# Dynamic Filter Navigation & Programmatic Population of Content

**Priority**: High

## Overview

The filter navigation is a critical element for guiding users through product categories and subcategories on an eCommerce platform. Providing enhanced control over filter navigation enables better SEO management and helps shape the user experience. The CMS enhancement aims to give the web and SEO teams direct control over crawler accessibility, refinement URLs, and dynamic metadata, which ultimately improves search visibility and provides better contextual information.

## Implementation Requirements

### 1. CMS Controlled Refinement Hyperlinks

* **CMS Enhancement**: Create a new UI feature within the content management platform that adds a user-selectable toggle switch or checkbox for each subcategory and refinement option. This will allow the SEO/web team to manage the crawlability of various facets. The CMS enhancement should be integrated with existing workflows, ensuring seamless interaction with other features of the content management system. Technologies such as JavaScript for UI controls, and integration with headless CMS APIs should be leveraged to ensure efficient implementation. This will help clarify the technical aspects for developers, ensuring a consistent approach.
  + **User Selection Options**: The team will use the UI toggle to designate each subcategory or refinement as either:
    - **Crawlable**: Indicates that search engine crawlers should index this category or refinement and follow the associated links.
    - **Non-Crawlable**: Prevents search engine crawlers from indexing or following links associated with this category or refinement.
* **API Response Hook**: Develop a custom hook from the content CMS that returns a boolean value that once processed controls if a refinement URL path is rendered into the filter navigation or not. This will enable the frontend to dynamically adjust how these elements are rendered, such as generating or omitting relevant hyperlinks.

### 2. Conditional Navigational Paths

* **Conditional Rendering**: Subcategory and refinement option hyperlinks within the filter navigation should be conditionally rendered based on the API response. This allows for CMS control over which links are accessible to search engine bots.
  + **Example Implementation**:
    - **Crawlable Option**: If the API response indicates the route is crawlable, render the hyperlink beneath the corresponding label.

<button type="button" aria-checked="false" aria-label="Add filter: Blue (109)">

<a href="/filter/blue">

Blue (109)

</a>

</button>

* + - **Non-Crawlable Option**: If the API response indicates non-crawlable status, do not render the hyperlink.

<button type="button" aria-checked="false" aria-label="Add filter: Blue (109)">

Blue (109)

</button>

* + **Server-Side Rendering**: This process should initially be server-side rendered so that crawlable hyperlinks are included in the initial HTTP response, ensuring that search engines receive the appropriate links during their first crawl.

### 3. Refinement URLs

* **Unique URLs for Refinements**: Each unique combination of category, subcategory, and refinement selection should result in a distinct, SEO-friendly URL following a predetermined priority-based structure.
  + **URL Structure**:
    - **Base URL**: /category/subcategory/
    - **Single Refinement**: /category/subcategory/refinement-value/
    - **Multiple Refinements (Same Group)**: /category/subcategory/refinement-value1+refinement-value2/
    - **Multiple Refinement Groups**: /category/subcategory/refinementGroup1-value1/refinementGroup2-value2/
  + **Key Principles**:
    - **Priority-Based Ordering**: Refinement groups and values should be prioritized to ensure consistent URL generation, regardless of user selection order.
    - **Unique URLs**: Each unique combination of refinements should result in a distinct URL to prevent duplicate content issues.
    - **Hyphens as Separators**: Use hyphens (-) to clearly delineate refinement groups and their values.
    - **Pluses for Multiple Values**: Use pluses (+) to combine multiple values within the same refinement group.
  + **Example**:
    - If "Colour" is a higher priority refinement group than "Size," and "Red" is a higher priority value than "Blue," the URL for filtering by both Red and Blue would be:

/category/sub-category/color=red+blue/size=20ml

### 4. Dynamic Page Titles

* **Page Titles Reflecting Active Filters**: Dynamically generate page titles that reflect the active filters selected in the faceted navigation, providing users with a clear context of the displayed product listing.
  + **Ordering Examples**:
    - **L3 PLP + Brand**: "Shop all [BRAND] [L3] | [BOOTS] [L1]"
      * Example: "Shop all Anadin Pain relief | Boots Pharmacy"
    - **L3 PLP + Condition**: "Browse all [L3] for [CONDITION] | [BOOTS] [L1]"
      * Example: "Browse all Pain relief for Back pain | Boots Pharmacy"
    - **L3 PLP + Condition + Brand**: "Browse all [BRAND] [L3] for [CONDITION] | [BOOTS] [L1]"
      * Example: "Browse all Anadin Pain relief for Back pain | Boots Pharmacy"
  + **Maximum Refinements**: If three or more refinements are selected across all groups, or two or more refinements are selected within the same group, revert to the default category page title. This rule is intended to prevent overly long and complex titles that could negatively impact user experience and SEO. For example, if a user selects the "Brand", "Size", and "Color" filters across different groups, or selects multiple values within the "Size" filter, the page title should default back to the base category title, such as "Shop all Pain Relief Products | Boots Pharmacy".

### 5. Dynamic Meta Descriptions

* **Dynamic Meta Description Content**: Dynamically generate meta descriptions that reflect the active filters selected in the faceted navigation.
  + **Ordering Examples**:
    - **L3 PLP + Brand**: "Shop our complete range of [BRAND] [L3] products. [ADVANTAGE CARD]. [DELIVERY]"
      * Example: "Shop our complete range of Anadin Pain relief products. Collect Advantage Card points for every pound you spend. Free delivery on orders over £15+"
    - **L3 PLP + Condition**: "Check out our extensive range of [L3] products for [CONDITION]. [ADVANTAGE CARD]. [DELIVERY]"
      * Example: "Check out our extensive range of Pain relief products for Back pain. Collect Advantage Card points for every pound you spend. Free delivery on orders over £15+"
    - **L3 PLP + Condition + Brand**: "Check out our extensive range of [BRAND] [L3] products for [CONDITION]. [ADVANTAGE CARD]. [DELIVERY]"
      * Example: "Check out our extensive range of Anadin Pain relief products for Back pain. Collect Advantage Card points for every pound you spend. Free delivery on orders over £15+"
  + **Maximum Refinements**: If three or more refinements are selected across all groups, or two or more refinements are selected within the same group, revert to the default category meta description content. This ensures the meta description remains concise and relevant, without becoming overly detailed. For instance, if a user selects multiple refinements such as "Brand", "Condition", and "Size", the meta description should return to a more generic form like "Explore our range of Pain Relief Products. Collect Advantage Card points on every purchase. Free delivery on orders over £15+."

### 6. Dynamic Heading Tags

* **Dynamic H1 Headings**: Dynamically generate H1 page headings that reflect the active filters selected in the faceted navigation. If the number of selected refinements exceeds the specified limits (three or more refinements across all groups, or two or more refinements within the same group), the default category H1 heading should be used to ensure clarity and avoid overly complex headings.
  + **Ordering Examples**:
    - **L3 PLP + Brand**: "[BRAND] [L3]"
      * Example: "Anadin Pain relief"
    - **L3 PLP + Condition**: "[L3] for [CONDITION]"
      * Example: "Pain relief for Back pain"
    - **L3 PLP + Condition + Brand**: "[BRAND] [L3] for [CONDITION]"
      * Example: "Anadin Pain relief for Back pain"
  + **Maximum Refinements**: If three or more refinements are selected across all groups, or two or more refinements are selected within the same group, revert to the default category H1 heading. This helps maintain clarity and prevents the heading from becoming cluttered or difficult to understand. For example, if multiple refinements such as "Brand", "Condition", and "Size" are selected, the H1 heading should default to something simple like "Pain Relief Products".

## Conclusion

The implementation of CMS-controlled filter navigation will empower SEO and web teams to have better control over how filter navigation links are managed for both crawlers and users. By dynamically generating URLs, page titles, meta descriptions, and headings based on selected refinements, this solution will enhance both the user experience and SEO performance for category and product listing pages.