



# Roku Search Feed

Developers Portal

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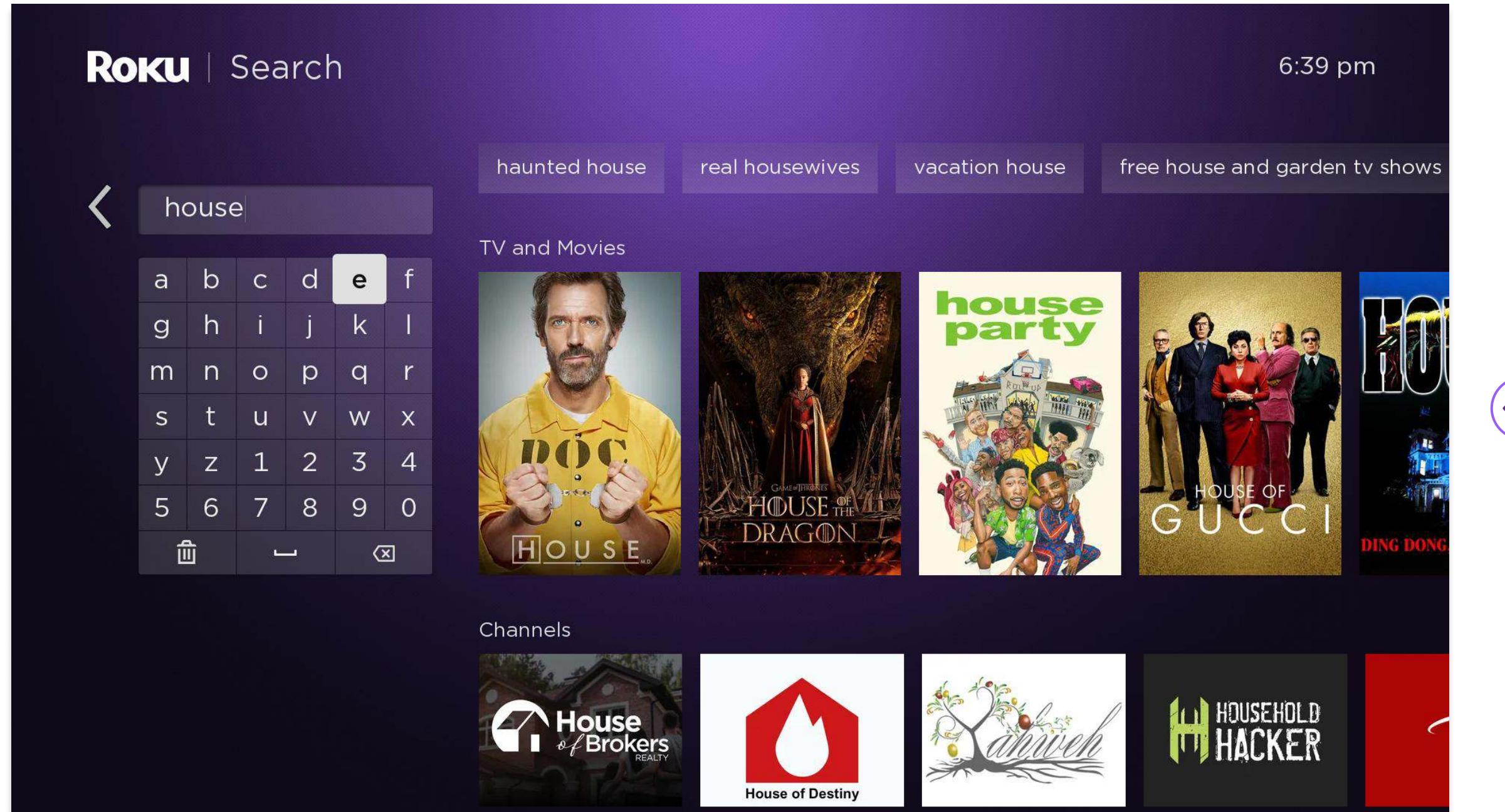
**Team involved:** 1 UX Designer, 1 Product Managers, and SWE Team

# Background

## Background

# How does Roku Search works behind the scene?

### Search on consumer side (Search Result)



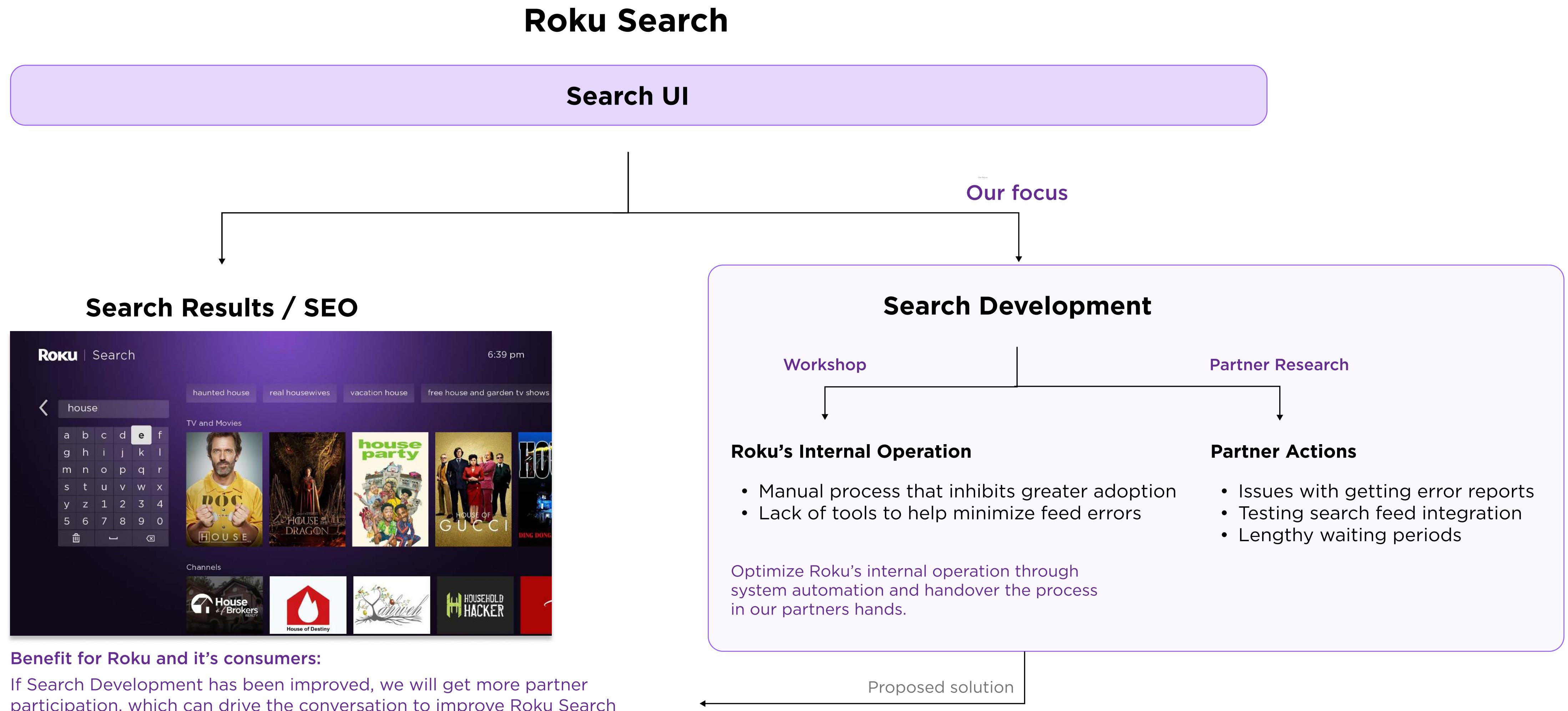
### How a feed looks like on Development side

```
{  
  "$schema": "http://json-schema.org/draft-07/schema#",  
  "type": "object",  
  "properties": {  
    "version": {  
      "type": "string"  
    },  
    "defaultLanguage": { ... },  
    "defaultAvailabilityCountries": { ... },  
    "nextPageUrl": { ... },  
    "assets": {  
      "type": "array",  
      "items": {  
        "type": "object",  
        "properties": {  
          "id": { ... },  
          "type": { ... },  
          "titles": { ... },  
          "shortDescriptions": { ... },  
          "longDescriptions": { ... },  
          "externalIdSource": { ... },  
          "externalIds": { ... },  
          "releaseDate": { ... },  
          "releaseYear": { ... },  
          "genres": { ... },  
          "tags": { ... },  
          "credits": { ... },  
          "advisoryRatings": { ... },  
          "images": { ... },  
          "durationInMilliseconds": { ... },  
          "durationInSeconds": { ... },  
          "episodeInfo": { ... },  
          "seasonInfo": { ... },  
          "content": { ... },  
          "isOriginal": { ... }  
        },  
        "if": { ... },  
        "then": { ... },  
        "else": { ... }  
      },  
    }  
  }  
},  
}  
}
```

**Note:** We collect all the above information, but not all the metadata is searchable by users.

## Background

# Roku Search building blocks and problems with them

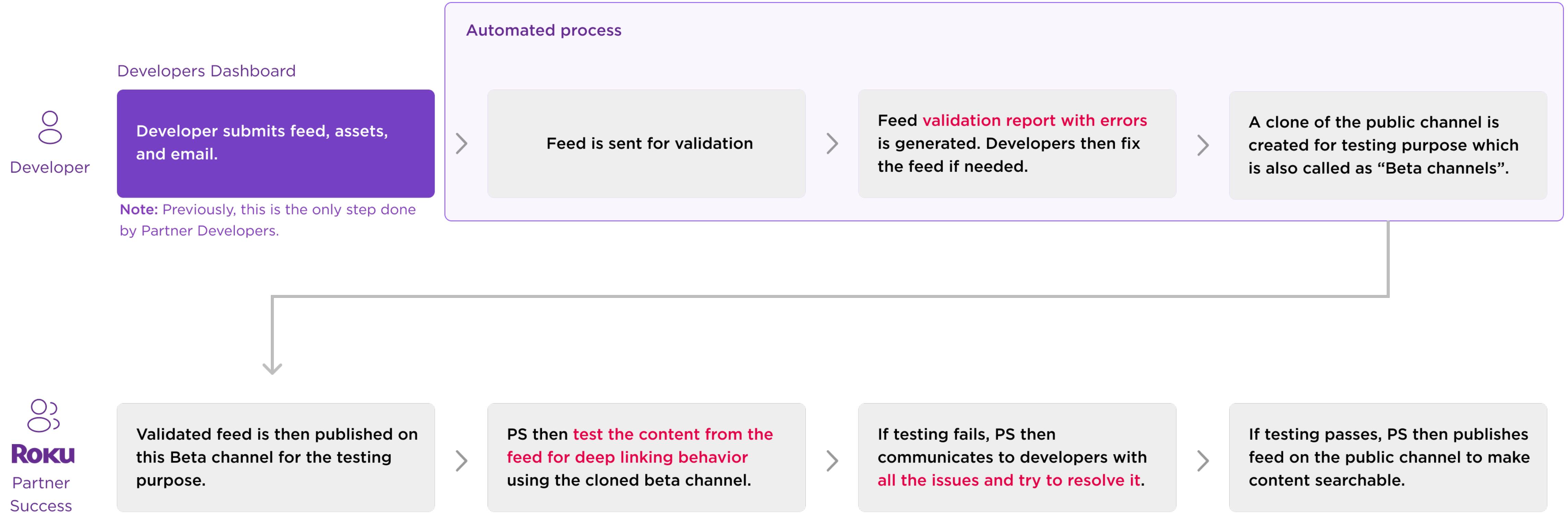


# Discovery process

Workshop, journey maps, and research

## Discovery process

# How does the feed submission process looks like?

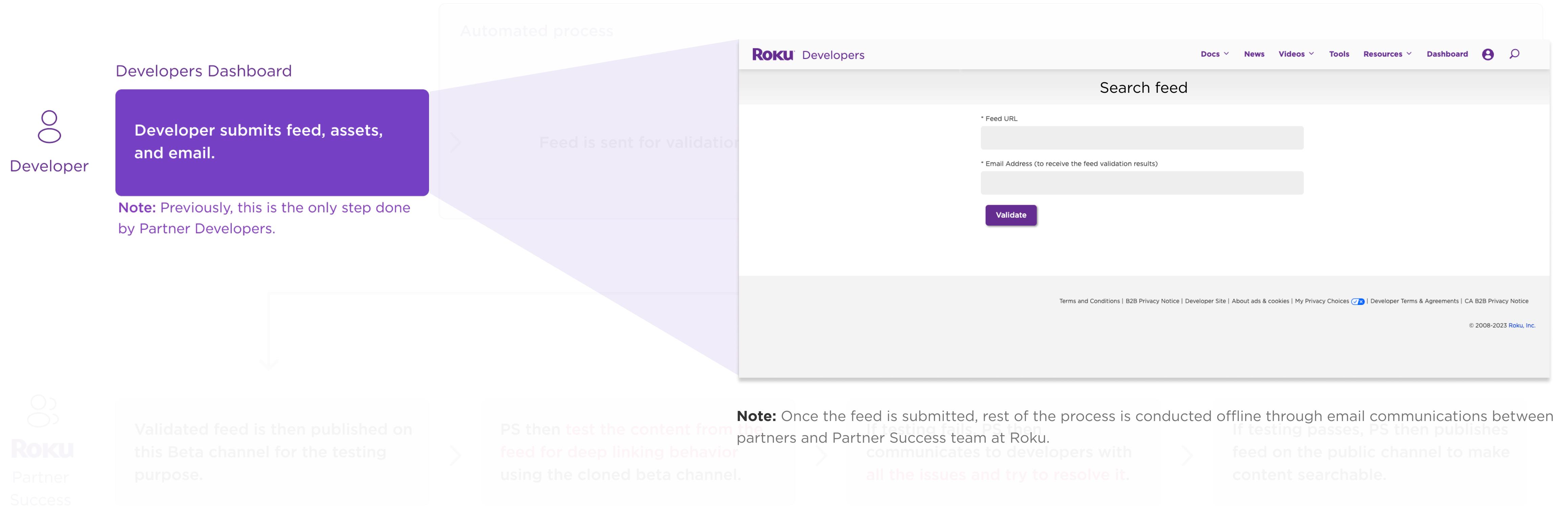


## Key problem

Currently, it takes anywhere from **3-8 weeks** for our partners to publish a search feed successfully, and this delay is due to asynchronous tasks, inefficient reporting, and offline communications.

## Discovery process

# How does the feed submission process looks like?



## Key problem

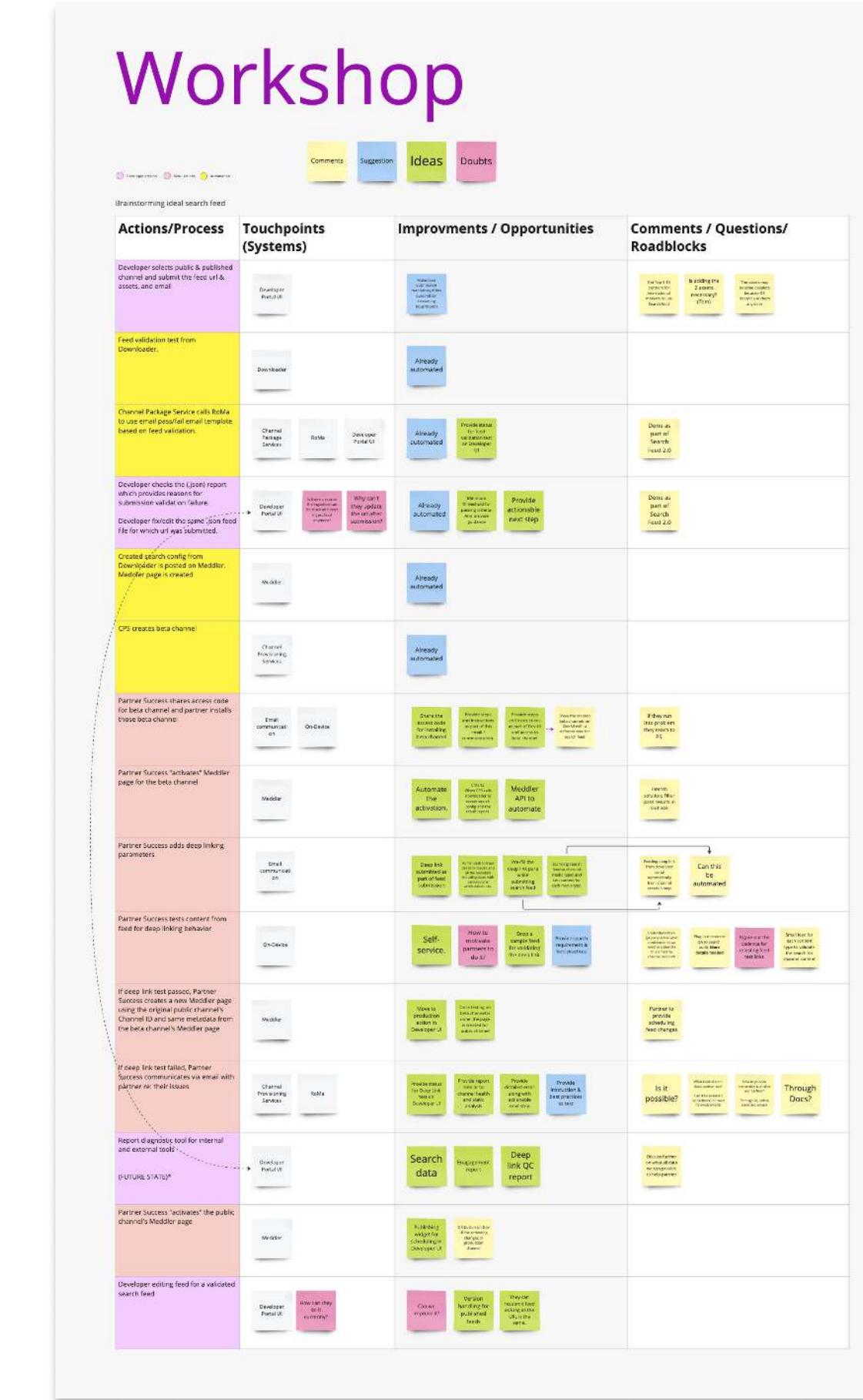
Currently, it takes anywhere from **3-8 weeks** for our partners to publish a search feed successfully, and this delay is due to asynchronous tasks, inefficient reporting, and offline communications.

## Discovery process

# Workshop goals and outcomes

### Find problems in the process

With the help of Partner Success team we mapped out the existing CUJ and all the PS manual tasks (problems) within it.

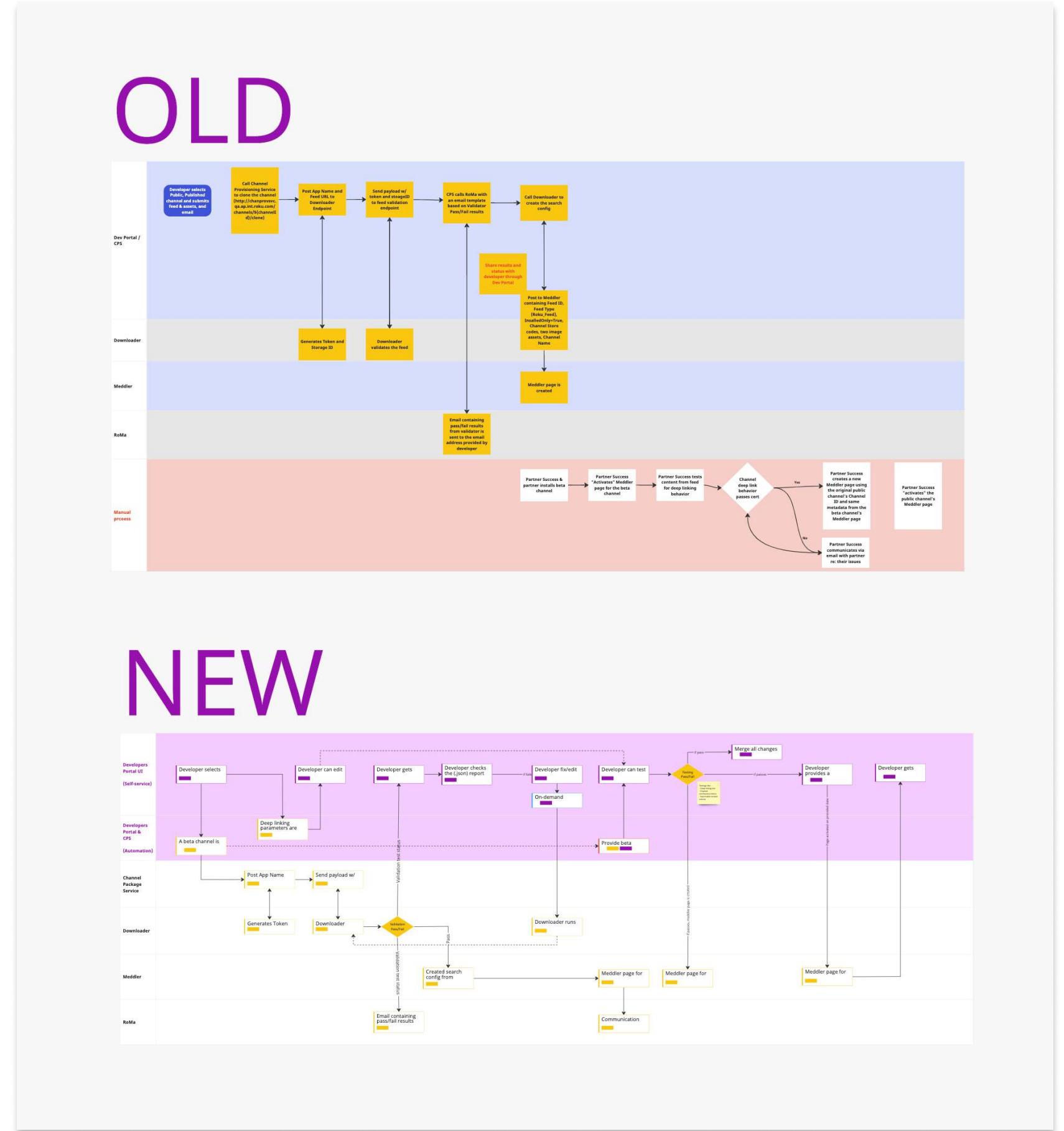


### Brainstorm ideas to solve problems

We brainstormed ideas to resolve those problems, identified some open ended questions (UXR) and roadblocks.

### Map the new CUJ

Then new CUJ used those ideas to turn the operational tasks done by Partner Success to a self-service flow.



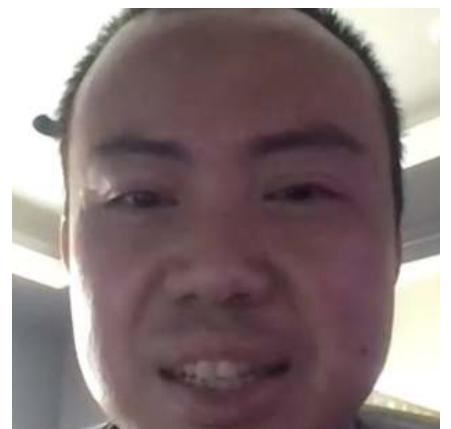
# User research

Learnings from partners

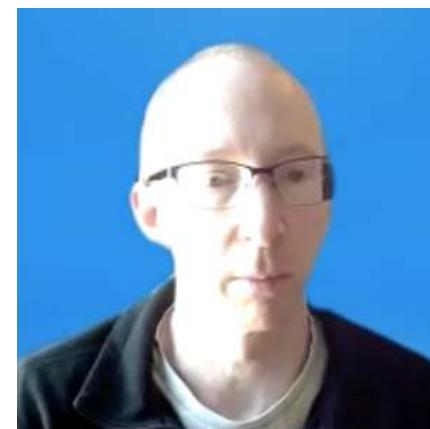
User research

## Research goals

**Understand how users submit their search feed today and their experience with that process.**



**App Engineer**  
DirecTV



**Backend**  
Philo



**Backend**  
Philo



**App Engineer**  
Philo



**Co-Founder**  
UniversalSearch  
QVC



**Co-Founder**  
UniversalSearch  
QVC



**Stakeholder**  
QVC

## Research outcomes

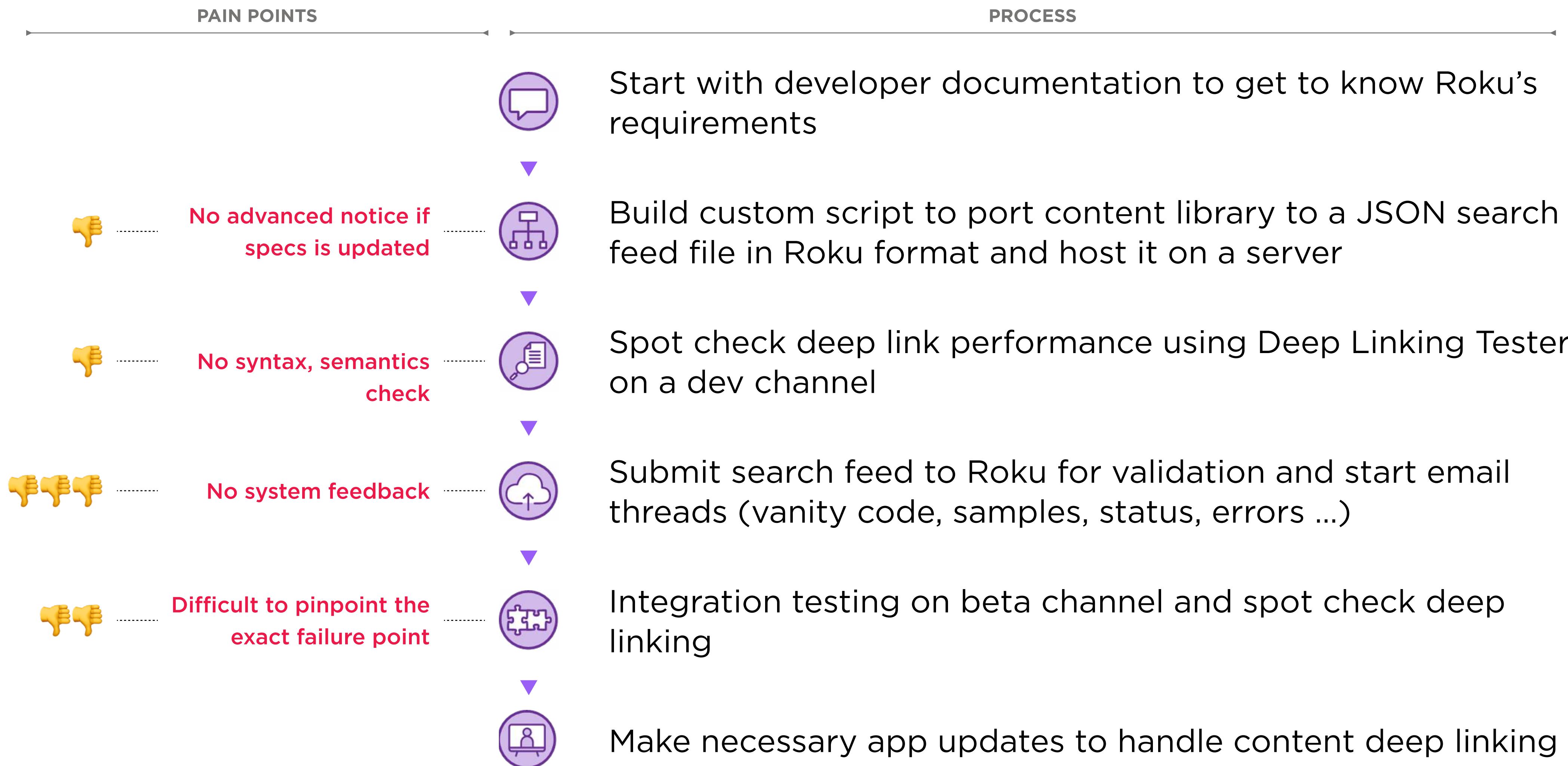


*"Given the lag and black box experience, I would rate only 2/5."*



*"The frustration we feel is that there is a lot of manual back and forth we have to do, especially on the onboarding validation side of things. What you are showing us here can go up a floor 4.5 depending on how smooth it goes"*

# Pain points in current process



## Discovery & research outcomes

# TL;DR

### Key issues

#### Roku's operation

- Search testing is single threaded through Partner Success, which can inhibit wider adoption and international expansion
- Lengthy communication waiting periods due to a manual process

### Goals/solutions

Optimize Partner Success process through system automations and hand over tasks to partners

### Biz/user needs

Mandate search feed submission criteria for partners with certain millions of streaming hours so that more content can be discovered through search

#### Partner's actions

- Search feeds are continuously ingested every 6 hours but partners often won't receive any feedback until days later if the process fails
- Lengthy back-and-forth deep linking and integration testing process



Enable partners to submit, test and review search feeds with minimal delays and reliance on Partner Success



# Solution and Design

## Solution and Design

# The new solution and E2E Design for feed submission



### Provide better error reporting and feed validation tools

Better error report summary along with downloadable .json files and feed format validation tool.



### Make submission process as self-service feature

Provide all the means to partners to submit, validate, update, and publish their search feed at their convenience.



### Enable partner to schedule their new feeds

Provide flexibility to partner to schedule their feeds similar to publishing their apps.



### Better metadata will lead to better recommendations

This will lead to better search results & recommendations which will help provide better consumer experience.

The screenshot shows the Roku Developers dashboard. On the left, a sidebar lists various developer tools: Dashboard, CHANNELS (Public channels selected), Beta channels, Search feeds, MONETIZATION (In-app purchases, Products, Test users, Roku Pay web services), FINANCIAL REPORTS (Transaction reporting, Sales activity, Payout reporting), ENGAGE (Display ads, ROKU IDK, Download), ACCOUNT (Developer information, Developer key pairs, Payout settings, User access, Switch account, RokuTV CA). The main content area shows a 'FilmRise Free Movies & TV' channel listing. It includes details like Access code DF23DF, Type SDK 1.0, Version 1.0, Created Aug 1, 2021, Last publish Sep 15, 2021, and Branch @ New branch. Below this are sections for 'Store listing' (listing setup, store assets), 'Channel properties' (channel profile, channel type, privacy & terms, account requirements, customer support info, monetization setup), 'Package & testing' (channel package, deep linking, test credentials, static analysis, channel behavior analysis), and 'Roku search' (submit search feed). A preview of the channel's content is shown in a grid of thumbnail images.

Based on newly ideated CUJ and proposed solutions, we designed an ideal E2E UX for our Developers which doesn't involves Partner Success team in the process.

[View High-level Design](#)

## New UX outcomes

# Deliveries and it's outcome



## What was delivered as initial offering in 2023?

- **Better submission form** where users can submit image assets for their feed and channel along with feed url.
- **New feed status monitoring dashboard** to track where they are at along the submission process and other useful information.
- **New feed validation report UI** to make errors and warnings easy to consume along with **refreshed email notification** for it.

The image displays three screenshots of the Roku Developers platform interface:

- Search feeds dashboard:** Shows a table of search feed statuses for various channels like FilmRise Free Movies & TV, FilmRise Family, and FilmRise True Crime. It includes columns for Channel, Validated content, Last feed ingestion, and Status (e.g., SUBMITTED, REJECTED, FEED VALIDATED).
- Submission form for FilmRise Family:** A modal window for creating a search feed. It asks for a Channel (FilmRise Family), provides a Feed URL (https://example.com/roku/feeds/en/my-feed-v1-rdp.xml), and includes a section for a Teaser logo with specific dimensions and file type requirements.
- Validation report for submitted feed:** A detailed report for the FilmRise Free Movies & TV feed. It shows a summary with a 93% approval rate, lists 323,428 approved titles, 5,228 rejected titles, and 19,422 warning titles. It also lists error messages such as ASSET\_INVALID\_GENRE, IMAGE\_DOWNLOAD\_ERROR, and ASSET\_MISSING\_DURATION.



## What was the outcome of this delivery?

- Members from Partner Success team are individually saving **4 hours of work every week** where they used to perform above task manually.
- **Increase in partner engagement** and curiosity for submitting their feed.

# Thank you

Any questions?