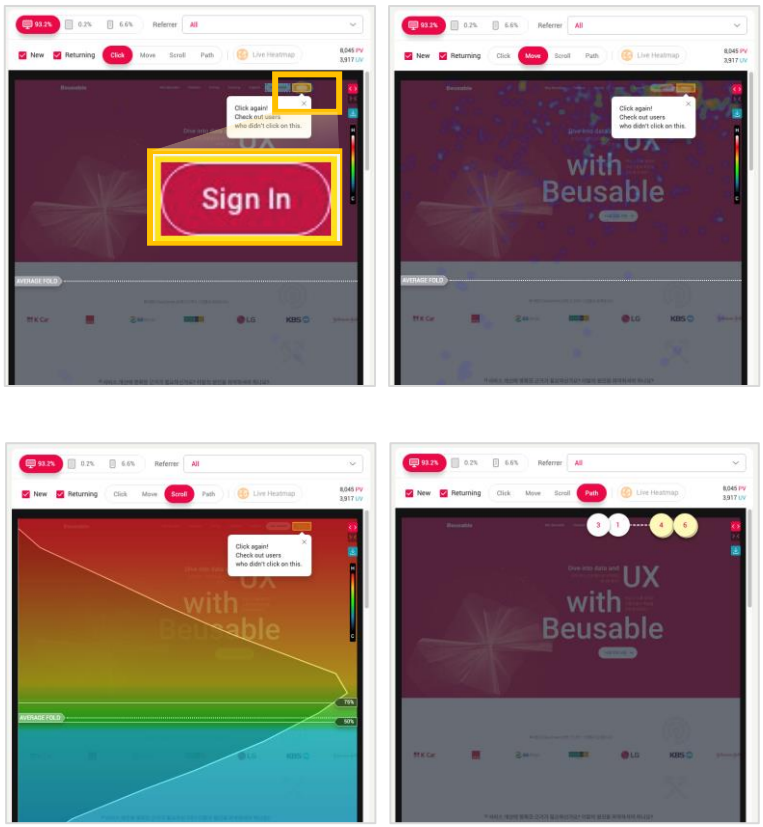
08.4.1. Heatmap and Path Plot of Users Who Clicked CTA



- Understand user behavior who clicked CTA with heatmaps and Path Plot. The CTA element is highlighted by a yellow bold line box.

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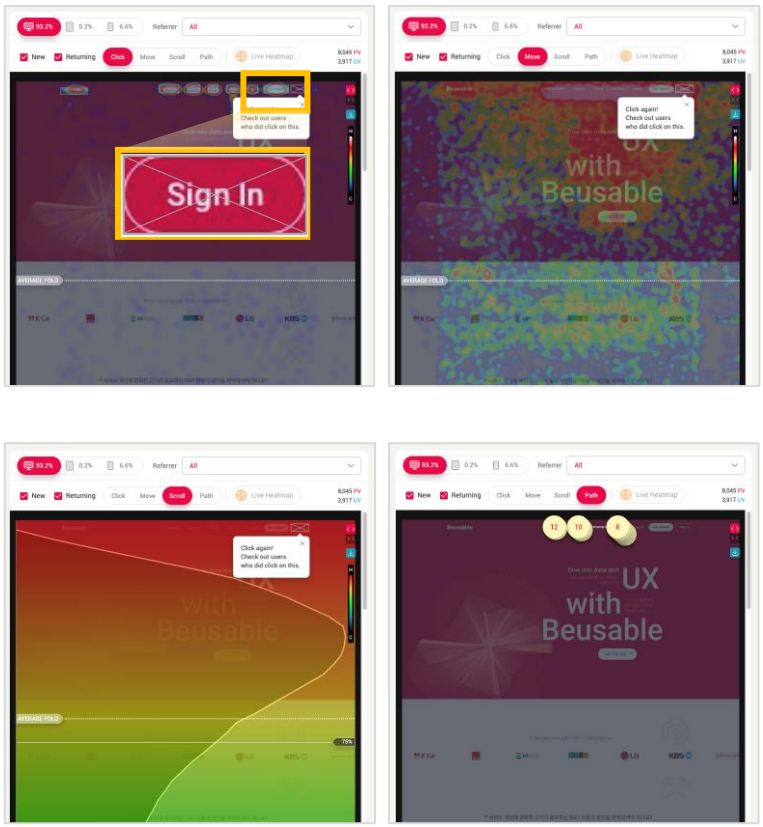
08.4.2. Heatmap and Path Plot of Users Who Did Not Click CTA



- Understand user behavior who did not click CTA with heatmaps and Path Plot. The CTA element is highlighted by a black bold line box marked X.

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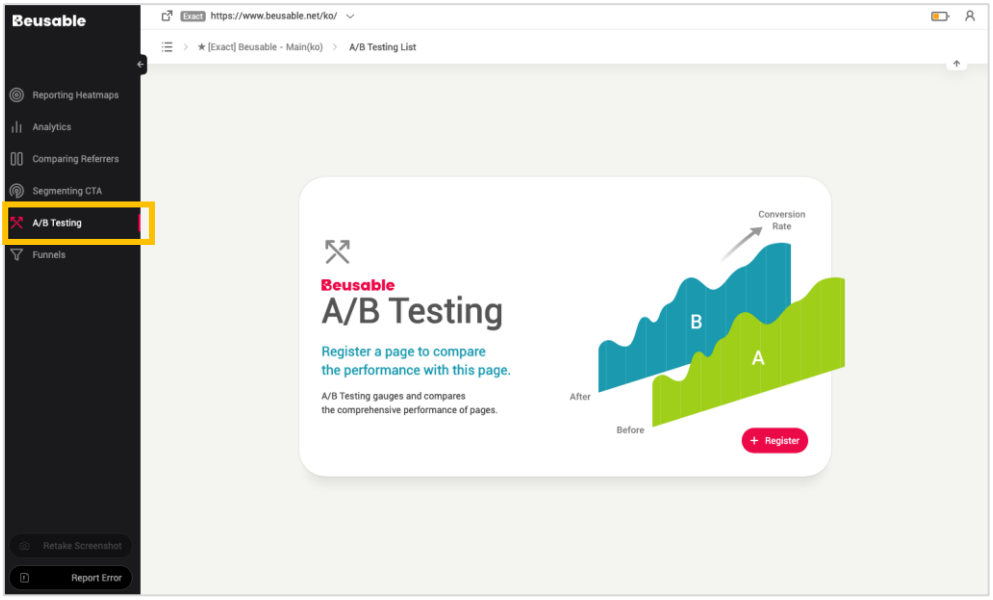
09. A/B Testing

1. Overview



- A/B testing is a method of comparing two versions of a webpage or app against each other to determine which one performs better.
- Beusable's A/B testing feature allows you to minimize required development resources and to perform A/B testing with just a few clicks.

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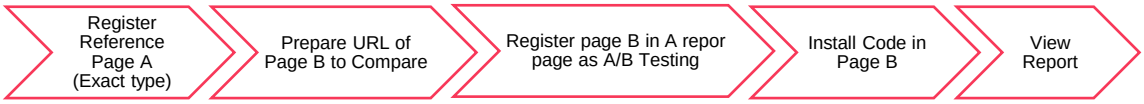
09.1.1. A/B Testing With Beusable



① Register standard A page using Exact URL Match option.

② Prepare the URL of page B to compare with A. The URL of page B must match the protocol and domain of the URL of page A, and must have a configuration separated by path or parameter or fragment.

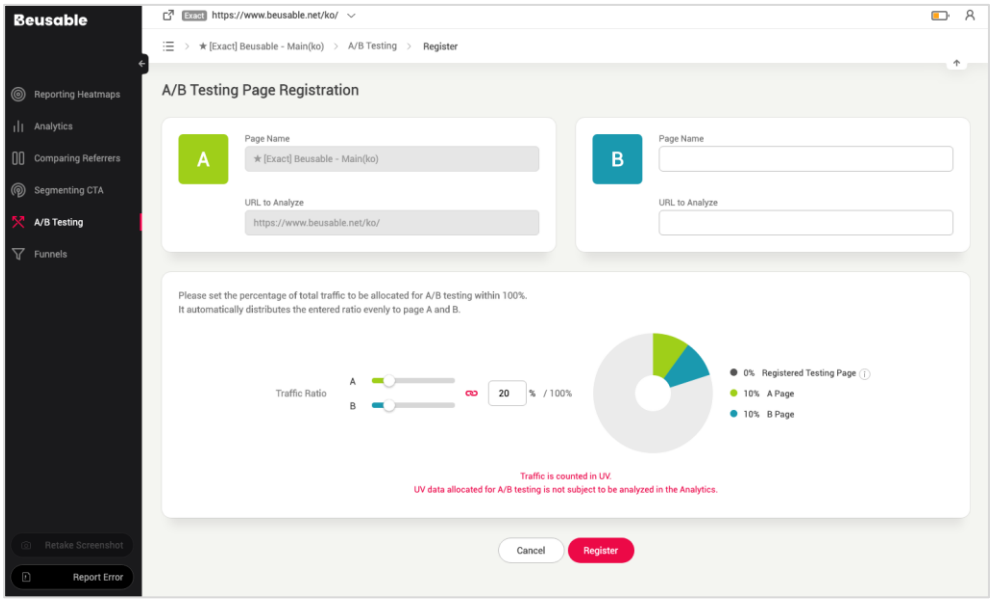
③ Register page B. A report page as A/B testing

④ Install the code issued by A/B testing on page B that has been registered.

⑤ After sufficient sample PV is accumulated, compare A/B test report or heatmap to see the result.

2. A/B Testing & Code Installation

09.2.1. Registering A/B Testing Page



- Register a test page via *Register* button as shown above from the A/B Testing feature page.
- Enter the URL of the page to be added as 'B Page'. Registered URLs are collected using the Exact URL Match option and must be different from Page A.

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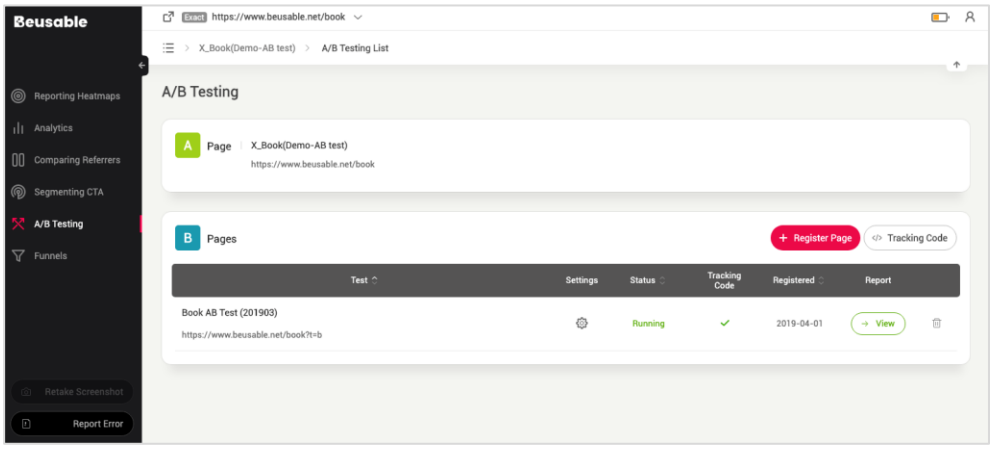
- Set the percentage of the traffic that will be used for A/B testing among the users to the page.
- The percentage of the traffic to be moved can be set within [100%]. Automatically distributes traffic to each A and B based on the percentage of administrators entered.
- The remaining percentage that the user has not set is the percentage that can be used to add another A/B Testing.
- All data related to the UV used in A/B testing are excluded from the Reporting Page, and Heatmap Analysis etc.

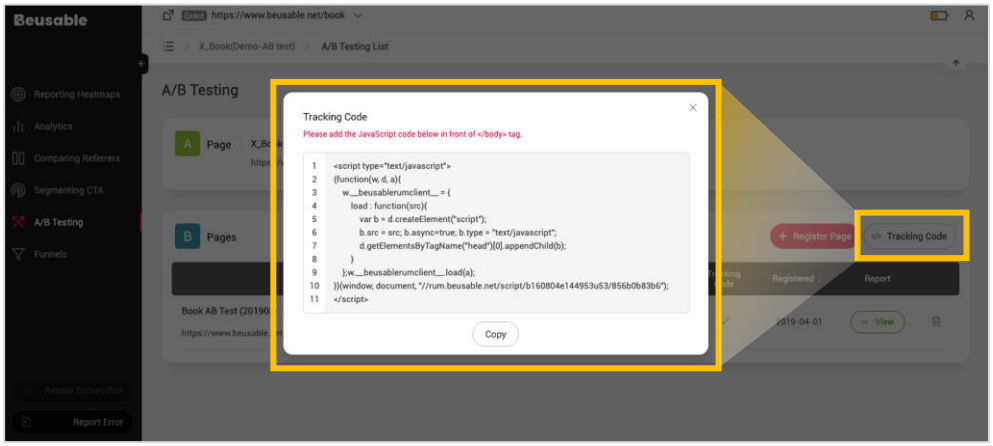
09.2.2. A/B Testing List

- Registered B page can be viewed on A/B Testing list page.
- A list of registered A/B testing can be found in a report of an A page.



09.2.3. Installing A/B Testing Code

- Install the code that has been issued on page B.
- After registering a page, check the code to be installed through the *Tracking Code* button in B page list.
- The A/B testing code installation method is the same as the Beusable code installation method.



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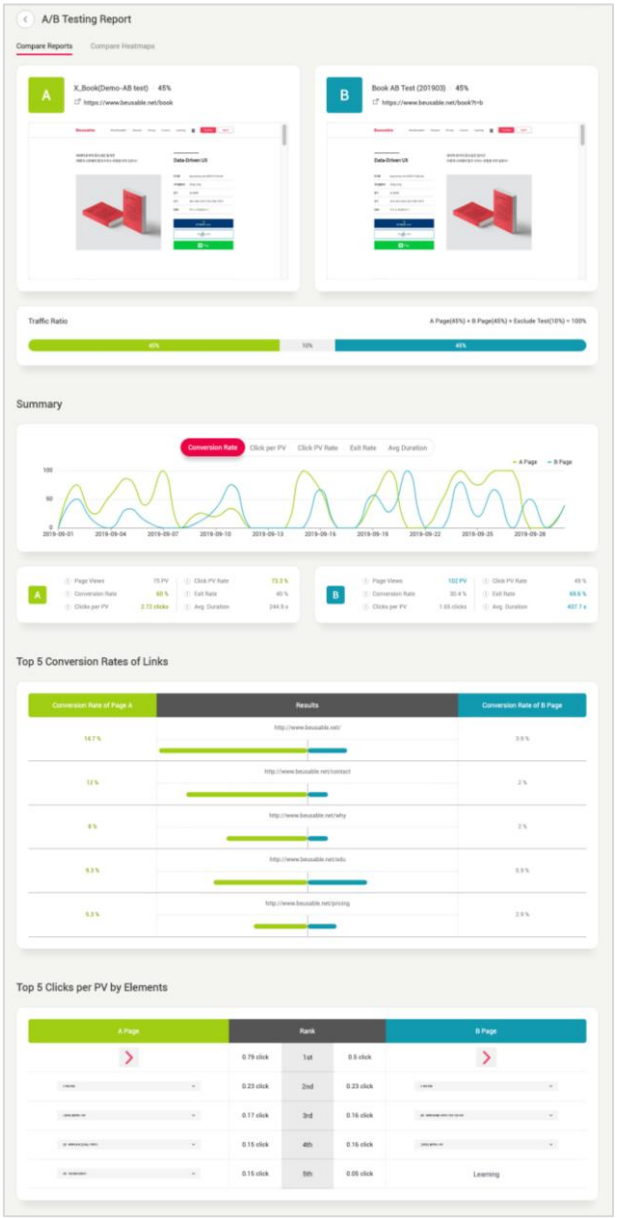
3. A/B Testing Result

09.3.1 Compare Reports



- Compare the following items by date or by average in *Summary* section.
- Report comparison provides information on the traffic ratio, summary of conversion rate and clicks per PV ranking of A and B pages.

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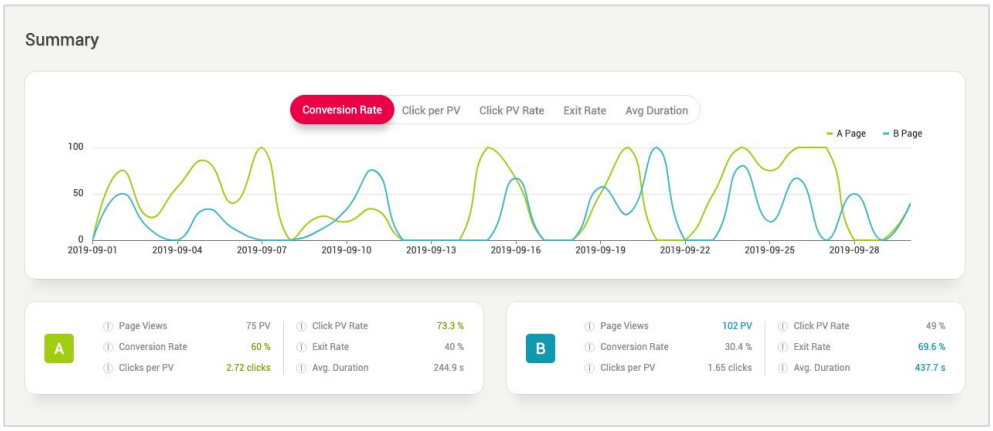
Summary



- Conversion Rate
- Click per PV
- Click PV Rate
- Exit Rate (the opposite of Conversion Rate)
- Average Duration

Top 5 Conversion Rates by Links

- Compare the ranks of converted page URLs.

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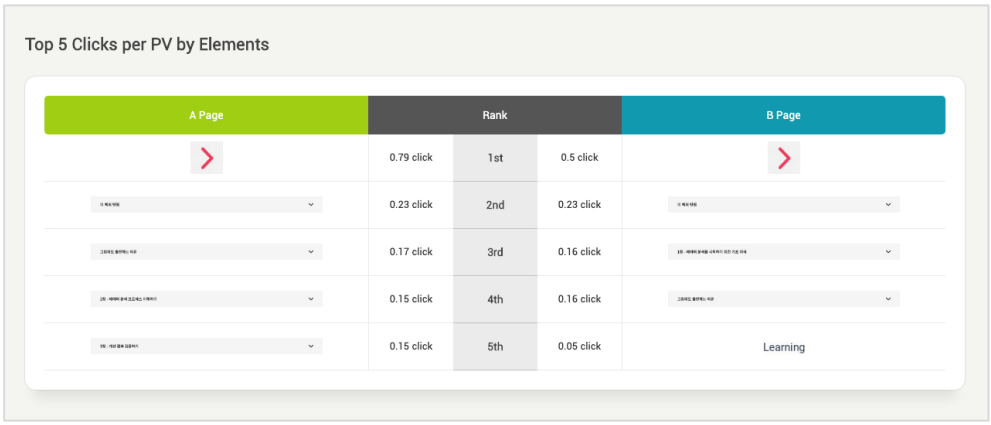
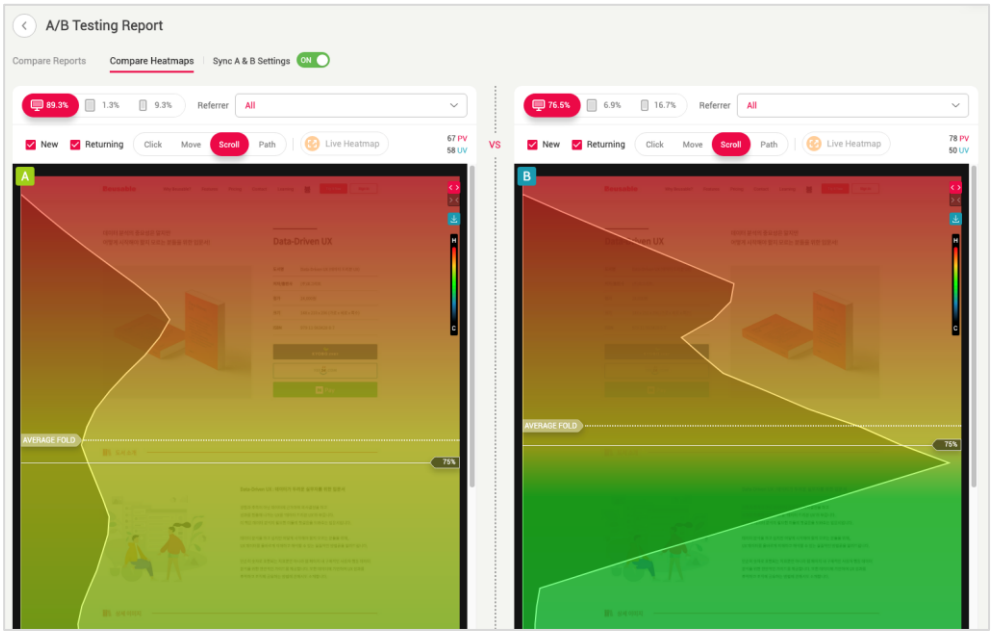
Top 5 Clicks per PV by Elements



- Compare the differences in the most clicked contents by rank.

09.3.2. Compare Heatmaps



- Compare the UX of the original page and the added page through the left and right heat map, just as in the Comparing Referrers feature.
- For accurate comparison between two pages, set and compare the same funnels and new and/or returning users / device / type.

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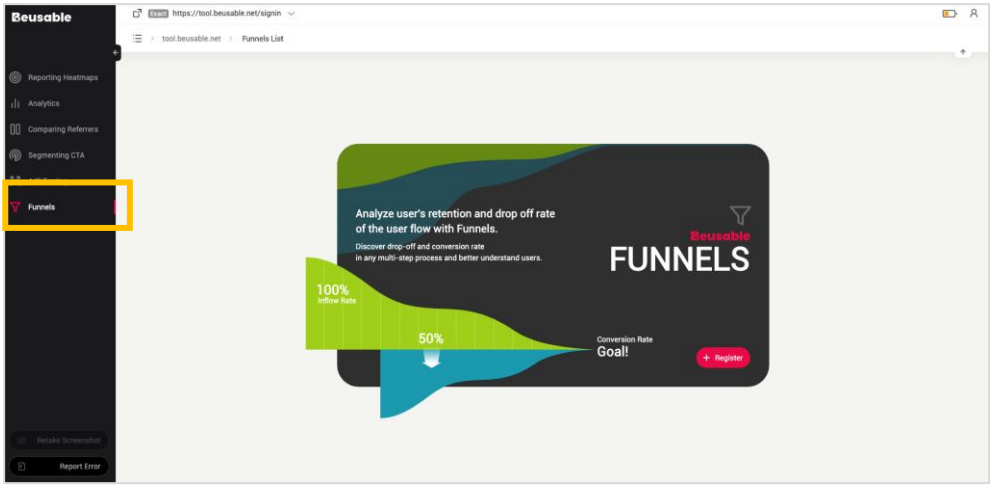
10. Funnels & Session Report

1. Overview



- Architecting and visualizing the user's exploration path between multiple pages within one domain in step by step process is called *Funnel*.
- Analysis through *Funnels* feature has two major benefits. First, the user exit time and the number of retained or exited users can be learned. Second, it makes easier to focus on page improvement for lower bounce rates and to track conversion performance. Ultimately, *Funnel* and *Session Report* enable easier design of user behavior flow scenarios that match the design goals to optimize the user's navigational journey.

NOTE _ Beusable's Funnel & Session Report

- Beusable's Funnels feature is a report which analyzes the user's retention rate and exit rate of each step. Through funnels, the step by step data is aggregated from the initial inflow to the final conversion. Then, one can find a page with high exit rate to improve the page by diagnosing exit-causing elements within the corresponding page.
- With the 'Funnel' and 'Session report' features of Beusable, the problematic pages can be investigated then can be improved.

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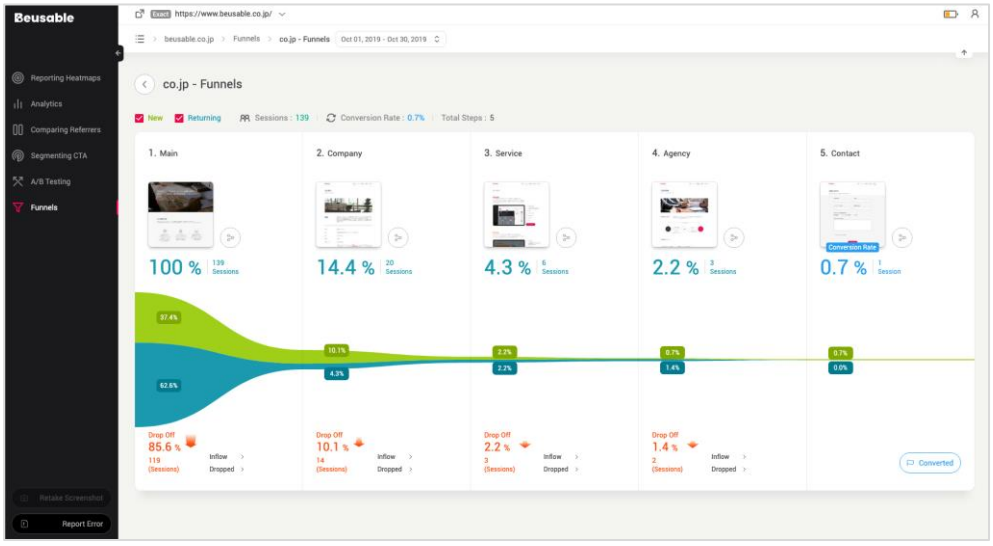
2. Function & Structure of a Funnel

- *Funnels* feature can be understood with its three main functions.

10.2.1. Analyzing the User Behavior Flow in Steps



- *Funnels* feature allows you to design a detailed user behavior flow in specific steps. This can support a precise analysis of the user behavior flow in each funnel step. The user behavior flow set per each step of a funnel can be modified.

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10.2.2. Funnel Flow Comparison & Analysis per User Type

- The flow of each funnel step can be filtered for the new(green) or returning(blue) users. You can understand the conversion and exit characteristics per user type with this filtering feature.

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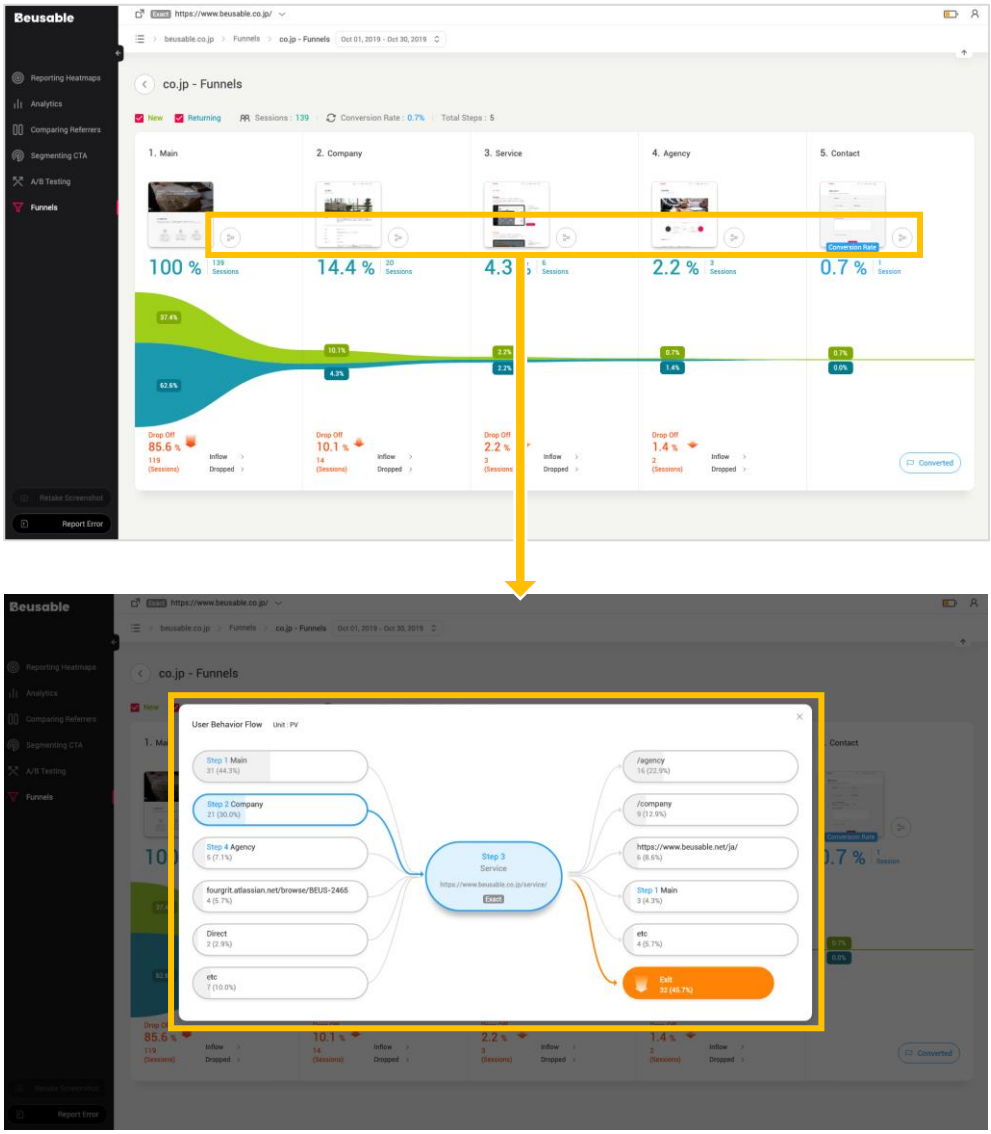
10.2.3. Reporting Retention & Exit Status of Users in Individual Steps



- *Funnels* feature also reports the user's retention and exit status through a visual graph. Also, the higher the slope of the retention and exit status graph of a specific funnel step, the higher the exit rate. Likewise, the lower the slope of the retention and exit status graph of a specific funnel step, the lower the exit rate. Understanding the slope of each step's exit status through the graph might provide you with insights such as which step needs improvement prior to the other pages, or which step has a relatively stable conversion rate.

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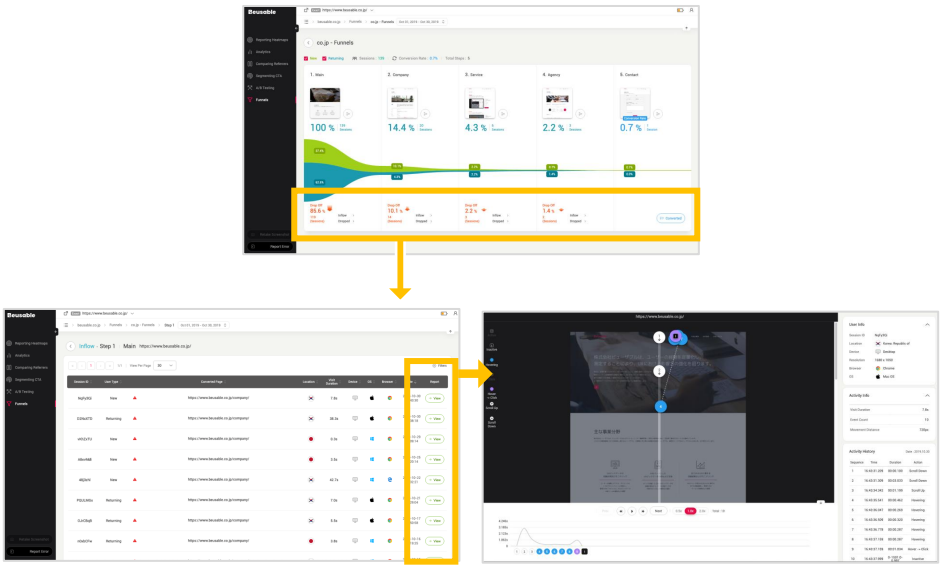
10.2.4. Simulating the Exploration Flow of Individual Users & Additional Information



- The page exploration of a specific user can be simulated through the *Inflow* and *Dropped* buttons located beneath the exit rate graph of each funnel step. Each category leads to either Inflow session report page or Dropped session report page, either of which simulates the exploration flow of individual users who converted or those who exited the corresponding page. Also, both session report categories provide additional information on user's browsing environment regarding the user's exploration flow.

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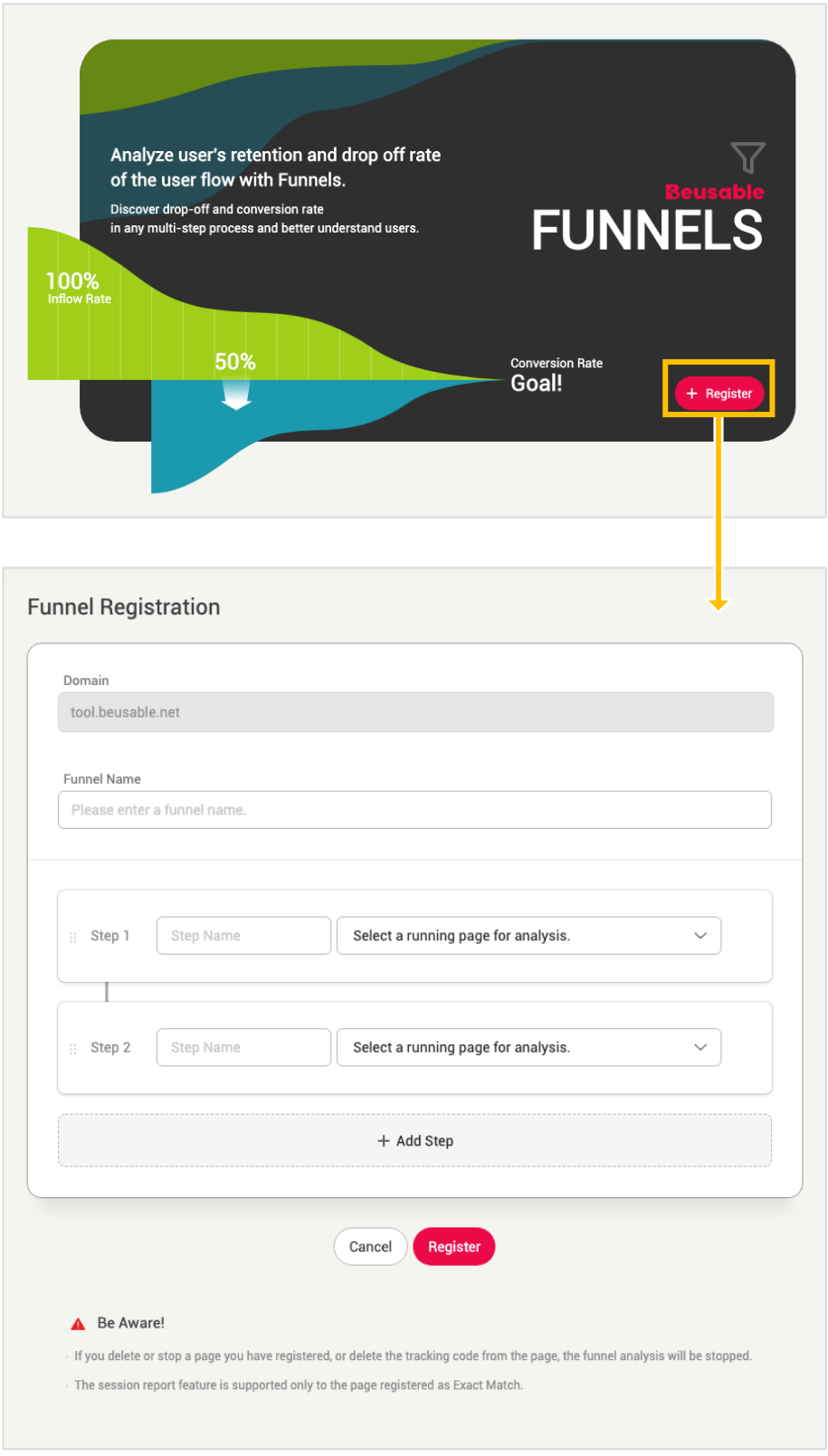
3. Funnel Registration



① Enter the name for your new funnel.

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② Select the corresponding URL per step. Only the pages of an identical domain of the current report page can be selected. (The number of steps per funnel is limited to 20).

③ When the registration process is complete, the registered funnel will appear in the funnel's list page.

NOTE _ Notice

- All the URLs can be registered in funnel regardless of its match type. However, only the Exact Match type URL is available for a session report.
- As a page registered in a funnel is deleted or paused, following funnel analysis will also be interrupeted.
- Immediately after funnel registration, the report is yet generated. Reports status will change to *Running* after acquiring sufficient data.
- *User Behavior Flow* of each step allows understanding if users are navigating as intended.

NOTE _ Notice

- The registered funnel's report cannot be accessed instantly. (When Beusable completes the analysis process, the status of a funnel changes to 'Running.')
- Each *User Behavior Flow* chart helps to examine whether the actual inflow and the conversion tendency of a corresponding page coincide with the previously architected flow.

NOTE _ Funnel Architecting Guide

- Even the comprehension level of the all Beusable users are the same, the usability and efficiency of the funnel feature can vary distinctively depending on how they architected and utilized the funnel. Considering the user's behavior path or move path in an inverse order helps to architect a funnel.
- The architecture of a funnel can start from the discovering stage and definition stage of the most important goal of the site. The examples of the final purpose or the most critical goals could be a 'Product Purchase rate,' 'Sign-up rate,' 'Subscription rate,' 'audience rate of video content'. One can communicate or discuss with a team or an organization to define the final goal of the site then write possible scenarios based on the concluded final behavior or values. The scenarios for the most optimized user experience that is desired to be delivered to the users or to induce the users can be written based on the decided standards. Each service industries build their funnels like the following funnels for analysis.
- E-Commerce (Goal: Increasing revenue through a payment completion.): Main > Product detail page > Cart > Checkout > Payment Complete
- Web Service (Goal: Increasing revenue through paid version charge): Main > Trial Registration > Running trial version > Upgrade to paid version.
- Content Service (Goal: Increasing revenue through regular subscription): Main > View content detail > Regular subscription
- B2B company (Goal: Increasing revenue through inquiries.): Main or Product page > Contact us > Submitting inquiry.

NOTE _ Notice before architecting a Funnel

- When architecting a funnel, one must be attentive not to omit the core paths. If there is no core path connecting the other pages, the final conversion might not happen at all. For instance, in case of an e-commerce site, if 'Check-out' step is omitted, the final conversion rate will be aggregated as 0.

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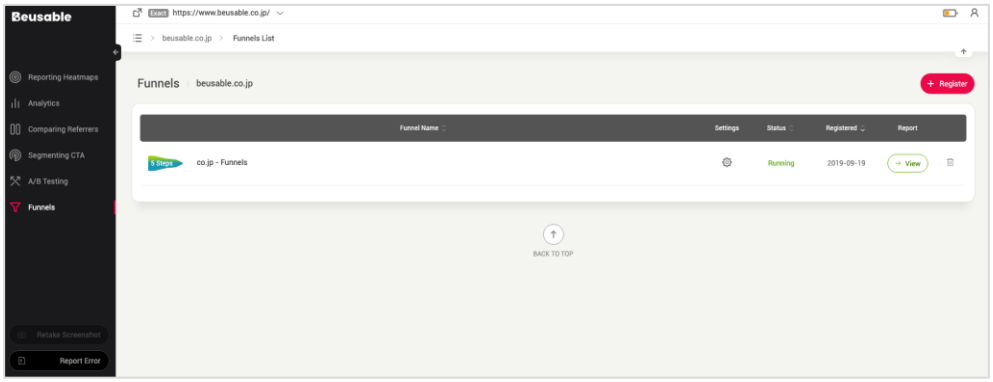
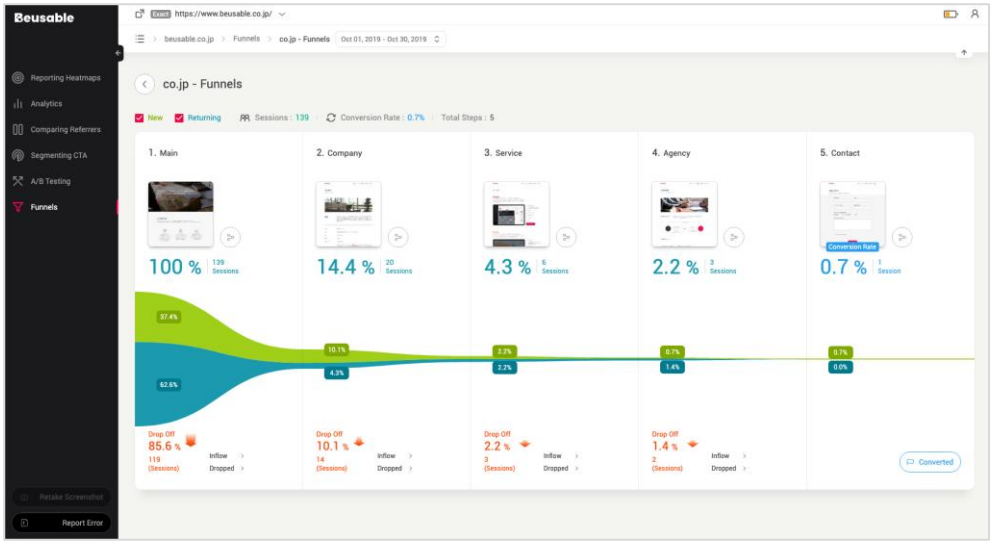
4. Funnel List



- All the registered funnels are listed on the *Funnels List* page.
- Moreover, registration and management of funnels can be done on the page.
    - Registration: A new funnel can be registered via Register button on the right upper corner.
    - Settings: As clicking the button funnel management can be made, regarding renaming the funnel and steps and deleting any unnecessary URLs.
    - Status: Indicates the status value of the funnel. Each funnel has a status value of Analyzing, Running, Stop, Deleted.
    - Registered: Indicate a date of funnel registration.
    - Report View: Reports of registered funnel can be viewed.
    - Delete: Selected funnel can be deleted.

5. Understanding Funnel Report



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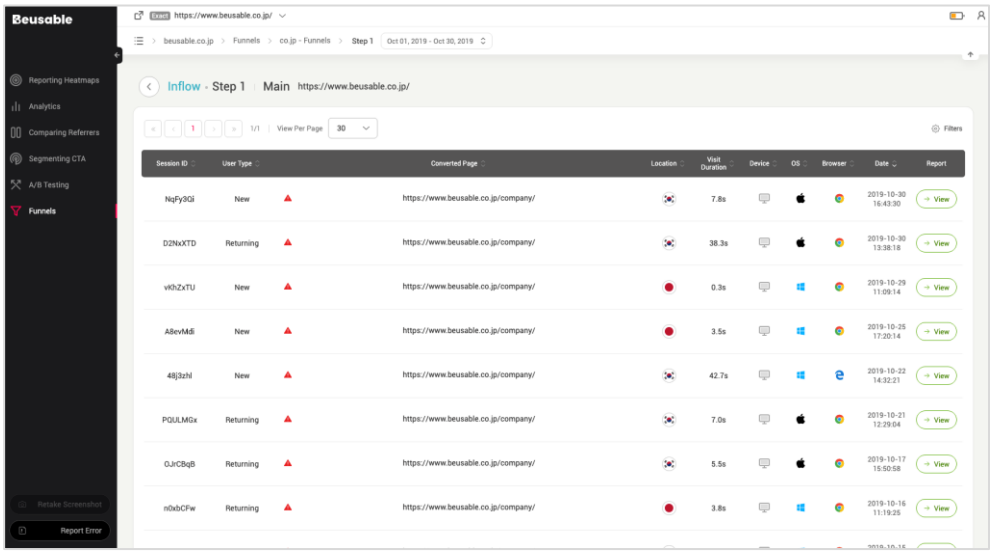
- Funnel report gives a detailed report of the created funnel.
- New/Returning User – Nagivation flow of new and returning users can be learned.
- Sessions - A session represents the record of a user activity after he or she visited the corresponding domain. If 30 minutes had passed since the detection of the last user activity event, that session will terminate automatically. And if the user resumes exploring after the terminated session, a new session will start based on the newly detected user activity.
- User Behavior Flow - When clicked, the user's inflow/conversion path can be learned of each step.
- Conversion Rate - Indicates the converted user's rate.
- Steps - Indicates the number of steps.
- Inflow - The UX of individual users who accessed the corresponding page can be analyzed with session report feature.
- Drop Off - The UX of individual users who exited from the corresponding page can be analyzed with session report feature.
- Converted - The ratio of the users who converted to the next step (page) in the corresponding funnel.

6. Inflow / Dropped Session Report List

10.5.1. Session Report List



- *Session Report* feature shows the history of user behavior in detail.
- Inflow / Dropped Session Report list can be filtered by a user property or a visit property using the filter option located in the upper right corner of the funnel's list page.
- Session ID - This is an arbitrary ID given to distinguish individual users.

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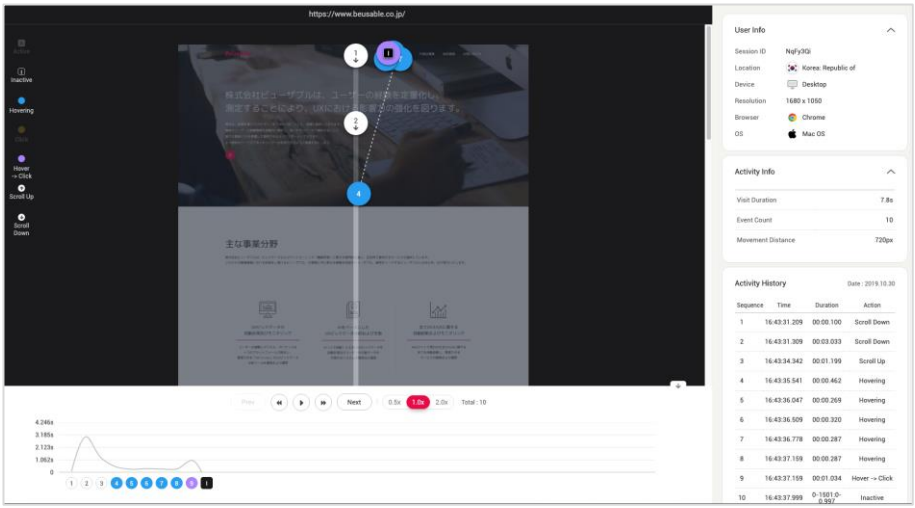
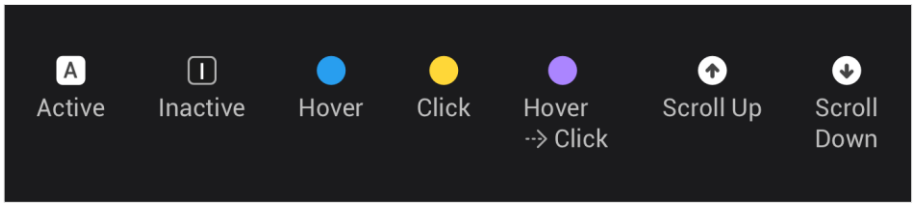
- Converted Page - This represents a URL of where a user converted.
- Visit Duration - This represents the amount of time the user spent on the page set in session report.
- Device / OS / Browser - Information on session's region (country), device, OS, and browser is displayed.
- Date - Indicates the date and time when the user visited the page set in the session report.
- View - Individual user's session report can be accessed by clicking the *View* button. However, if the event is not collected, the *View* report button is disabled and a guide tooltip is provided.

7. Details of Session Report



- The detailed activity of the user can be found in the form of *Gaze Plot* on the left side of the session report.

10.7.1. Event Type



- Active - Indicates the page activation by the selected user. The corresponding icon is colored in white and an abbreviation of Active 'A' is written in the center of the square.

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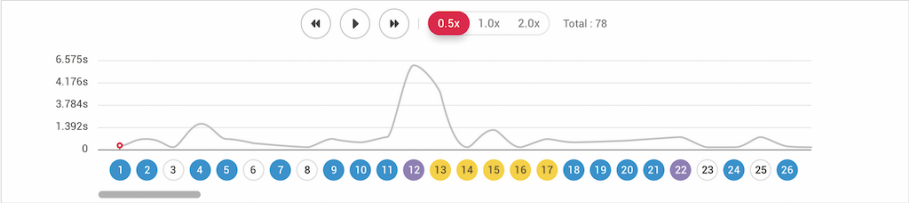
- Inactive - Indicates the page deactivation by the selected user. The corresponding icon is colored in black and an abbreviation of Inactive 'I' is written in the center of the square.
- Hover - Indicates the recorded hover behavior of the selected user. The corresponding icon is colored in blue and an abbreviation of Hover 'H' is written in the center of the circle.
- Click - Indicates the recorded click behavior of the selected user. The corresponding icon is colored in yellow and an abbreviation of Click 'C' is written in the center of the circle.
- Hover to Click - Indicates the mouse hovering behavior record of the user before his or her click behavior. The corresponding icon is circle colored in purple.
- Scroll Up - It represents the recorded scroll behavior upward of the selected user. The corresponding icon is colored in white and an upward arrow is written in the center of the circle.
- Scroll Down - It represents the recorded scroll behavior downward of the selected user. The corresponding icon is colored in white and a downward arrow is written in the center of the circle.

10.6.2. Play Timeline



- Play timeline is a graph visualizing behavior information. It is activated when the session report's activity stream is played.
- Each behavior is plotted on the horizontal x-axis at its corresponding occurrence time. Vertical y-axis reflects the duration time per each behavior.

Play Control

- Play Button – Clicking a button plays the session report.
- Prev - This button directs the session report of the page to the previous page where the corresponding user visited.
- Next - This button directs the session report of the page to the next page where the corresponding user visited.

Play Speed

- The following three types of play speed option is provided: 0.5x,1.0x, 2.0x.

10.7.3. User Info

- User Info - Corresponding user information.
- The user info area shows the information on the environment of the selected user.

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- Session ID - It is an ID that is assigned to a user.
- Location - It represents the regional information where the selected user accessed the corresponding page.
- Device - It shows the device type used by the selected user to access the corresponding page.
- Resolution - Indicates the resolution of the selected user's screen.
- Browser - Indicates the type of browser the selected user used to access the corresponding page.
- OS - Indicates the OS used by the selected user to access the corresponding page.

10.7.4. Activity Info

- This section shows the information regarding user activity.
- Visit Duration - Indicates the dwell time of the selected user at the corresponding site.
- Event Count - Indicates the number of detected activity-records of the selected user within the corresponding page.
- Movement Distance - Indicates the distance moved by the selected user's cursor at the pixel unit.

10.6.5. Activity History

- Indicates the history of every behavior that the selected user records.
- Date - Indicates the first day when the selected user recorded his or her behavior data.
- Sequence- Indicates the appropriate sequence of each behavior that the selected user records.
- Time - Indicates the initial occurring time of each behavior.
- Duration - Indicates the amount of time the action lasted.
- Activity – Indicates the type of the recorded behavior.

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11. Applying Beusable's Analysis

1. Find Out What People are Focusing On.

Scroll Heatmap & Attention Graph | Movement Heatmap | Click Heatmap

- You can discover whether the service provider's intention is properly reflected on the page by understanding which part of the page the users had focused on.
- (1) See where the users had stayed longer through the attention graph of the scroll heatmap.
- (2) Examine where the density of cursor activities is relatively high through mouse move heatmap.
- (3) Study whether users had clicked that area enough through click heatmap.
- Where the above three conditions are met, it can be interpreted as the area where the users focused on.
- If the scroll-reach rate is high as shown in the image (1), one can understand that a large number of users have affected the attention status. In general, it is ideal to expand the content area where the user's attention level is relatively high.
- With Beusable, see whether the users are focusing on the right contents and elements as you intended.

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2. Investigate which information could be removed to draw user's attention.

- Users can approach the target area faster when unnecessary and disrupting elements are removed.
- (1) Check whether the locations of cursor movement activities are scattered all over the page rather than being clustered around the locations of crucial content, buttons, and links. If this is the case, it is recommended to execute some improvement as soon as possible.
- Accentuate the content in which you need to draw users' attention to and decisively move or remove the elements which disrupt users' attention.

- If users' clicks, mouse moves, and duration time are congested around a particular element that is unrelated to your intention, that specific element should be improved prior to others.
- (1) Examine whether there is an 'Irrelevant area to a target but is focused by users located near the critical areas such as the main phrase, CTA, etc. across a click heatmap, a mouse move heatmap, and a scroll heatmap.

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3. Analyze the most optimal location to place a CTA or banner advertisement.

Scroll Heatmap & Attention Graph　　Movement Heatmap

- CTAs and banners are the core source elements to corporation's revenue. Where should these critical CTAs and banners be placed? Simply find out with Beusable's heatmap.
- (1) For instant visibility, critical CTAs and banners should be placed above the average fold, which indicates the average of all user's default browser height.
- (2) The point where the scroll heatmap's scroll-reach rate is high and where the attention graph's duration time is high is more adequate because it indicates many users are viewing that location.
- (3) Then, find out where the mouse movement activities are concentrated. Because that place demonstrates where user's attention are drawn.
- Therefore, it is efficient to place a CTA button or a banner around that location. Make sure to evaluate with Beusable heatmap analysis to see the result has changed and improved.

4. Find out whether users just skimmed the page.

Click Heatmap　　Movement Heatmap　　Scroll Heatmap

- It is ideal that the created contents are being explored enough with user's attention.
- Utilizing Beusable heatmap can verify whether the page is that kind of page or not.
- (1) Check if the page has a low level of mouse click activity.
- (2) Check if the mouse move activity is also low.

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- (3) If the scroll-reach rate is high in the lower area of the page, the above detected facts state that the users are skimming through the page quickly rather than exploring the content thoroughly.

Click Heatmap　　Movement Heatmap　　Scroll Heatmap

- (1) Check if the page has a low level of mouse click activity.
- (2) Check if the mouse move activity is low.
- (3) If the scroll-reach rate is also low, it indicates that the users had stopped exploring the page.
- Place attention-grabbing content to prevent users from exiting the page after skimming.

5. See which information users are ignoring within the page.

Scroll Heatmap & Attention Graph　　Movement Heatmap

- (1) Check whether many users have focused on that content through scroll heatmap and mouse move heatmap.
- (2) If the duration time from the attention graph seems low, the area can be interpreted as an ignored area despite high user-reach rate.

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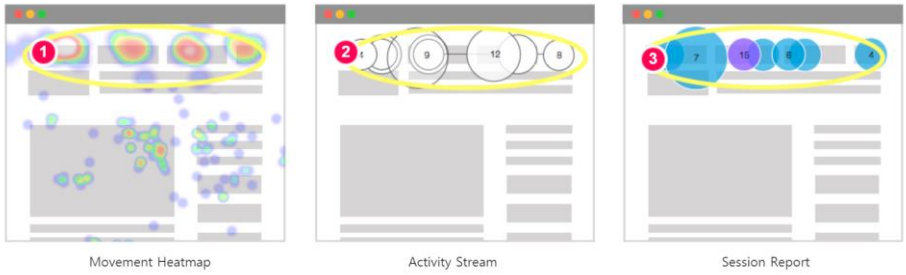
- (1) Check whether the attention graph and scroll-reach rate are high.
- (2) If the area has low mouse move activities in mouse move heatmap, the area can also be interpreted as an ignored area despite high user-reach rate.
- Check if the area is inclusive of the critical content regarding the intention of the page. If so, it is better to improve the page right away. Relocate the ignored information to where the user's attention level is high, or redesign the UI so your page becomes more appealing to users.

6. Find out if there is an element where users are hesitating or hovering the cursor around.



- With Beusable's mouse move heatmap, activity stream and session report, you can analyze whether users had hesitated or pondered while using the navigation.
- (1) Mouse move heatmap shows how much attention and consumption have been spent by users who look for navigation. Concentrated mouse cursor activity is not always positive sign. It could mean that users are experiencing difficulties in finding what they need within the page.
- (2) Understand the average behaviors of the user through the activity stream. Don't users stay for a long time around navigation area in the activity stream? If so, this could be a negative sign meaning users are not converted through the menu. Check whether the users are hesitating or pondering in the page.
- (3) Study the left user's behavior through the session report. Investigate which type of individual users has hesitated or pondered.

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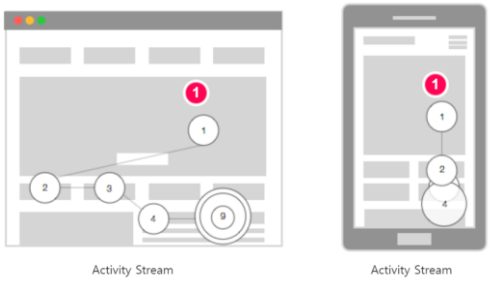
- There could be a million reasons for hesitations or pondering in the page. However, it is most likely that users could not find what they are in need of when they show such behaviors. Therefore, it is advised to check whether the navigation title is clear and to consider improving the information architecture.

7. Check if the critical information is being correctly exposed on different device types.



- A wide range of device sizes such as tablet and smartphone were generalized besides desktop. A noticeable CTA on a desktop can be invisible on a particular smartphone. See how user behavior varies according to the information structure depending on the device type.
- (1) With activity stream, the change in user's behavioral sequence can be viewed per different device type.
- (2) Apply the insights and results gained from Beusable to improve the critical contents that are visible from every device type.
- (3) Or, introduce a responsive design to expose various information regardless of different screen size.

8. Diagnose whether there is an element degrading the scrolling.

- Beusable can diagnose if there is an element disrupting users to scroll. The corresponding result can be broadly divided into two cases of whether there is no attention-grabbing element or not.

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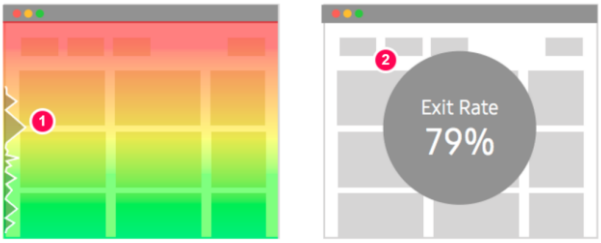
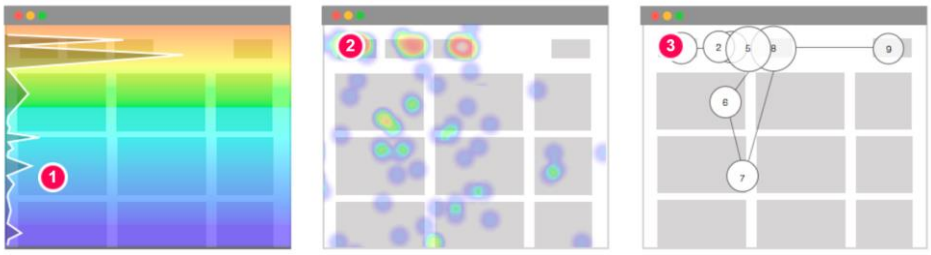


Scroll Heatmap & Attention Graph　　Analytics - Exite Rate

- (1) See if the attention graphs' dwell time is low through *scroll heatmap*.
- (2) See if the exit rate is low from *Analytics*.
- If both conditions are met, the users may have exited the page because interesting element is missing.



Scroll Heatmap & Attention Graph　　Click Heatmap　　Activity Stream

- Also, find out cases where the user had scrolled up because there is no interesting element.
- (1) Check if the scroll-reach rate and attention graphs are high.
- (2) Then through *click heatmap*, check if the click activities are focused on the upper area of the page.
- (3) Look into the user's exploring sequence with the activity stream. If the exploring sequence nodes are focused on the upper area of the page, plus the (1) and (2) conditions are met, it is most likely that users had scrolled up because there was no interesting content.

Click Heatmap　　Scroll Heatmap

- Lastly, let's study where the users stop scrolling as they discover the desired content at a certain point. This indicates the user had stopped scrolling to see or to convert through the interesting content.
- (1) Check if that certain area has relatively high click rate.
- (2) Then check if the scroll-reach rate is high in that certain location as well. If the scroll-reach rate significantly drops since that particular location, the analysis can be concluded in more valuable interpretation.

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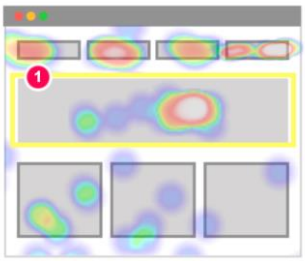
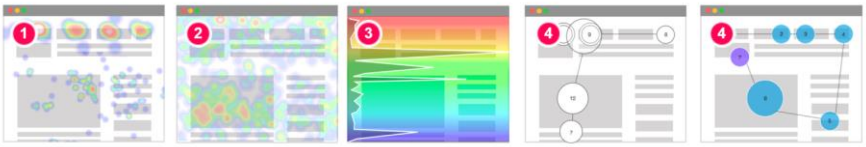
9. See whether users are clicking non-clickable elements.



Click Heatmap

- Sometimes users click a non-clickable page element or tab.
- (1) Identify the contents with high user activity level through Beusable's *click heatmap*. Try to look for elements that are non-clickable but have been clicked multiple times.
- These are the obstacles that might be disrupting users to reach their target. If it is a text, the click may have occurred because the users dragged the text lines as they read through. If not, improvement is needed.
- As one way of improvement, UI can be changed by adding links that connect the users to a suitable page. As a specific method, modal pop-ups within a page can be created to prevent the users from feeling confused.

10. Find out which content are really viewed by users.



Click Heatmap | Movement Heatmap | Scroll Heatmap & Attention Graph | Activity Steam | Session Report

- Sometimes, user behavior deviates from the intention of the page. With Beusable's heatmap, activity stream, and session report, the sequence of users' exploration behavior and the behavior tendency can be understood.
- (1) Check which page element is mostly being clicked for users' conversion through *click heatmap*.
- (2) Find out areas where users are interested in through *mouse move heatmap*.
- (3) With *scroll heatmap* and *attention graph*, you can discover if users are evenly consuming the contents and which contents are most drawing users' attention.
- (4) With *activity stream* and *session report*, user behavior sequence can be explained.
- Are those contents that the users are actually consuming at the moment coincides to your expectation? If not, build a hypothesis on why the current user behavior is deviated and then improve the site.

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