

**netbiscuits<sup>®</sup>**

# **Funnel Analysis**

Analytics V2

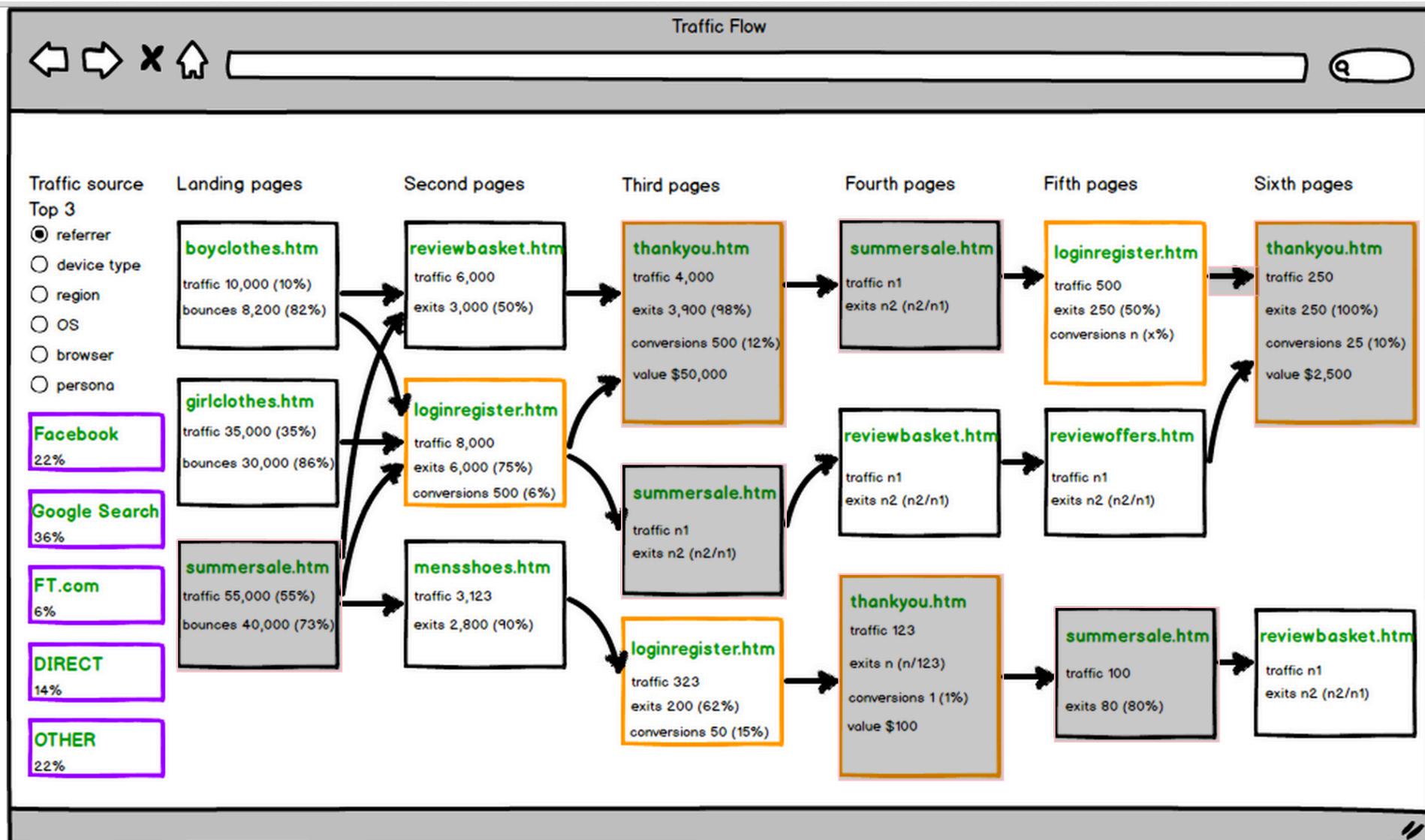
Matt James  
2014-10-15

# Build UI prototype for Funnel Analysis

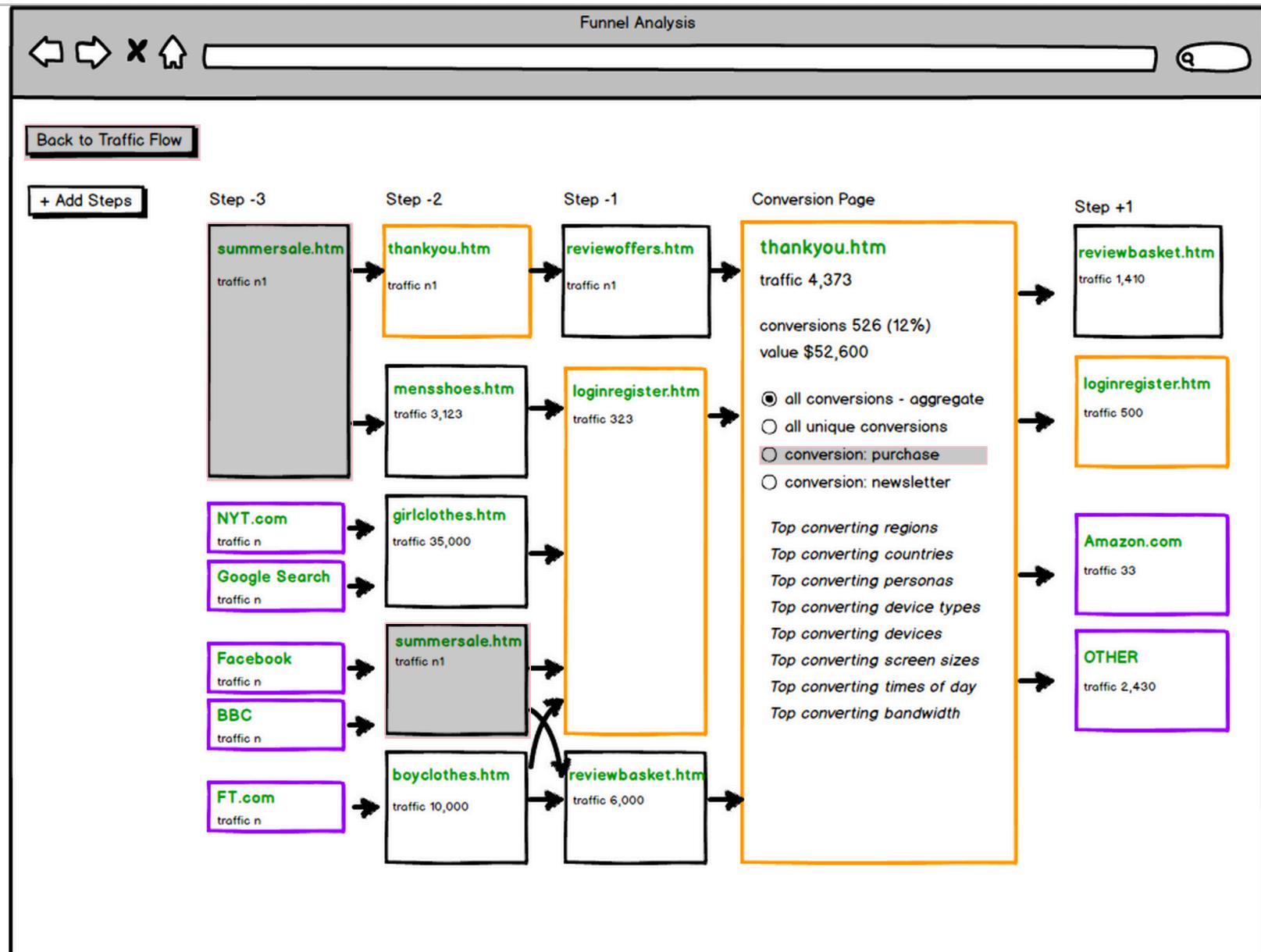
## Breakdown of what's needed

- Multi page microsite detailing traffic & conversion funnels.
- Technology to create Sankey diagrams.
- Add click events to Sankey.
- Add tool tip to Sankey.
- Implement custom style to NB brand.
- Mobile Solution.

# Sankey example diagram

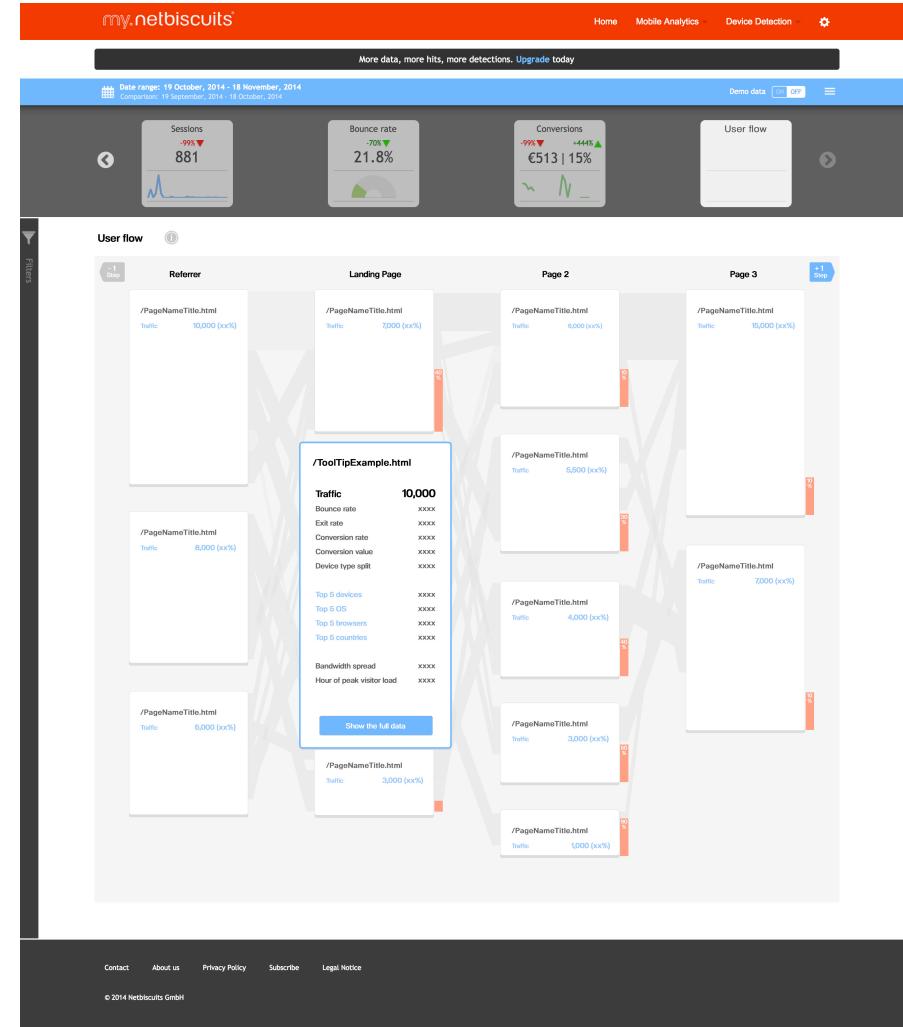
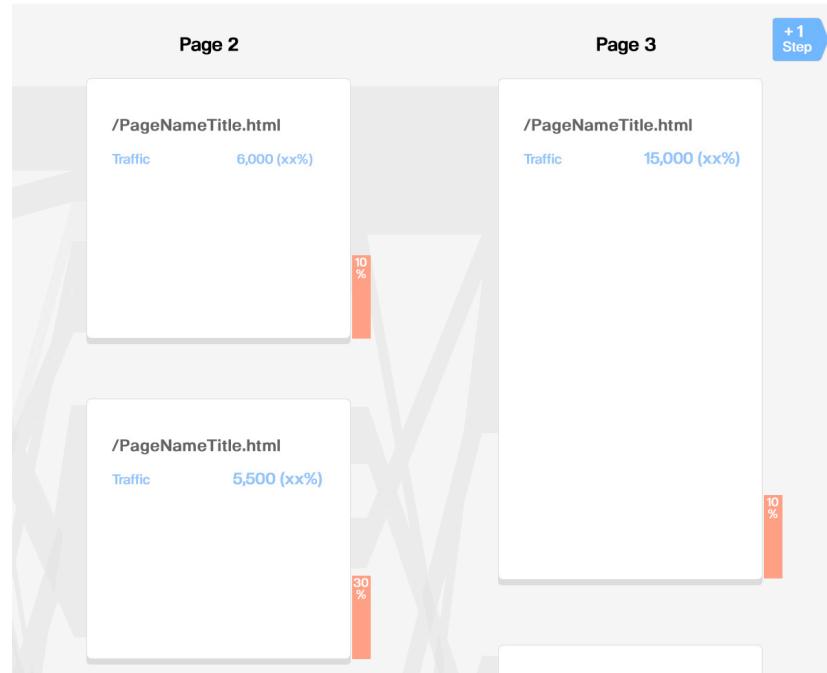


# Sankey drilldown



# Design & format

## Proposed style for Netbiscuits Spankey diagram



## Design complications

- Angular links between nodes
- Colour opacity's
- Click Events & layers

# Approach 1 - Google Charts

<https://developers.google.com/chart/interactive/docs/gallery/sankey>

## Pros

- Easy set up.
- Large knowledge base.
- Good API reference.
- Charts are rendered using HTML5/SVG technology.
- Automatically sorted by value (int)
- Cross-browser compatibility (including VML for older IE versions).
- Mobile ready.

## Cons

- Licensing issues – needs to be explored.
  - Found bug in colour rendering.
  - Limited custom style for formatting.
  - No CSS Support.
  - No dedicated lib available.
- Limited functionality – Code needs
- Click event.
  - Tooltip.
  - SVG Styling.

# Google Chart Example

Google Sankey Chart



# Approach 2 – Sankey.js

<http://tamc.github.io/Sankey/>

## Pros

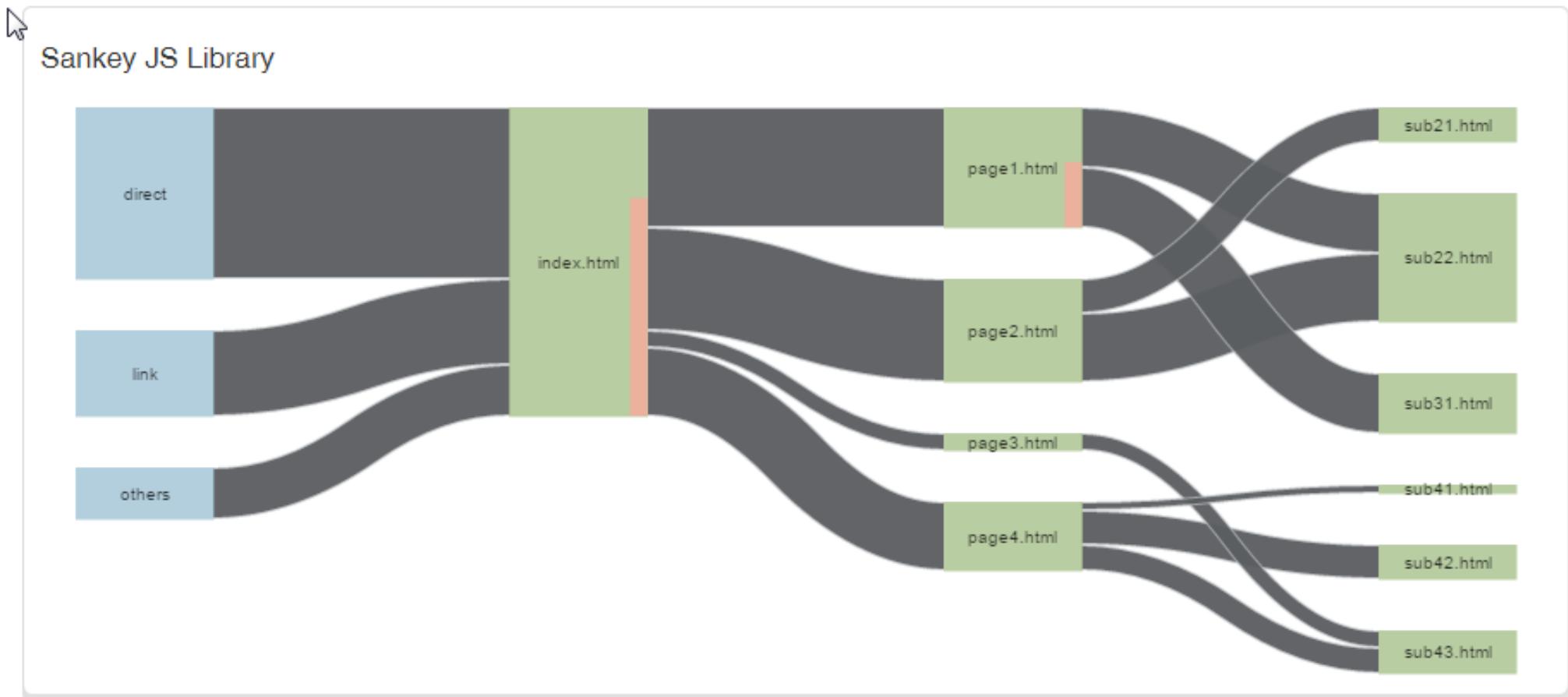
- MIT licence.
- Charts are rendered using HTML/SVG technology.
- Sankey diagram generator uses the Raphael library and therefore the diagrams work in Internet Explorer (IE8 and above).

## Cons

- Limited knowledgebase.
- Licensing issues – needs to be explored.
- Written in CoffeeScript .
- Limited custom style for formatting.
- No mobile support
- No CSS Support.
- No support for IE8 and under.
- Limited functionality - Code needs Click event.
- Tooltip.
- SVG Styling.

\* Sankey JS is a plugin that uses the same engine as D3.js

# Sankey.js Example



# Approach 3 – d3 .js

<http://d3js.org/>

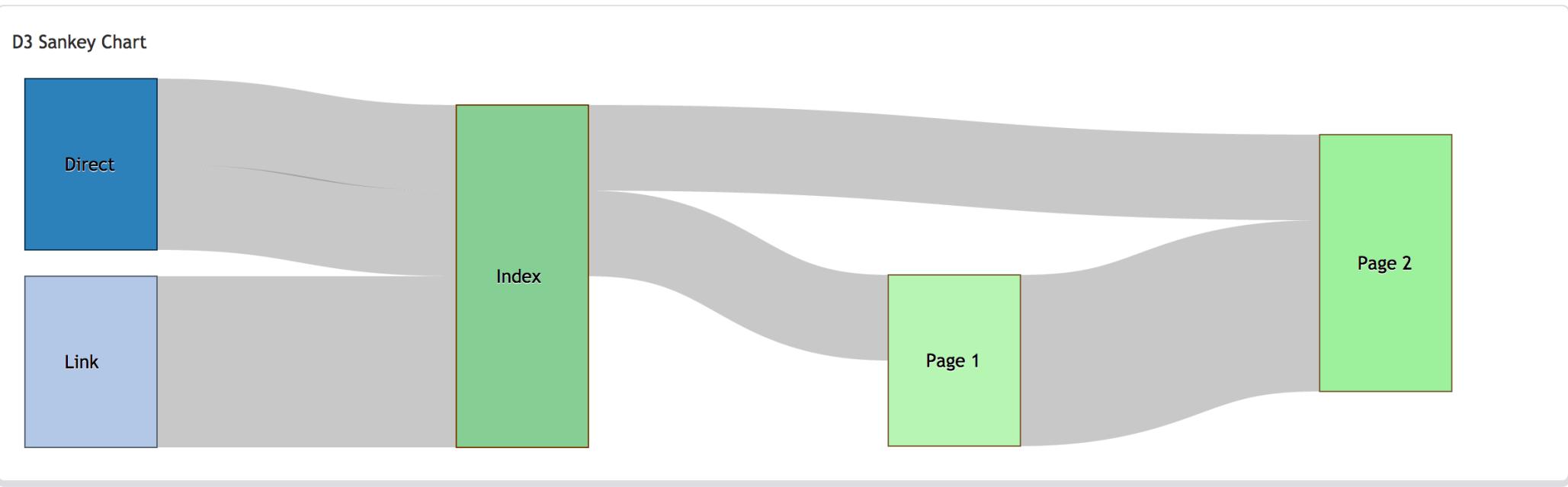
## Pros

- MIT licence.
- Good API reference.
- Charts are rendered using HTML/SVG/CSS technology.
- Custom style formatting.
- Some CSS Support.

## Cons

- No mobile support.
- No support for IE8 and under.
- Limited functionality - Code needs Click event.
- Tooltip.
- SVG Styling.

# D3.js Example



# Approach 4 – Highcharts

<http://www.highcharts.com/demo/renderer>

## Pros

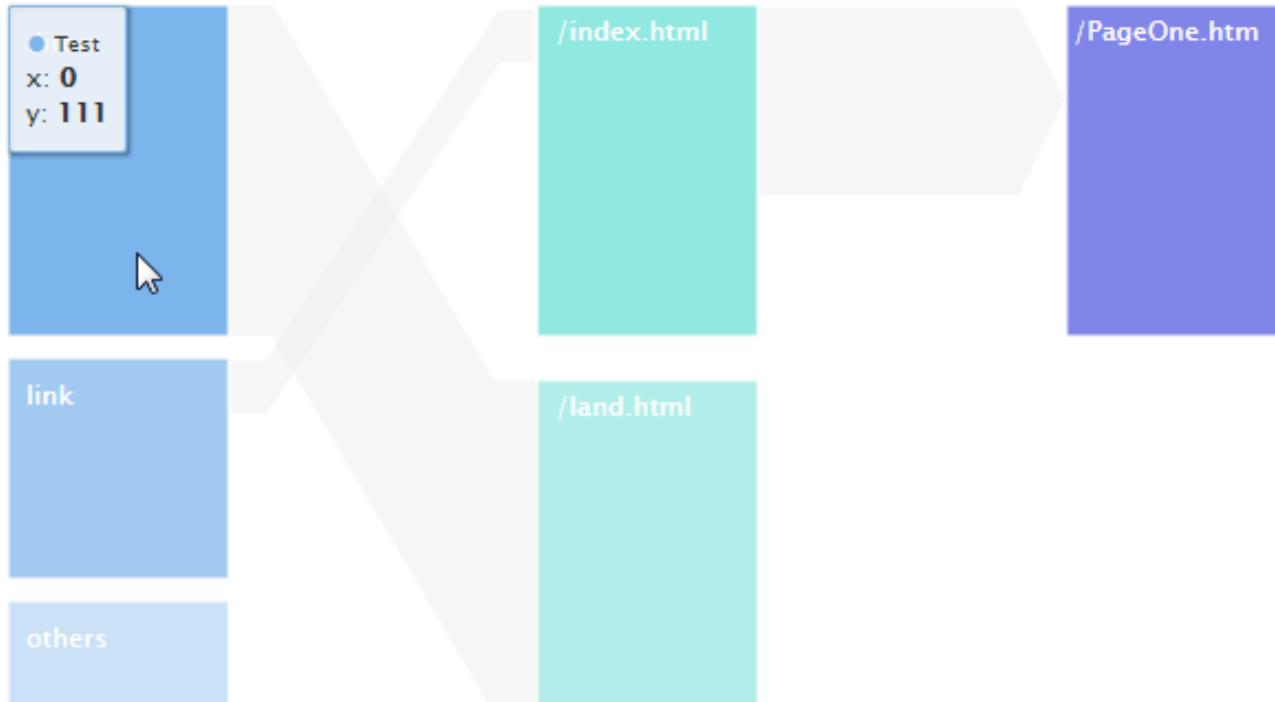
- No licence issue.
- Highcharts API already in use.
- No possible collisions with other APIs who are using the same rendering engine.
- On click events.
- SVG/CSS styles.
- **It is possible to adopt the routing algorithms from Sankey.js.**

## Cons

- No Sankey chart type available.
- Needs to implement from the scratch.
- Tooltips needs changes on the general tooltip behavior.
- No mobile support out of the box.

# Highcharts Example

Highcharts General Drawing



# Summary

- We should use the Highcharts General Drawing API to implement the specified Sankey diagram from the scratch because no API will 100% match the functional and UI requirements.
- Some parts (routing algorithms) could be reused from other APIs.
- With Highcharts there is no conflict with other APIs expected.
- Full control over styles.
- Mobile would require same layout as larger screen design but to use zoom and scroll to navigate. This page would require a change in viewport from the rest of the UI.