



## Search Facets

Role: UX UI Design, Production coordinator

Tools: UXPin, Jira, Confluence



Texas Instruments (TI) Incorporated is an American technology company headquartered in Dallas, Texas, that designs and manufactures semiconductors and various integrated circuits, which it sells to electronics designers and manufacturers globally.

The main goal is to become the leader in the semiconductor manufacturing industry by innovating and offering the best user experience throughout the customer's journey. Improving user flows and optimizing the interface are among some of the actions being taken to help our customers with their challenges.

# Problem & Goal

## **Pain points :**

**Visual clutter** makes it difficult to comprehend the important information.

**Primitive filter** (tabs) works limited. There isn't enough emphasis on them to make sorting options stand out.

**Lack of visual hierarchy** results in overlooking of important data such as products, applicaitons, tech documents.

## **Goal :**

To let the users **scan through the list** of parts and related categories (Products, Application, etc)

To let the users make a decision while giving them **options to filter the results** according to their preference.

Being a content heavy page, the search results need to be **structurally organised** with the right amount of emphasis for different pieces of information.

# User Research



## Embedded Hardware Engineer

- Uptime and productivity
- Standardizing production line
- Ease of engineering and programming

“ I am confused about tons of search results and pages.”

“ I want to find a technical document (data sheet, user guide) of the product.”

“ I want to know how XXX part works on XXX device.”

“ I can't find where the threads for my part XXX. ”

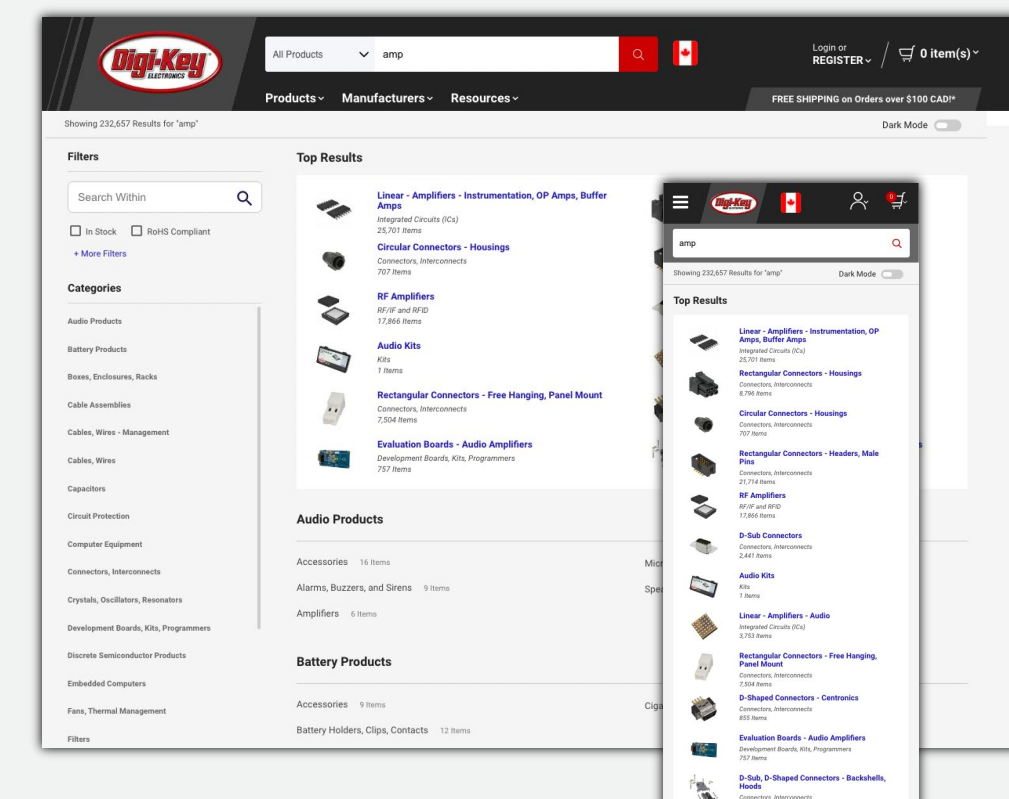
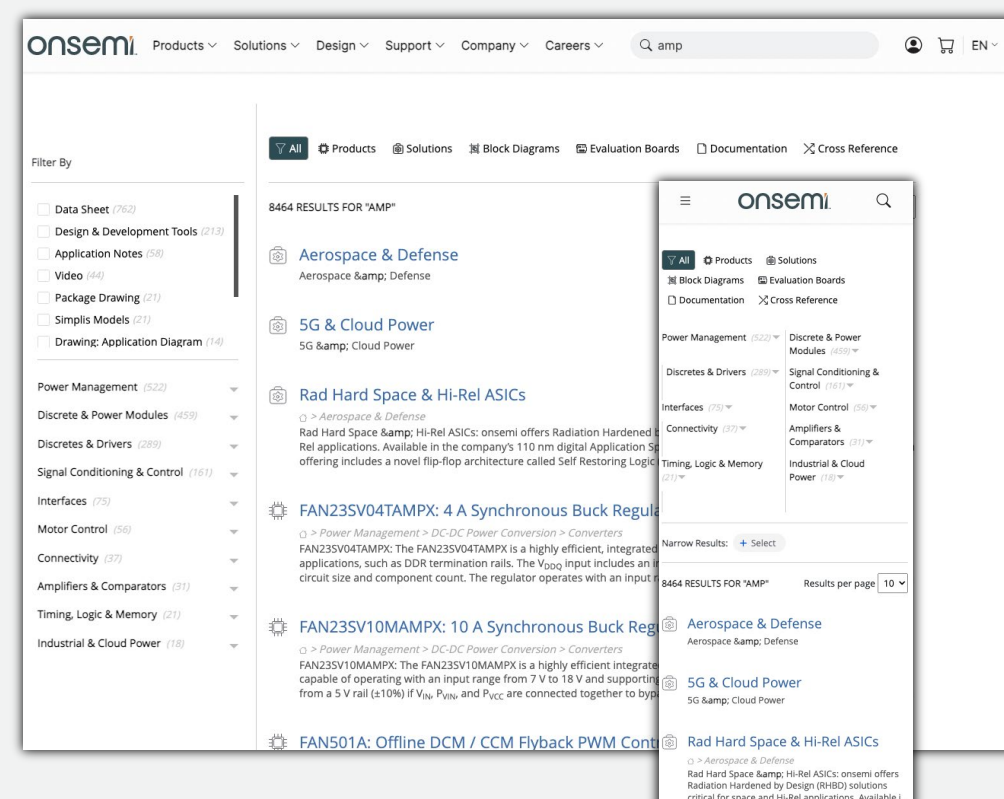
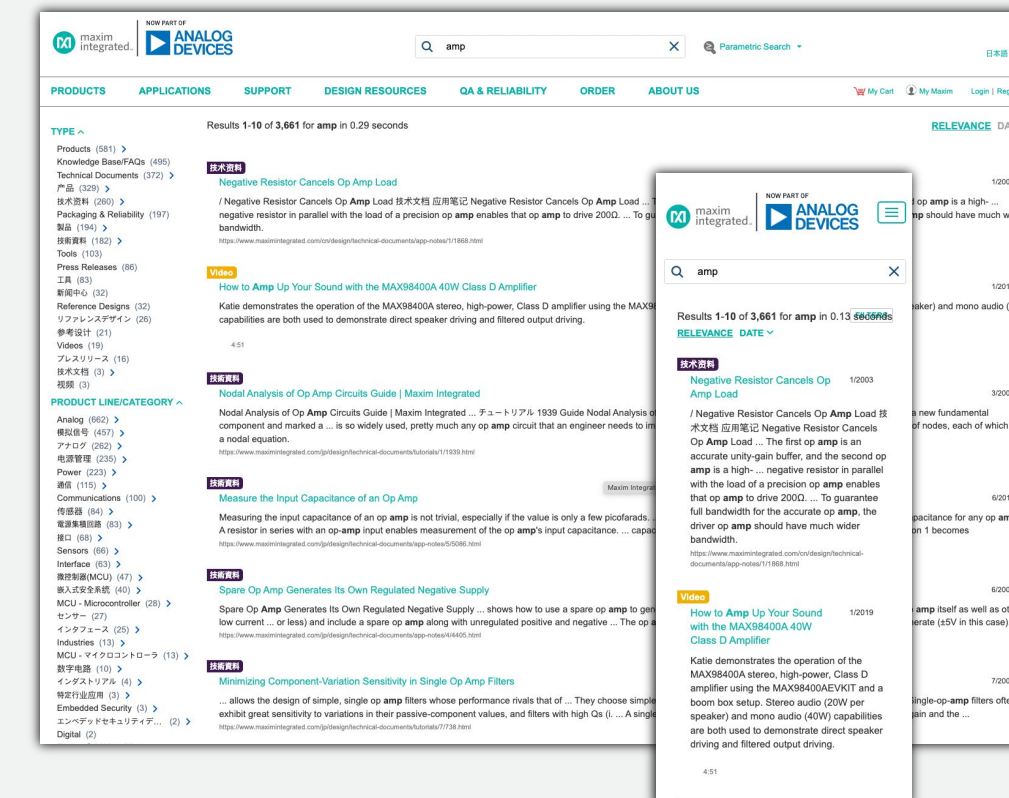
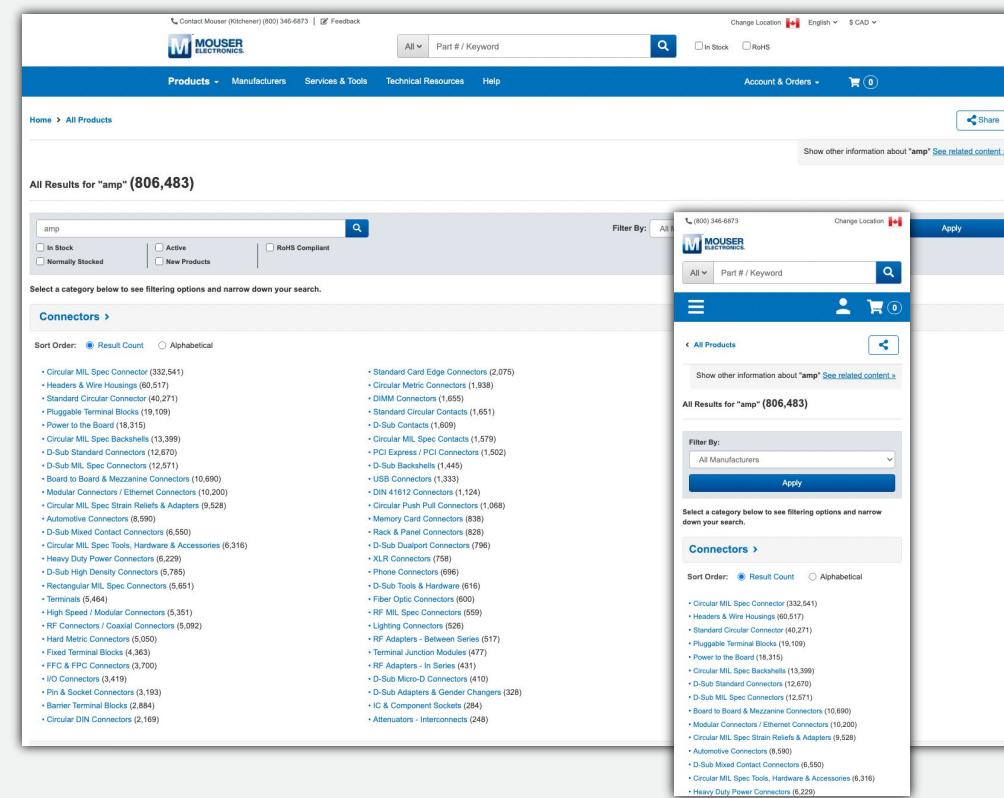
“ I want more information about the product if its compatible on my device.”

“ I want to play training video for my proeject.’

There was an over-abundance of content on the Search Results Page, which distracted them while finding relevant information.

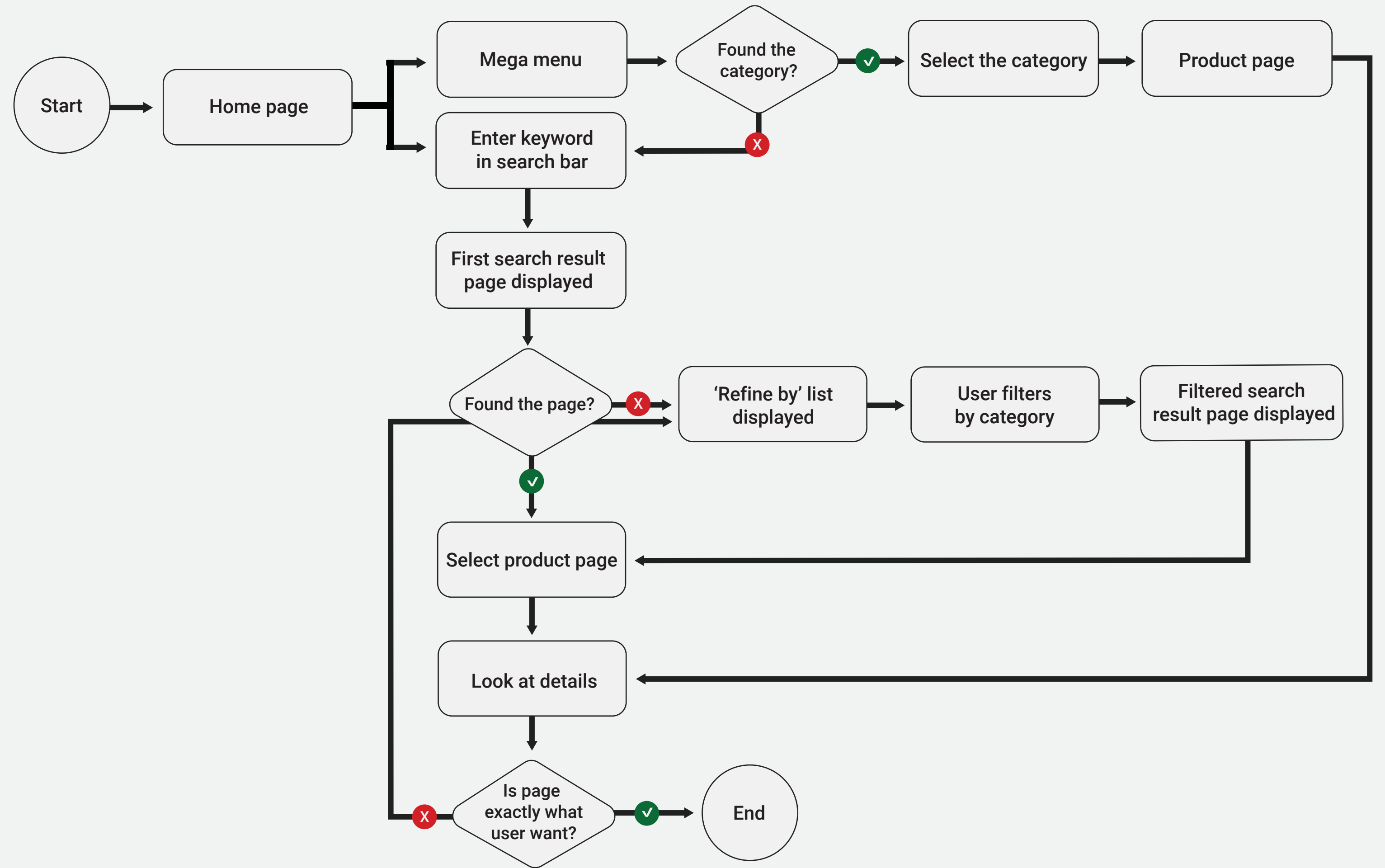
To gain some perspective, TI's customer service team has collected feedbacks through survey about the website experience customers. The survey includes a feedback category, so users can choose the options (payment, speed, search, etc) CS team consolidates the lists and creates a ticket for the UXD team.

# Competitive Analysis








Before starting the project, I did competitive analysis to identify existing design patterns from other semiconductor companies. I studied user flow of all kinds of search options and filter, sort to understand the decision making factors of a user, in a better way, and measured the score based on TI's checklist.

# User Flow



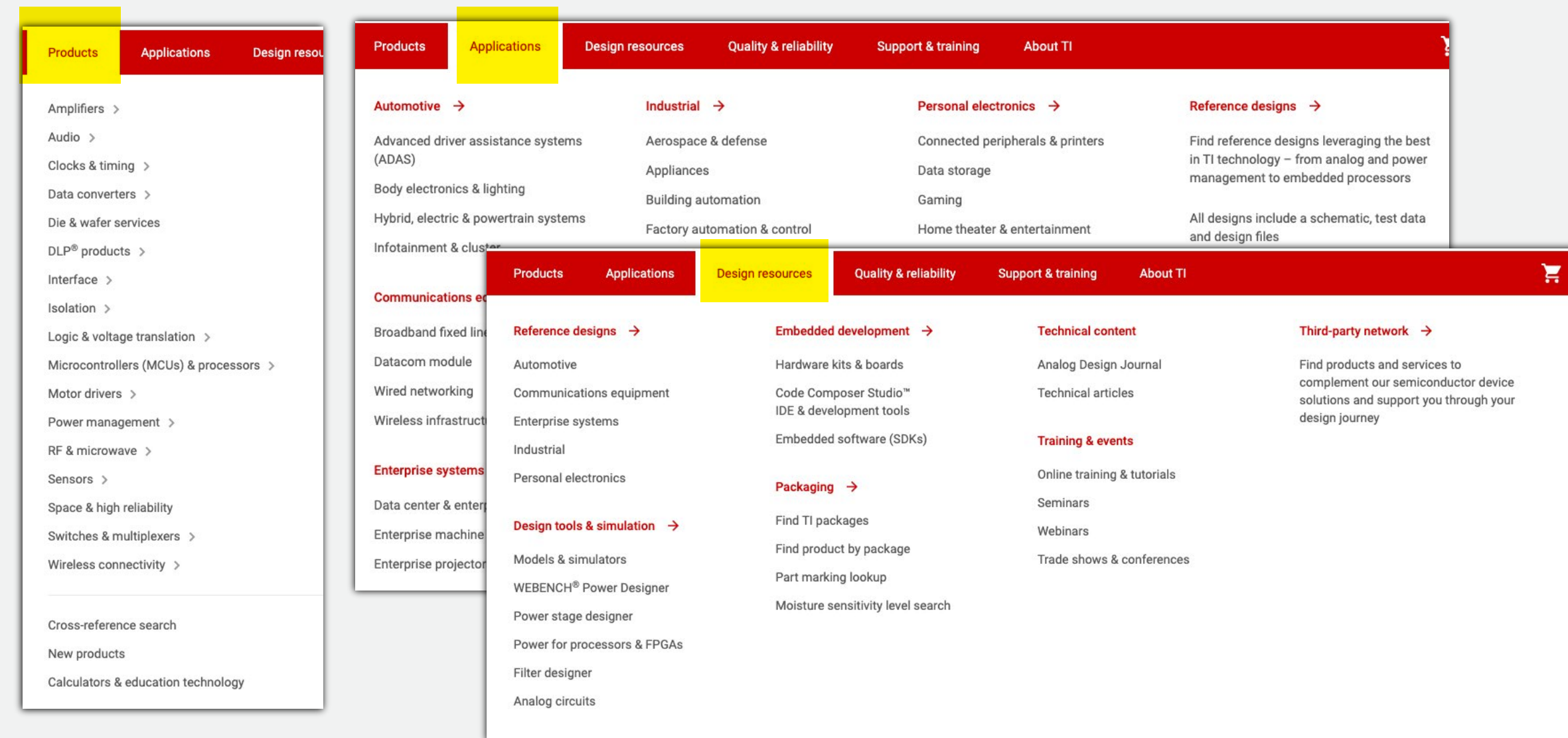
# Jeorney map / Requirement

STAGES	Home Page	Search bar	Checks on the first result	Use tab filters	Validation
EXPERIENCE	 Happy and Excited	 Neutral	 Users can feel overwhelmed or are misled by the amount of search result in the first field	 Disappointed, the filter doesnt have enough function	 Neutral
ACTIVITIES	Wants to find a product for business purpose	Searches the product via search bar	Finds the page with relevant decription on the search result	Sorting the list by tabs or filter	Opens a page to check product details
EXPECTATIONS	Easy access of TI.com, products and detail specs	easy to use search engine that can make the website search process easily	Easy to read and find content in the multiple pages	Easy to understand category and filter function	The page with an intuitive interface and layout
OPPORTUNITY	Homepage with an intuitive interface and layout	Easy access of the search page	Tabs are somewhat useful partly when the category is relavant that user want	Filter or facet may narrow down the list  Common terminology of name of search filter  Same pattern and UI based on TI's brand guide line	Easy access of the search page

# Contents

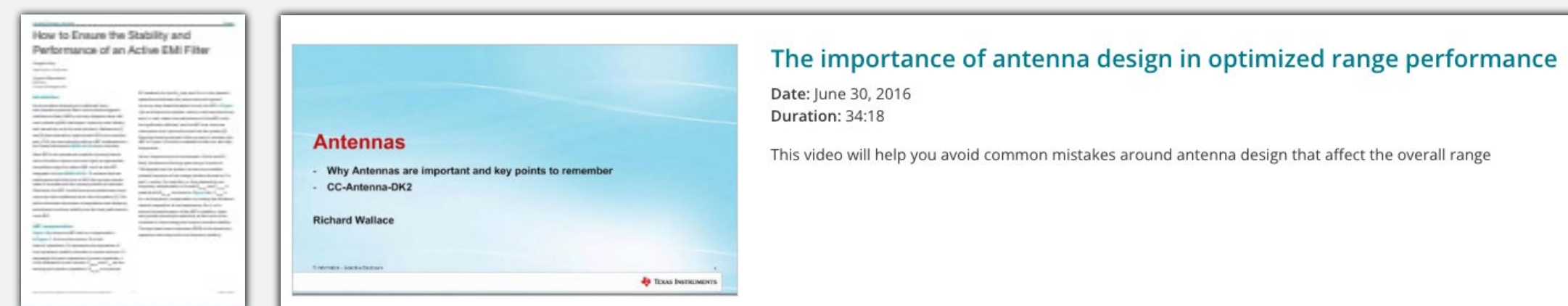
## Type A

Main categories contains lots of sub categories (Product, Applications, Design resources)



## Type B

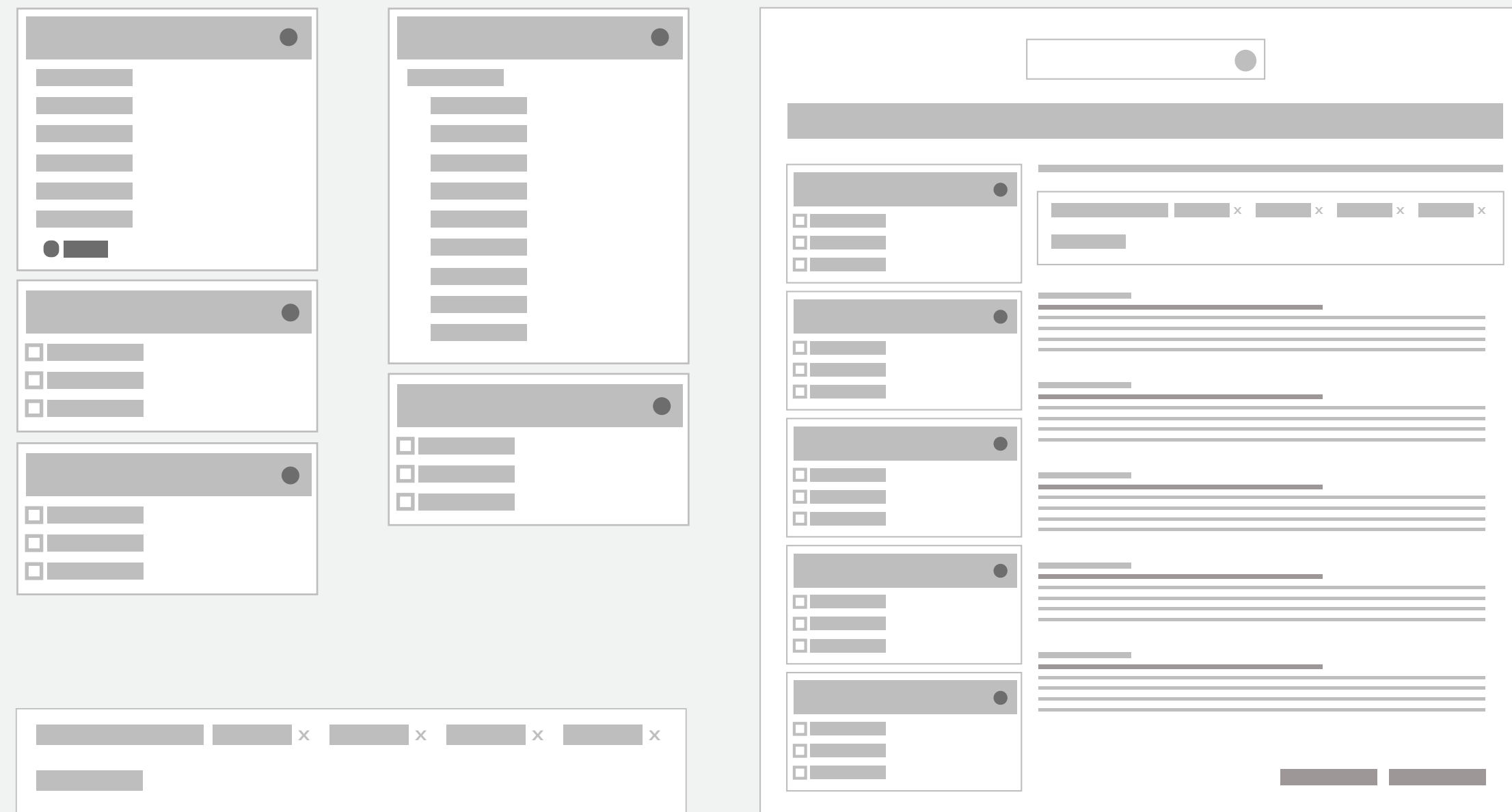
Sub categories contains contents related (Tech docs, support, Videos)





# Wire frames Iterations & Technical Feasibility

Low / Hi Fi wireframes



# Before & After

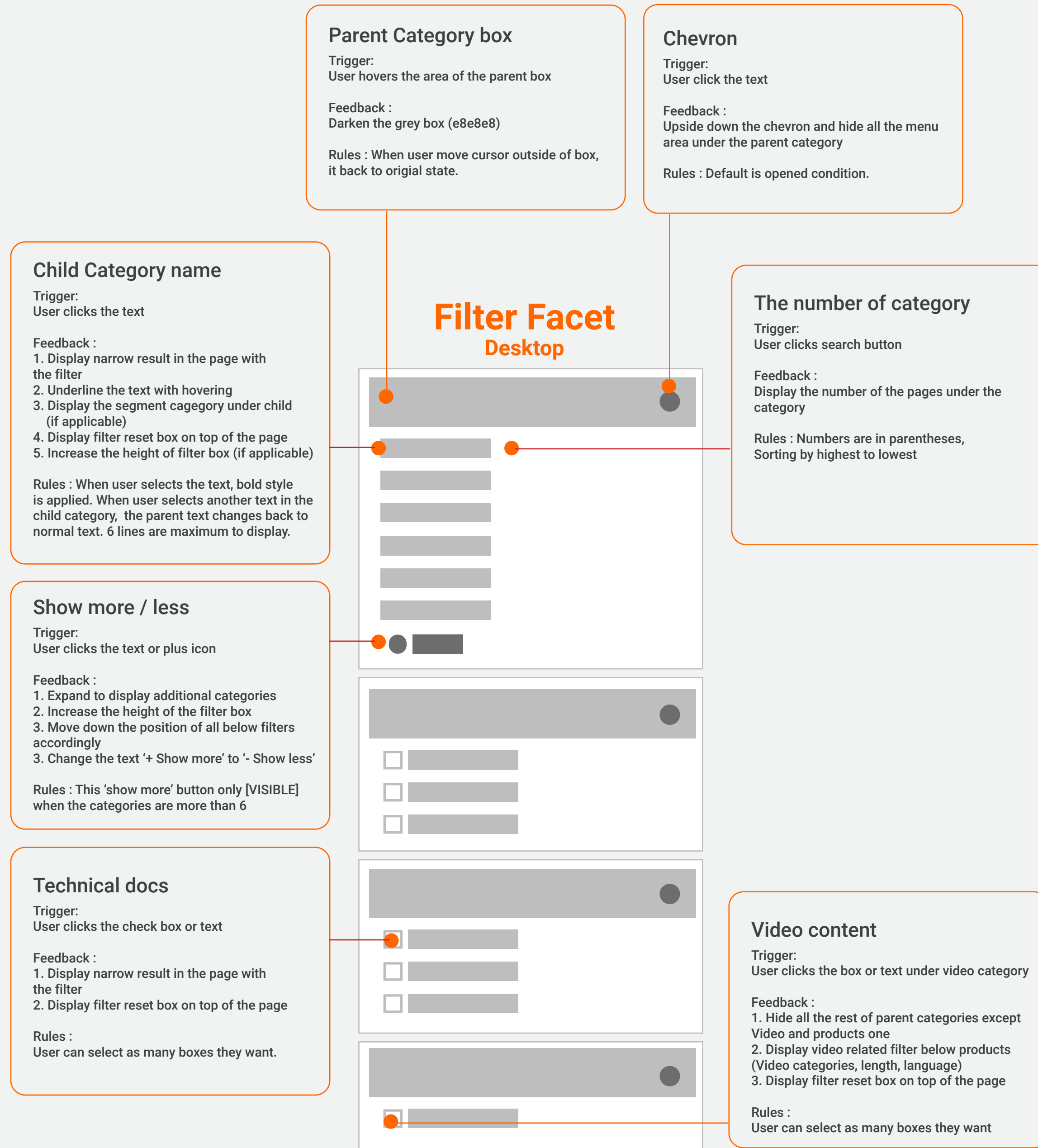
## Before

The screenshot shows the Texas Instruments website search results for the part number 'tps62864'. The search bar at the top contains 'tps62864'. The navigation bar includes links for Products, Applications, Design resources, Quality & reliability, Support & training, Order now, and About TI. Below the navigation bar, there are tabs for 'Everything', 'Technical documents', 'Support', and 'Cross reference'. The main content area features a product card for the 'TPS62864' with a 'NEW' badge and 'ACTIVE' status. The card includes a product image, a functional diagram, and buttons for 'Data sheet' and 'Ordering & quality'. Below the card, there are sections for 'PRODUCT DETAILS', 'TECHNICAL DOCUMENT - DATA SHEET', and 'PART - ORDER DETAILS'. The search results are summarized as 'Results 1-10 of 28 for tps62864 in 0.56 seconds'.

## After

The screenshot shows the Texas Instruments website search results for the part number 'opa333'. The search bar at the top contains 'opa333'. The navigation bar includes links for Products, Applications, Design resources, Quality & reliability, Support & training, and About TI. Below the navigation bar, there is a 'Refine by' section with filters for Products, Applications, Technical documents, Design resources, Support, and Videos. The main content area features a product card for the 'OPA333' with a 'PRECISION OP AMPS (VOS<1mV)' badge and 'ACTIVE' status. The card includes a product image, a 'Data sheet' button, and a 'View and order parts' link. Below the card, there are sections for 'Other products and design resources', 'Results 1-25 of 557 for opa333 in 0.25 seconds', 'PRODUCT DETAILS', 'PART - ORDER DETAILS', 'TECHNICAL DOCUMENT - DATA SHEET', 'DESIGN RESOURCE - EVALUATION BOARD', and 'PART - ORDER DETAILS'. The search results are summarized as 'Results 1-25 of 557 for opa333 in 0.25 seconds'.

# Interaction Flow Filter Facet



# Possible Scenarios

## 1 Filter applied

PRODUCTS: **Microcontrollers (MCUs) & processors** ×

[Clear all filters](#)

## 2 Different types of filters applied + Display Child category

PRODUCTS: **Data converters / Digital-to-analog converters (DACs)** ×

TECHNICAL DOCUMENTS: **Data sheet** ×

[Clear all filters](#)

## More than 6 filters applied in the same category (tech docs)

PRODUCTS: **Data converters** ×

TECHNICAL DOCUMENTS: **Data sheet** × **User guide** × **Application note** × **More literature** ×

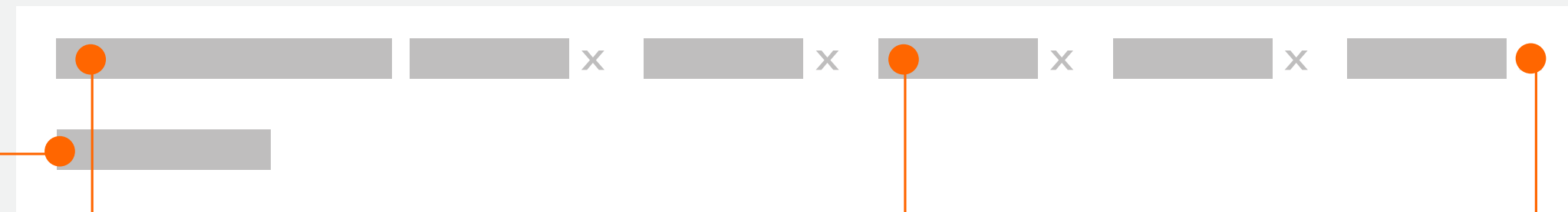
**Analog design Journal** × **1 more...**

[Clear all filters](#)

# Interaction Flow

## Filter reset box

### Filter reset box



#### Name of parent category

Trigger:  
User selects any filter option

Feedback :  
1. Display the name of the parent category

Rules : Text is all capital.

#### Name of child category

Trigger:  
User selects any filter option

Feedback :  
1. Display the name of the child category  
2. Underline the text with hovering

Rules : First letter is capital.

#### Remove child category

Trigger:  
User selects any filter option

Feedback :  
1. Remove individual child category  
2. Underline the text with hovering

Rules : Same function as deselecting  
the box in the filter facet

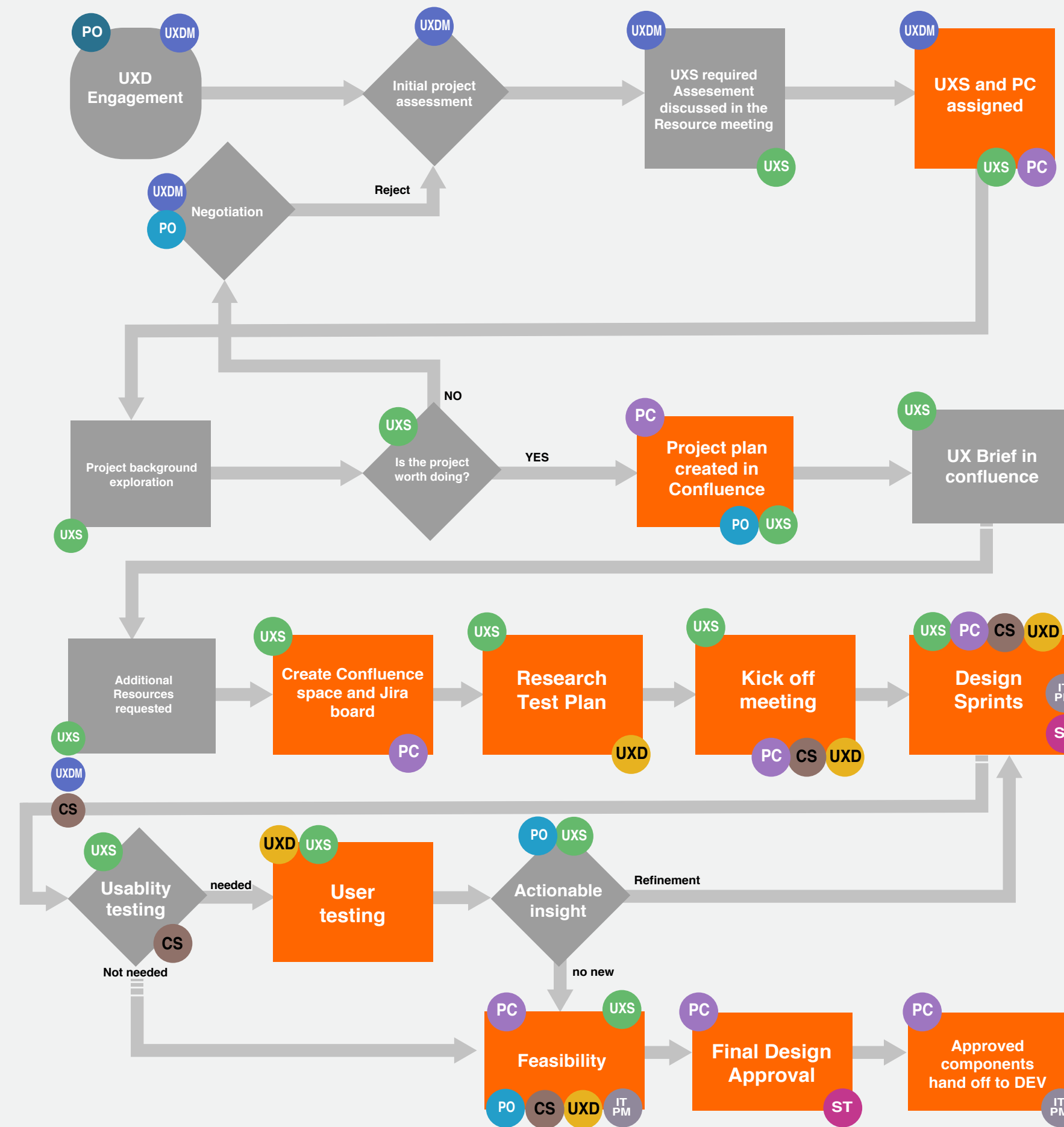
#### Reset button

Trigger:  
User selects any filter option

Feedback :  
1. Clear all the filters on the box  
2. Deselect all the check box and display  
default search result

Rules : The position is very last line when multiple  
categories generated

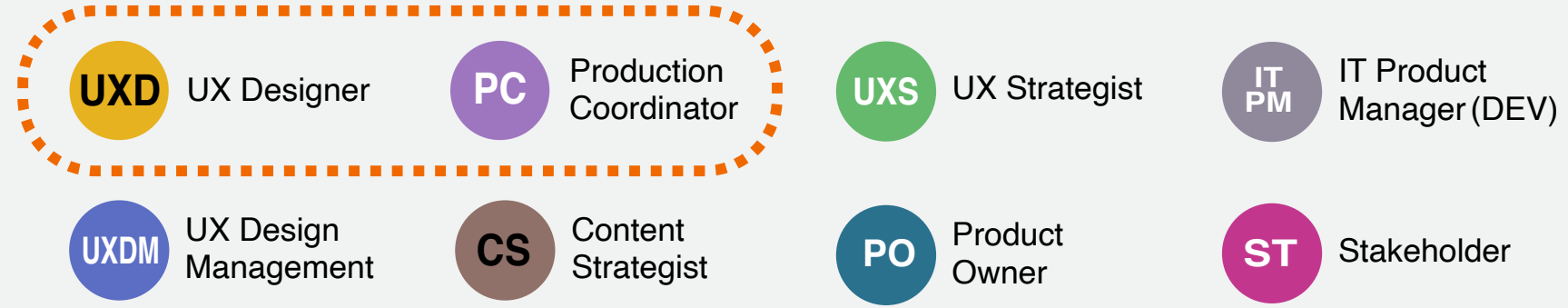
# Design Handover To DEV



**Design Sprint** 2 weeks Cycle

- Sprint Planning
- Daily scrum
- Design Review
- Meeting with PO, UXS
- Sprint demo (mid, end)
- Backlog refinement
- Retrospective

- Partner closely with Senior UX to conduct user interviews and vet out usability solutions
- Used Prototyping and Mockup tools to get sign-off from stakeholders
- Continued to create backlog tickets for the next launch and address in backlog refinement sessions.



# High Fidelity Wireframe

The wireframe illustrates a search results page for TI.com. It features a left sidebar with navigation menus for Products, Applications, Technical documents, Design resources, and Videos. The main content area includes a search bar, a 'Refine by' section with a 'Products' filter menu, and a list of search results. The right sidebar provides detailed information for each product, including product details, order details, and technical documents. The wireframe uses orange boxes to highlight key UI elements such as the 'Products' filter menu, the search bar, and the 'Amplifiers' filter chip.

**Products** (99)

- Operational amplifiers (op amps) (82) >
- Instrumentation amplifiers (15)
- Current sense amplifiers (8) >
- Comparators (7)
- Programmable & variable gain amplifiers (PGA/VGA) (5)
- Fully differential amplifiers (4)
- + Show more

**Applications**

- Industrial (19) >
- Personal electronics (3) >
- Automotive (2) >
- Enterprise systems (2) >

**Technical documents**

- Data sheet (33)
- Application note (10)
- Analog design Journal (3)
- User guide (2)
- Selection guide (1)

**Design resources**

- Reference design (15)
- Design tools & simulation (5) >
- Hardware development (2) >

**Videos**

- Video (9)

PRODUCTS: Amplifiers ×

Clear all filters

View all Amplifiers products

Results 1-25 of 99 for opa333 in 0.98 seconds

PRODUCT DETAILS

**OPA333 data sheet, product information and support**

TI's OPA333 is a 1.8-V, 17-μA, microPower, precision, zero-drift CMOS op amp. Find parameters, ordering and quality information

<https://www.ti.com/product/OPA333>

PART - ORDER DETAILS

**OPA333AID | Buy TI parts**

Buy the OPA333AID from TI - View pricing, inventory & data sheet | TI.com

<https://www.ti.com/store/ti/en/p/product/?p=OPA333AID>

PART - ORDER DETAILS

**OPA333AIDBVR | Buy TI parts**

Buy the OPA333AIDBVR from TI - View pricing, inventory & data sheet | TI.com

<https://www.ti.com/store/ti/en/p/product/?p=OPA333AIDBVR>

TECHNICAL DOCUMENT - DATA SHEET

**OPA333 1.8-V, microPower, CMOS Operational Amplifiers, Zero-Drift Series datasheet (Rev. E)**

OPA333 1.8-V, microPower, CMOS Operational Amplifiers, Zero-Drift Series datasheet (Rev. E)

<https://www.ti.com/lit/gpn/OPA333>

DESIGN RESOURCE - EVALUATION BOARD

**REF6025EVM-PDK Evaluation board**

View the TI REF6025EVM-PDK Evaluation board description, features, development resources and supporting documentation and start designing.

<https://www.ti.com/tool/REF6025EVM-PDK>

PART - ORDER DETAILS

**OPA333AIDCKT | Buy TI parts**

Buy the OPA333AIDCKT from TI - View pricing, inventory & data sheet | TI.com

<https://www.ti.com/store/ti/en/p/product/?p=OPA333AIDCKT>

PART - ORDER DETAILS

**OPA333AIDBVT | Buy TI parts**

Buy the OPA333AIDBVT from TI - View pricing, inventory & data sheet | TI.com

<https://www.ti.com/store/ti/en/p/product/?p=OPA333AIDBVT>

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PART - ORDER DETAILS

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<https://www.ti.com/store/ti/en/p/product/?p=OPA333AIDR>

PRODUCT DETAILS

**OPA333-Q1 data sheet, product information and support**

TI's OPA333-Q1 is a Automotive 1.8V, 17uA, 2uV, microPOWER CMOS Zero-Drift Series Operational Amplifier. Find parameters, ordering and quality information