Enterprise-Ready Flow Management:
Error Handling, Monitoring, and Optimization

Nicolai Schjørmann

Business Unit Manager
Abakion A/S, Denmark

Michael Nielsen

Senior Power Platform Consulant
Abakion A/S, Denmark

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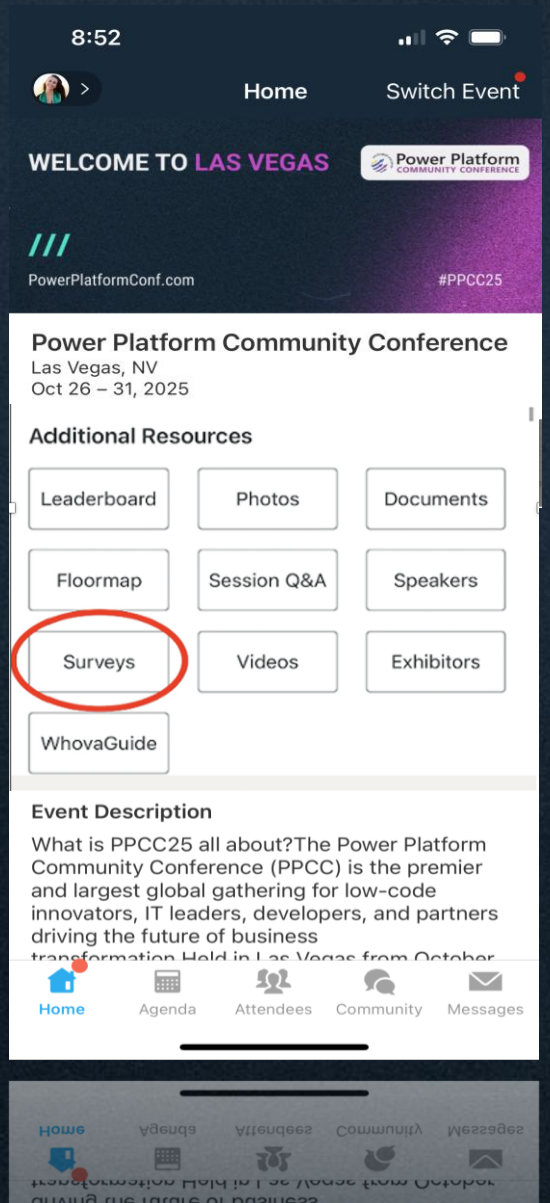
But first...

Session Feedback Surveys



We really want to hear from YOU!

In the pursuit of making next year's Power Platform Community Conference even better, we want to hear your feedback about this session.

Here's How -

- *Simply go to the Whova App on your smartphone*
- *Scroll down on the Power Platform Community Conference Homepage to 'Additional Resources' to click "Surveys'.*
- *Click Session Feedback.*
- *Scroll down to find this session title.*
- *Complete the session feedback survey.*
- *Finally, click 'Submit'*
- *It's just that easy!*

Let us try to imagine a scenario together...


Friday afternoon, the company gets their new system live.
SYSTEM LIVE
But then an error occurs...
Our system is down! Data errors everywhere!
Oh no! I need to call the consultant!
I'll be right there!
ERROR
ERROR
We need a more robust system that can identify issues quickly.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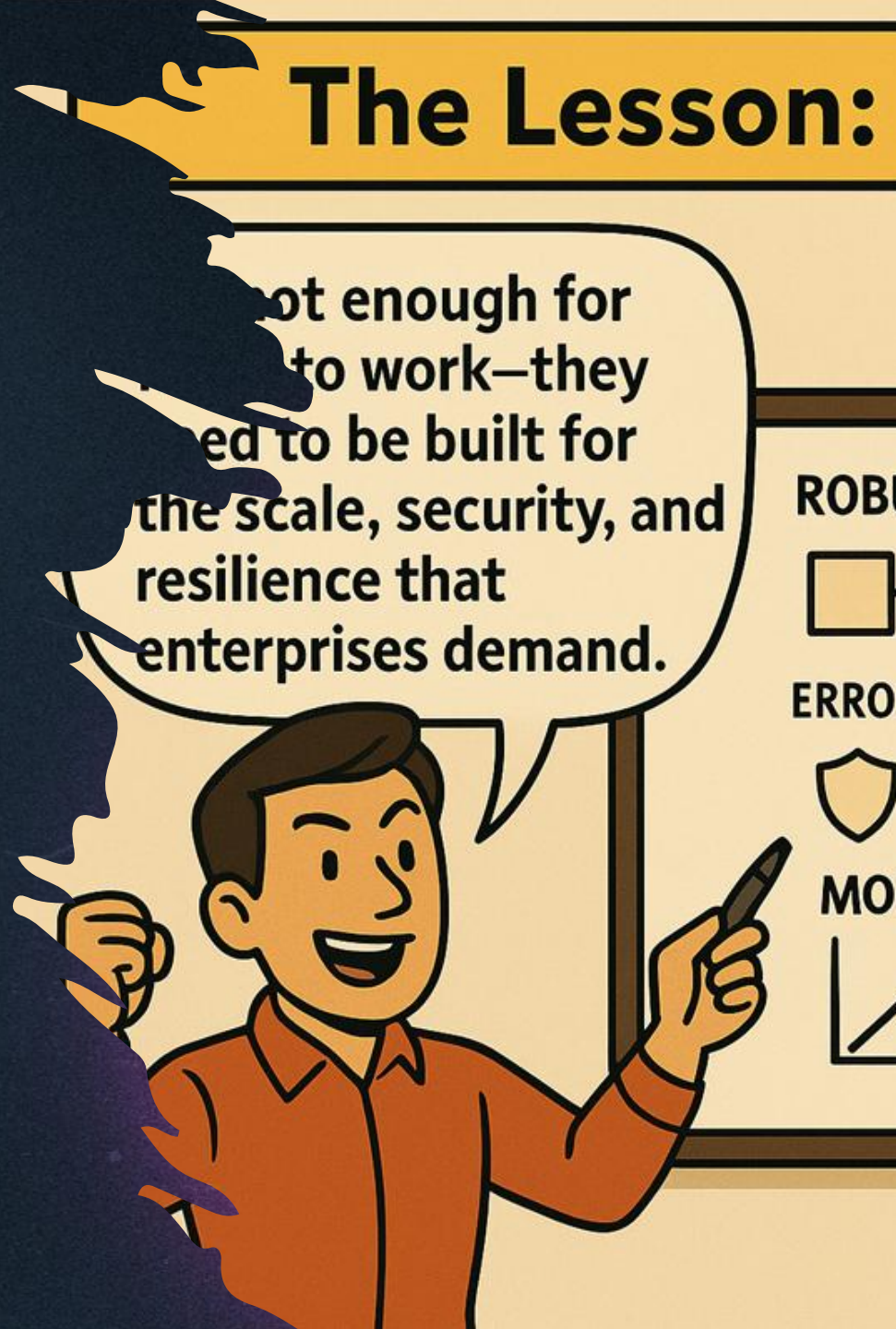
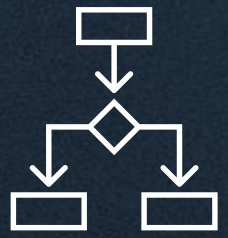
Lesson learned

- Error management
- Notifications
- Proactive monitoring
- Logging

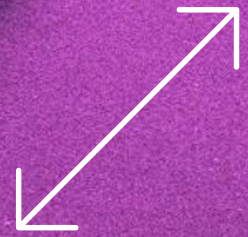


Scope: We'll explore how to elevate your flows



Design robust error handling to make your flows inform you what went wrong.

implement real-time monitoring that keeps you ahead of failures instead of reacting after the damage is done.



optimize your flows for performance and scalability, so they run smoothly no matter how complex business grows.

Why error handling matters

Business disruptions

- Workflow chaos
- Approval delays
- Unseen interruptions

Data inconsistency

- Asymmetrical sync
- Data incomplete
- Poor data

User frustration

- Confussion
- Missing notifications
- Manual work

Hidden failures

- No logs = no clues
- Failures in the shadow
- Quiet breakage

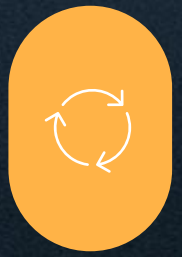
Common pitfalls

Run after

Not configure “Run After” conditions

API status

Assuming APIs and connectors always succeed



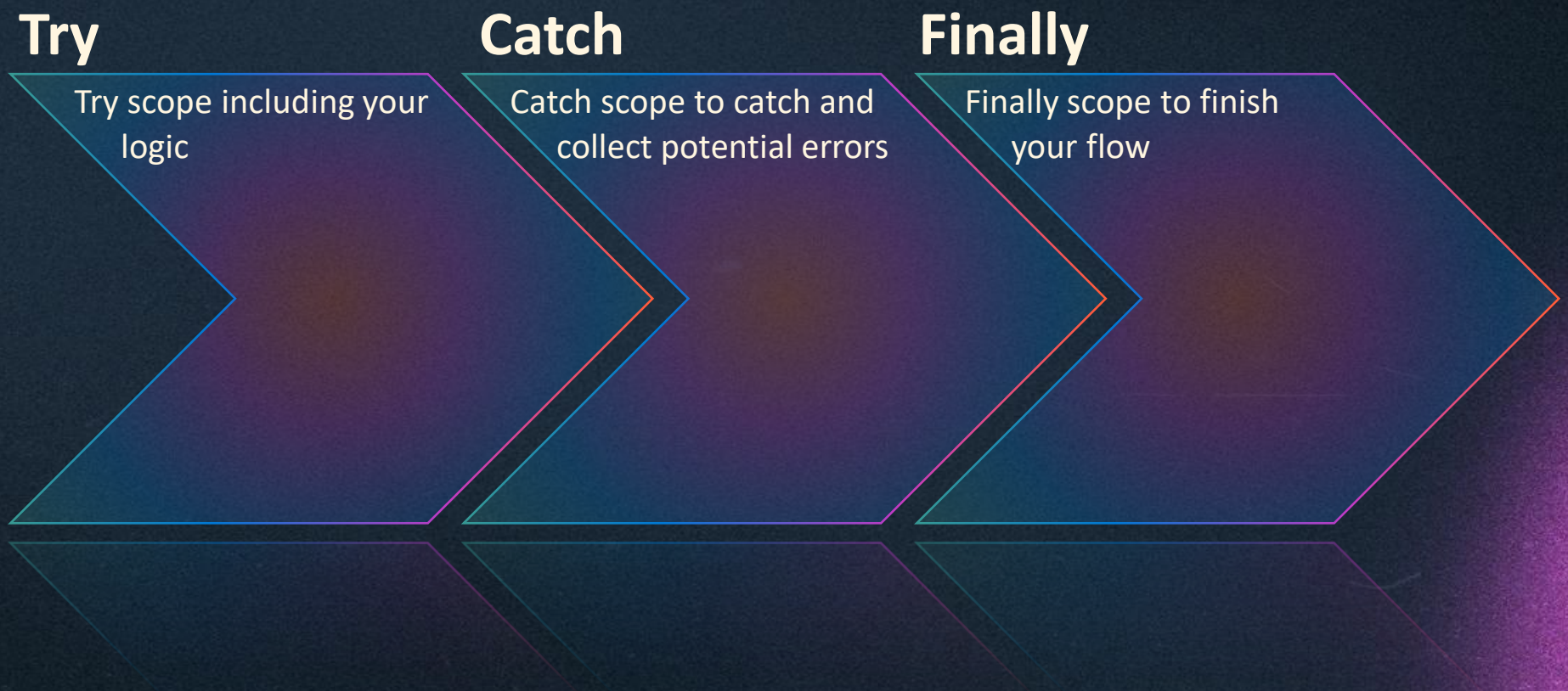
Retry policies

No “Retry policies” configured

Centralized management

No centralized monitoring or alerting

Our solution



- Configure Retry policies with exponential backoff for transient errors
- Design parallel branches for compensation or rollback mechanisms
- Leverage variables to capture and pass error details for downstream diagnostics
- Set up notifications on failure paths for immediate alerting
- Use Terminate actions to gracefully end flows with custom status and messages
- Add structured logging (Dataverse, SharePoint list, Azure Application Insights)

Interactive demo - Case

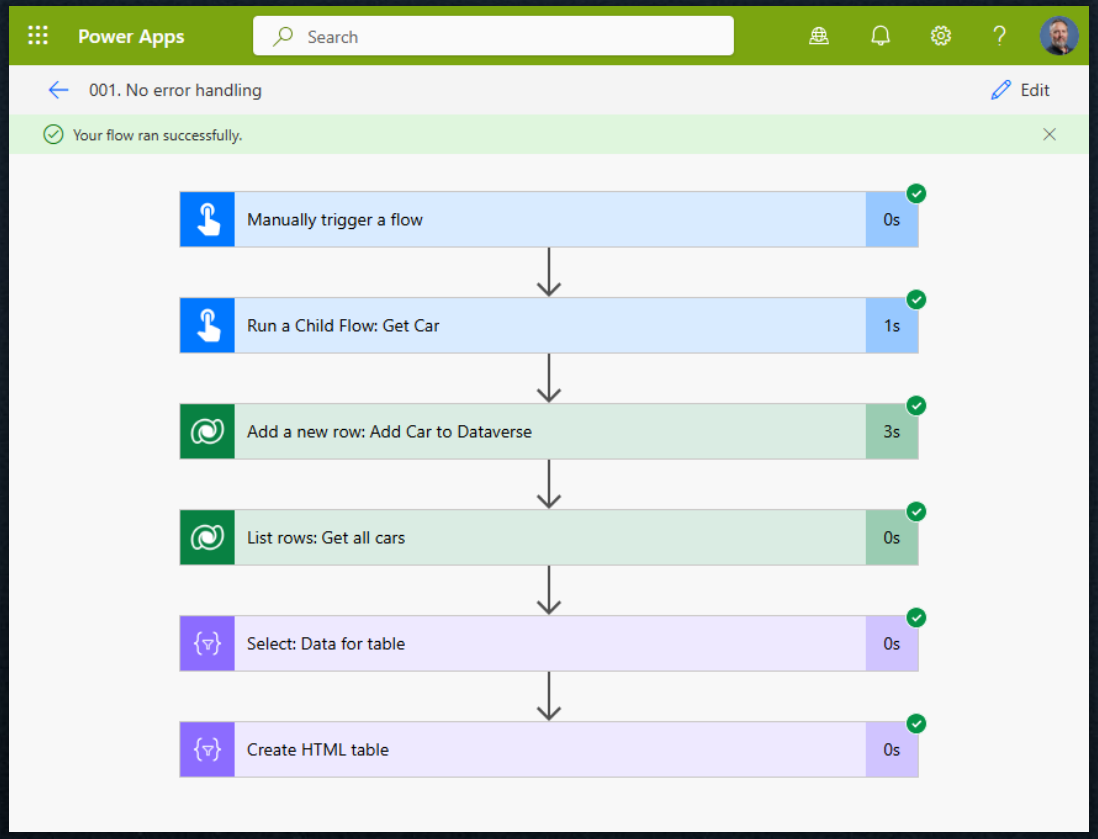
Interactive demo - Purpose

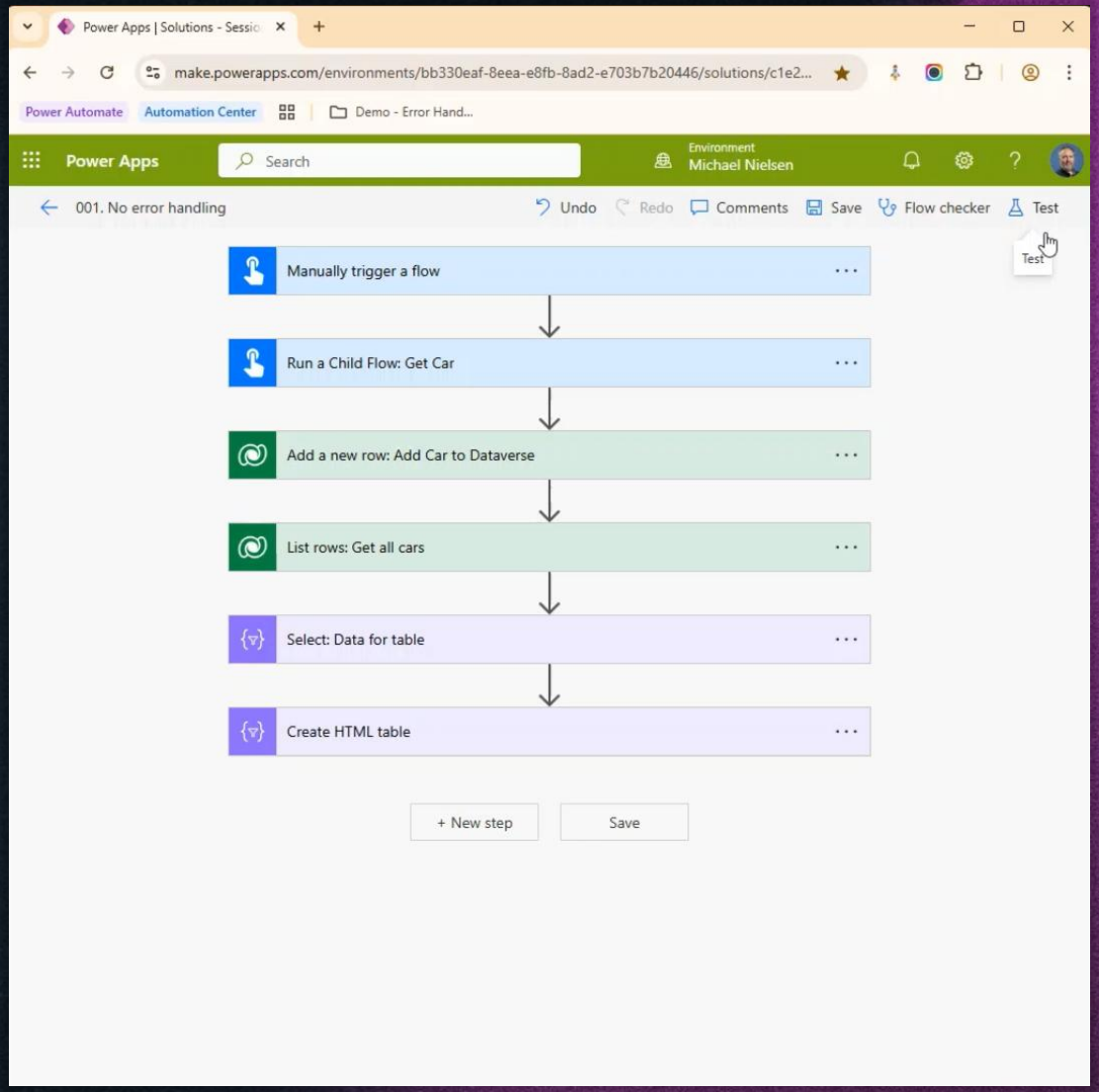
Understand the importance of error handling

Learn how to implement Try-Catch-Finally logic

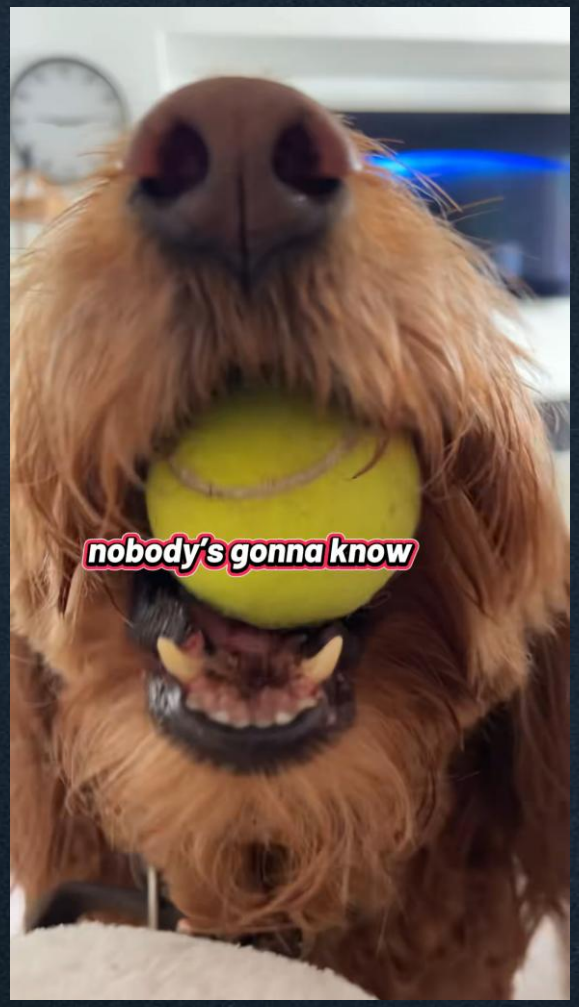
Implement custom error messages and notifications

Flow without error handling



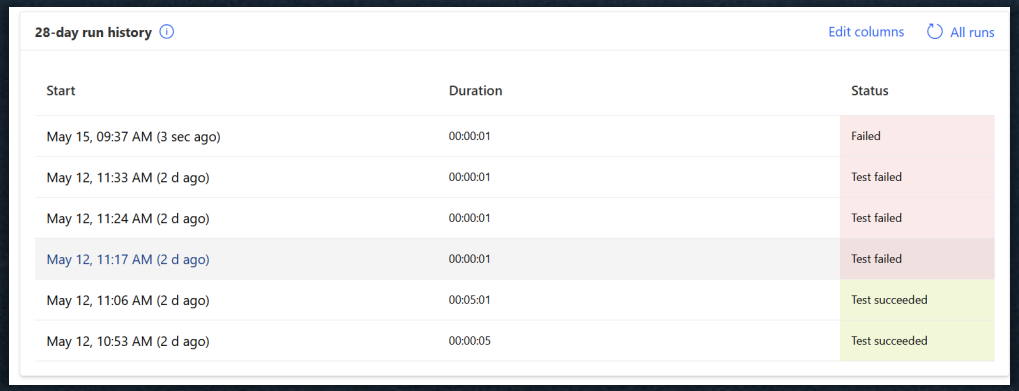


Who is going to know?



How will you know if a flow fails

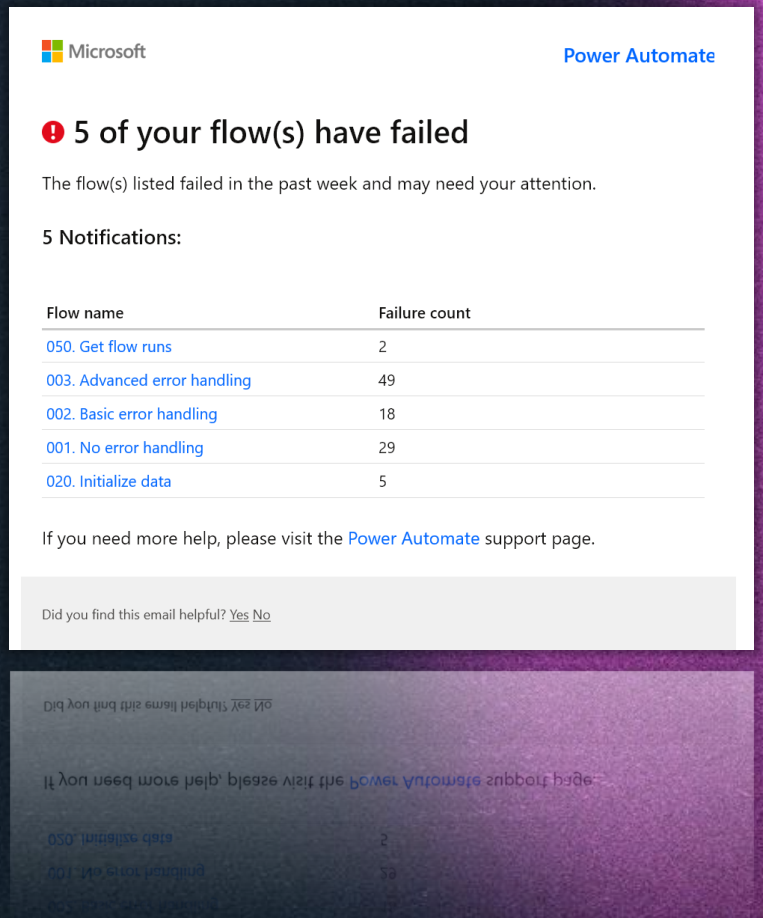
You can see it in the flow run history



28-day run history ⓘ Edit columns All runs

Start	Duration	Status
May 15, 09:37 AM (3 sec ago)	00:00:01	Failed
May 12, 11:33 AM (2 d ago)	00:00:01	Test failed
May 12, 11:24 AM (2 d ago)	00:00:01	Test failed
May 12, 11:17 AM (2 d ago)	00:00:01	Test failed
May 12, 11:06 AM (2 d ago)	00:05:01	Test succeeded
May 12, 10:53 AM (2 d ago)	00:00:05	Test succeeded

You will receive an email (one a day)



Microsoft Power Automate

5 of your flow(s) have failed

The flow(s) listed failed in the past week and may need your attention.

5 Notifications:

Flow name	Failure count
050. Get flow runs	2
003. Advanced error handling	49
002. Basic error handling	18
001. No error handling	29
020. Initialize data	5

If you need more help, please visit the Power Automate support page.

Did you find this email helpful? Yes No

How will you know if a flow fails

28-day run history ⓘ

Edit columns | All runs

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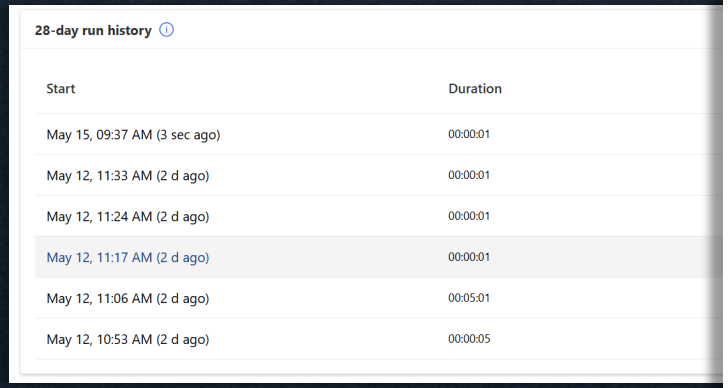

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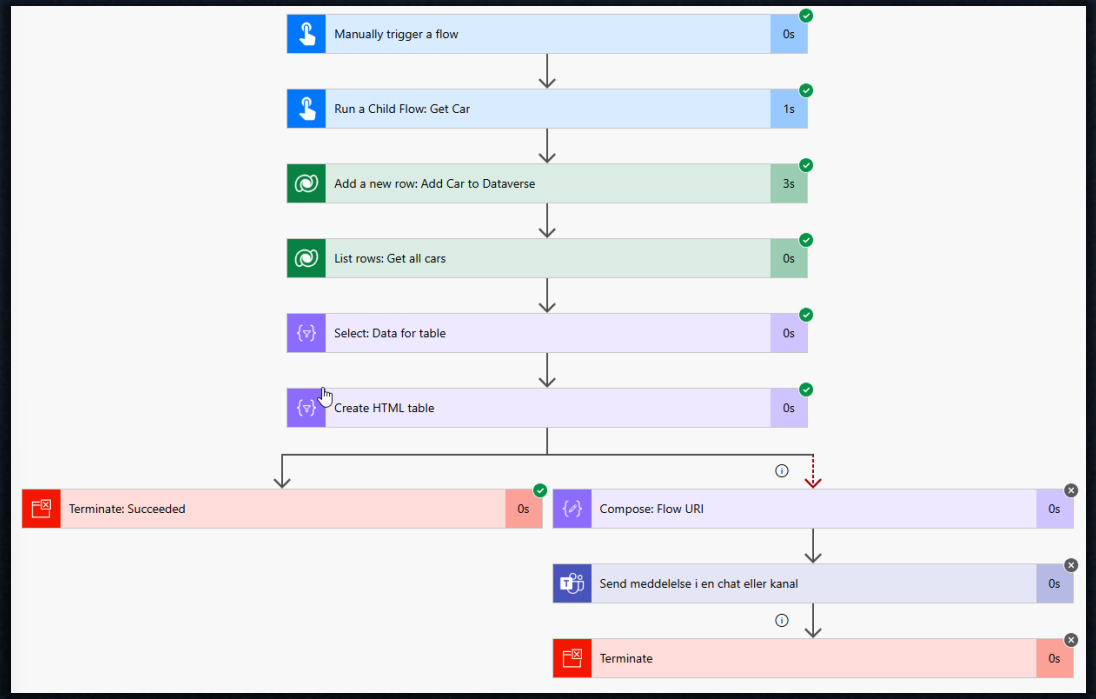
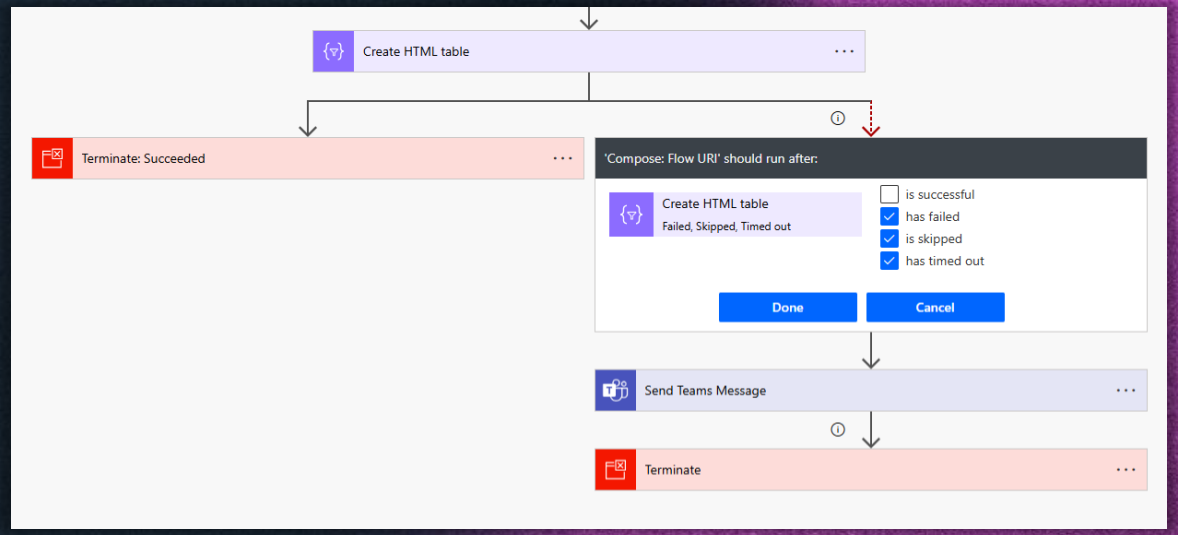
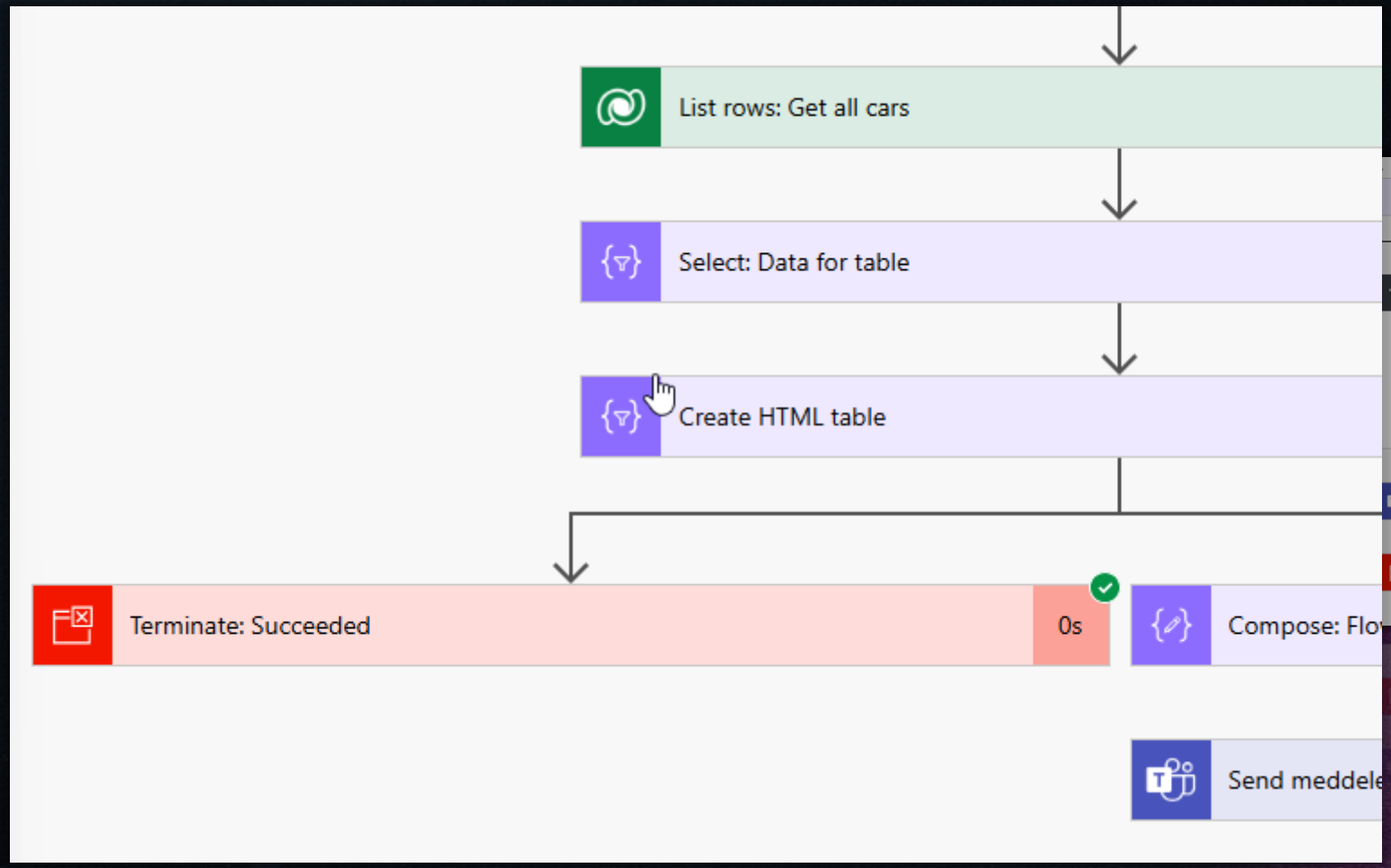
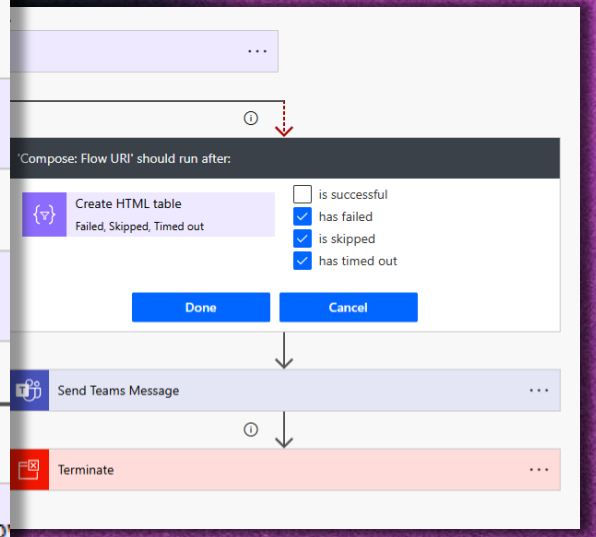
Basic error handling – Parallel Actions



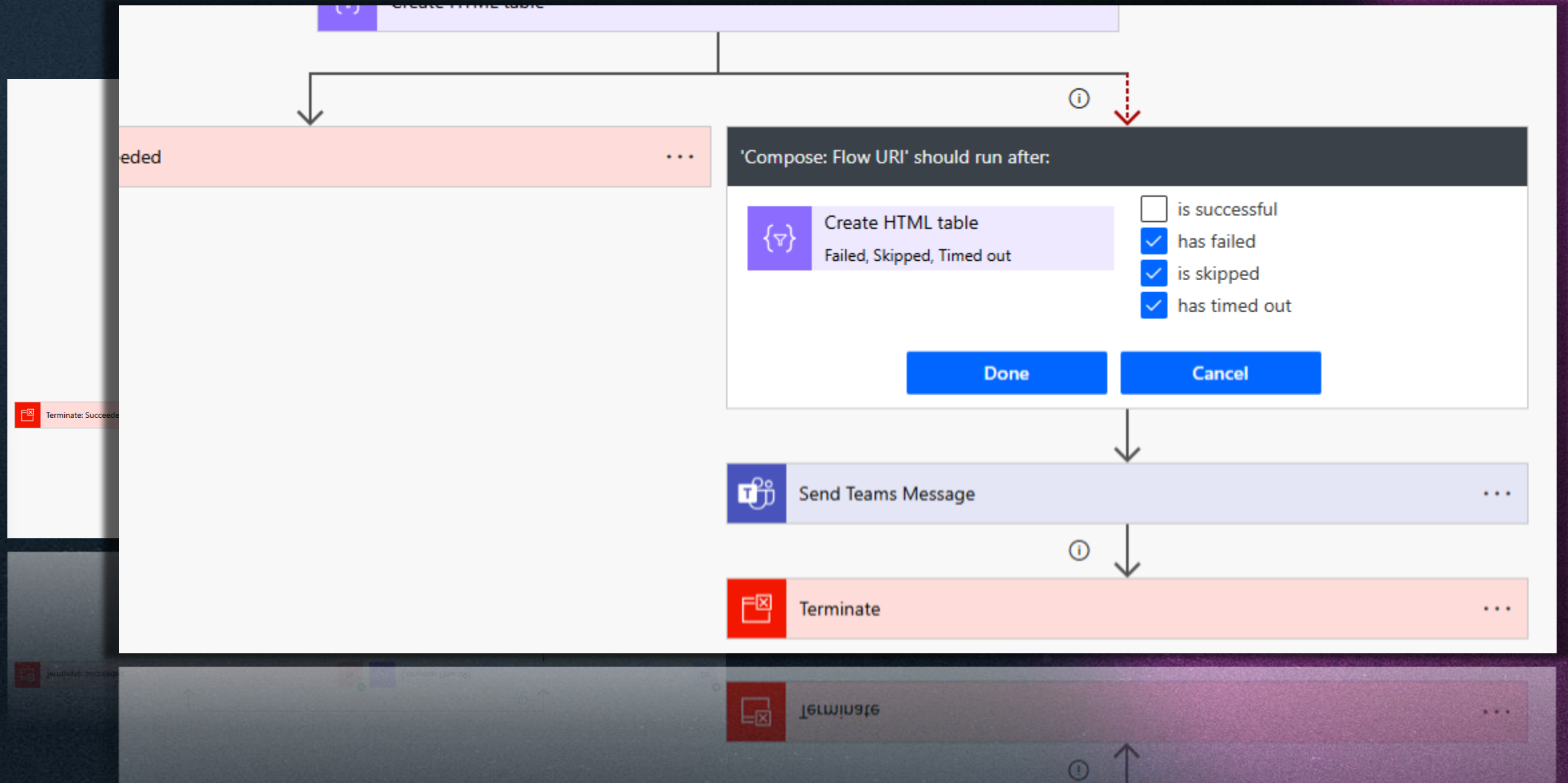


Left Branch – Success Path

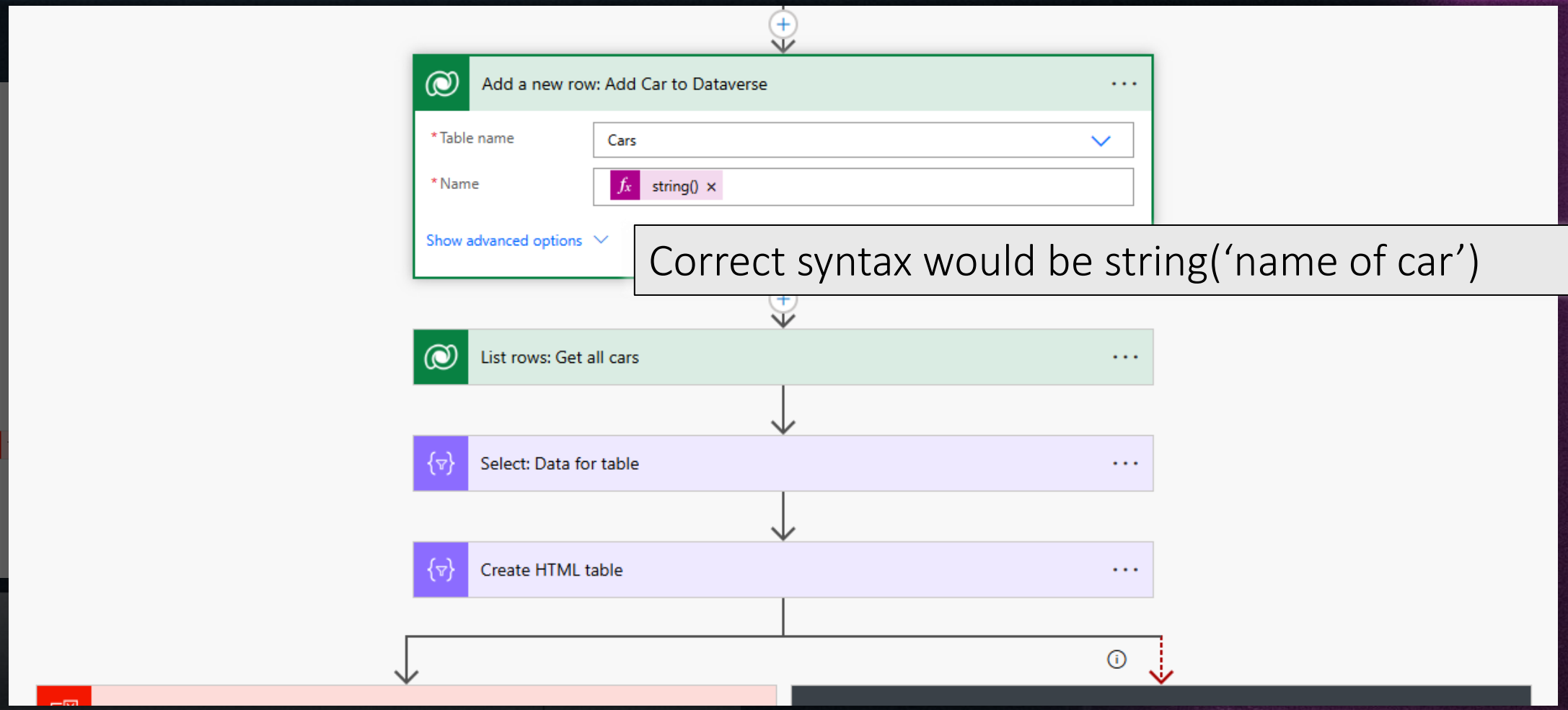




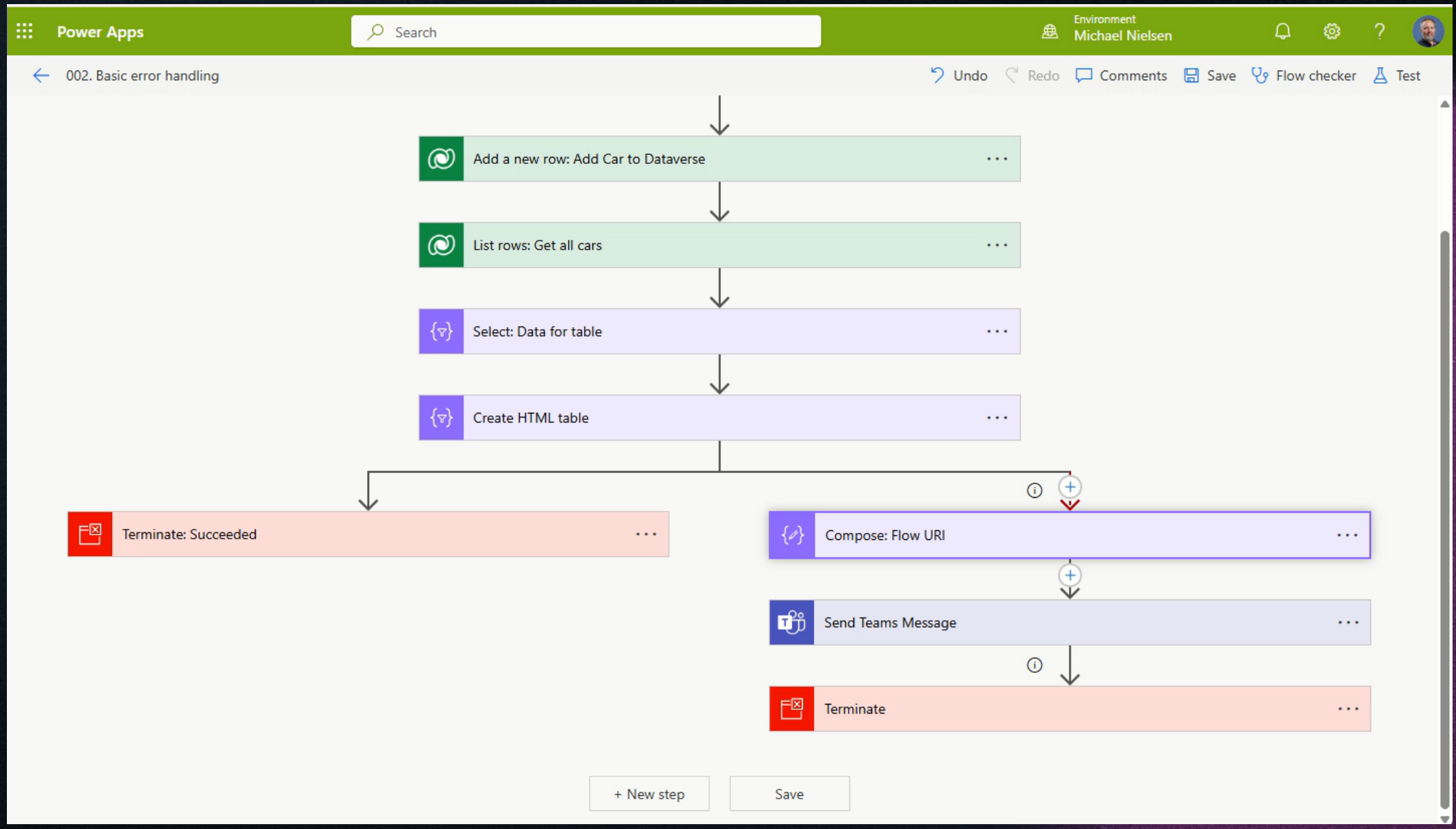
Right Branch – Failure Path



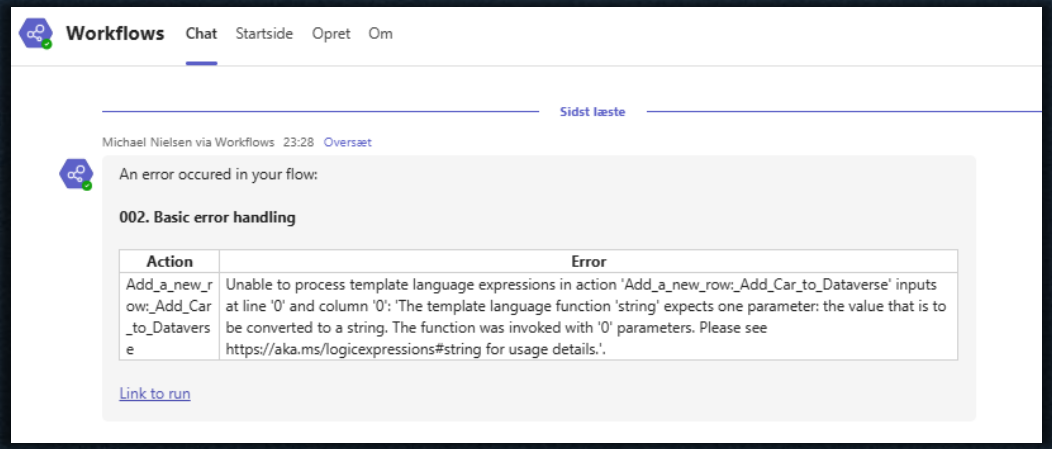
Syntax Error Example

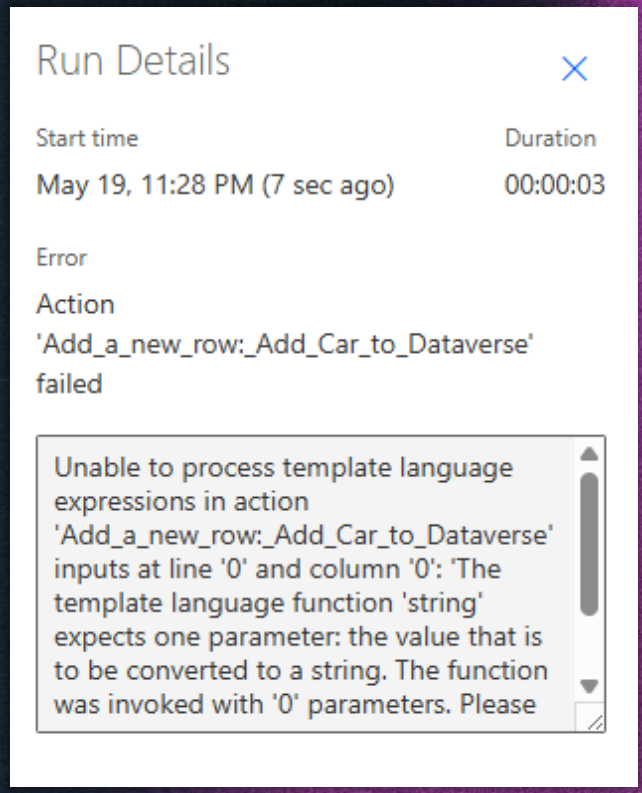


Correct syntax would be string('name of car')


Power Apps
Search
Environment
Michael Nielsen
002. Basic error handling
Undo
Redo
Comments
Save
Flow checker
Test
Add a new row: Add Car to Dataverse
List rows: Get all cars
Select: Data for table
Create HTML table
Terminate: Succeeded
Compose: Flow URI
Send Teams Message
Terminate
+ New step
Save

Messages received after error handling





Flow name

Michael Nielsen via Workflows 23:28 Oversæt

An error occured in your flow:

002. Basic error handling

Action	Error
Add_a_new_row:_Add_Car_to_Dataverse	Unable to process template language expressions in action 'Add_a_new_row:_Add_Car_to_Dataverse' inputs at line '0' and column '0': 'The template language function 'string' expects one parameter: the value that is to be converted to a string. The function was invoked with '0' parameters. Please see https://aka.ms/logicexpressions#string for usage details.'.

Link to run

Teams message received

Michael Nielsen via Workflows 23:28 Oversæt

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Link to run

Direct link into my failed flow

Michael Nielsen via Workflows 23:28 Oversæt

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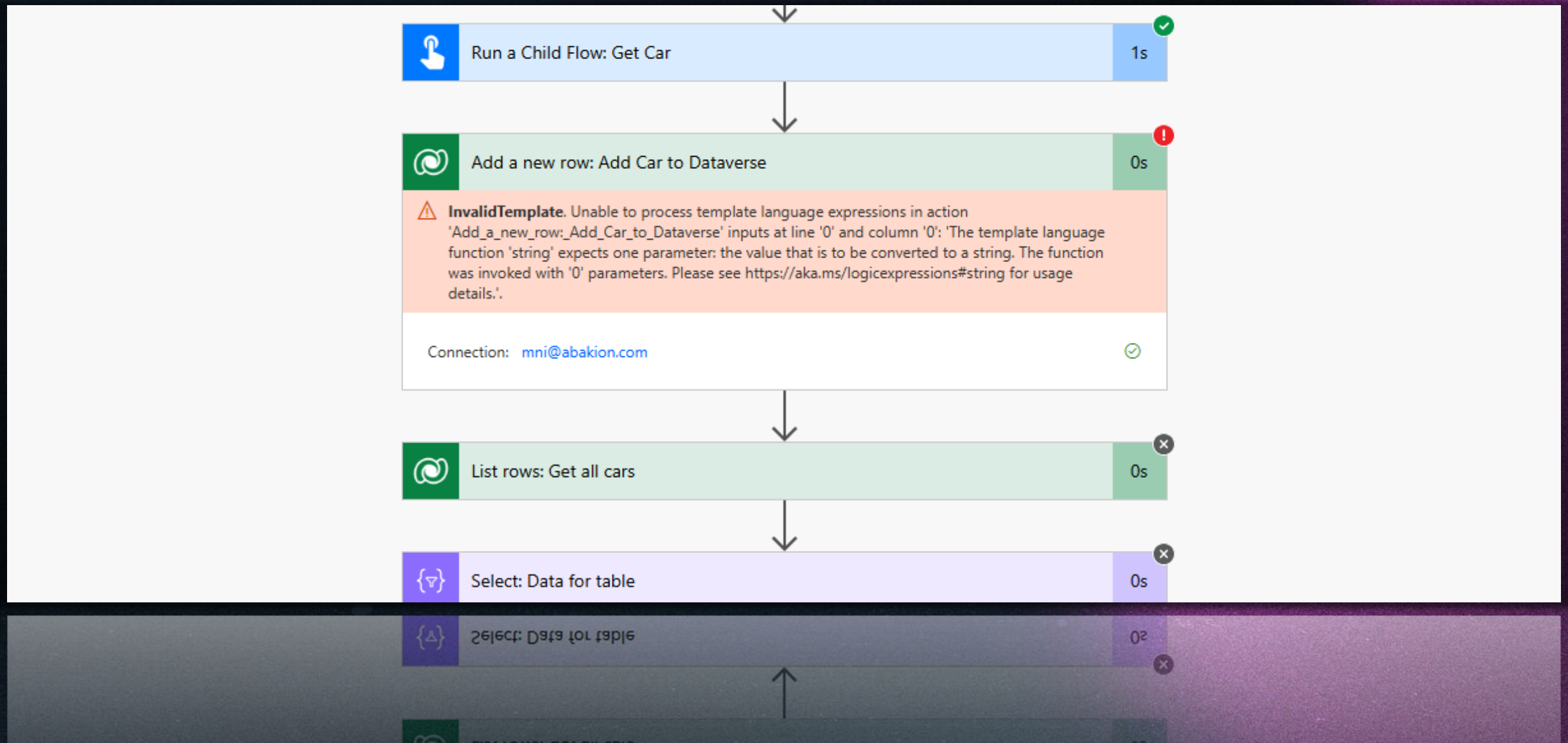
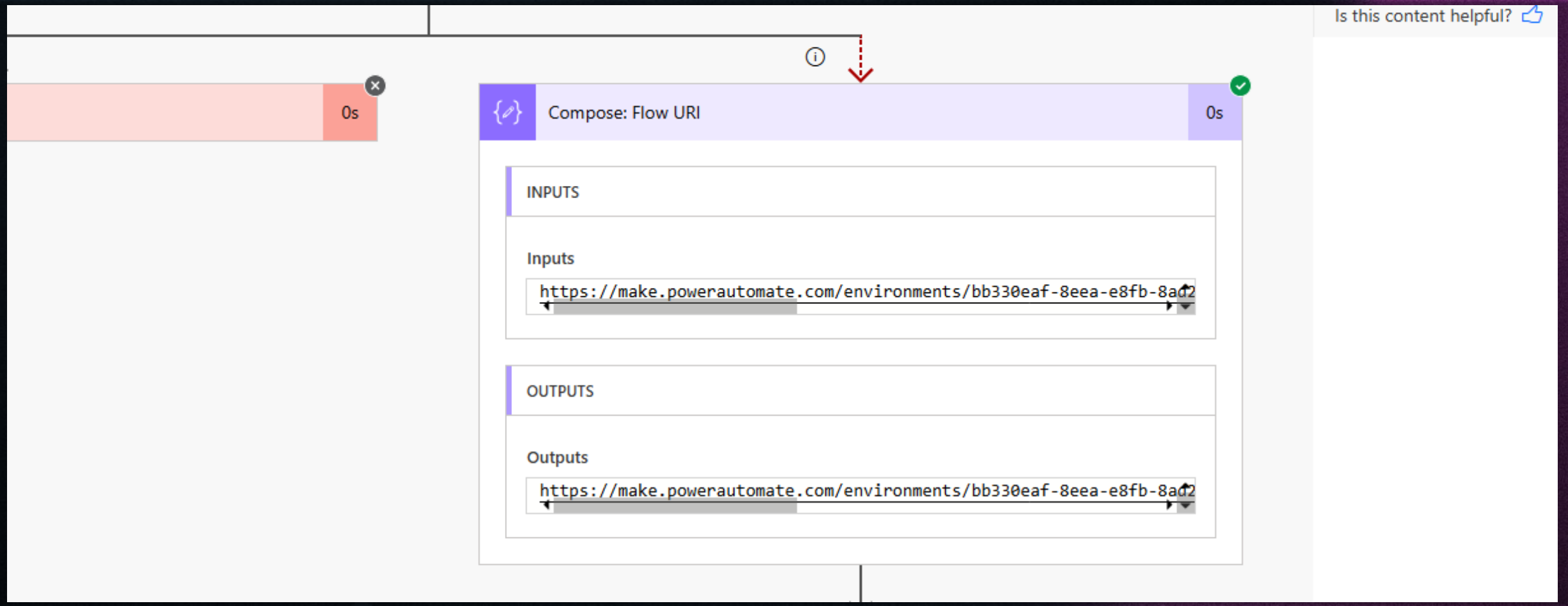
Link to run

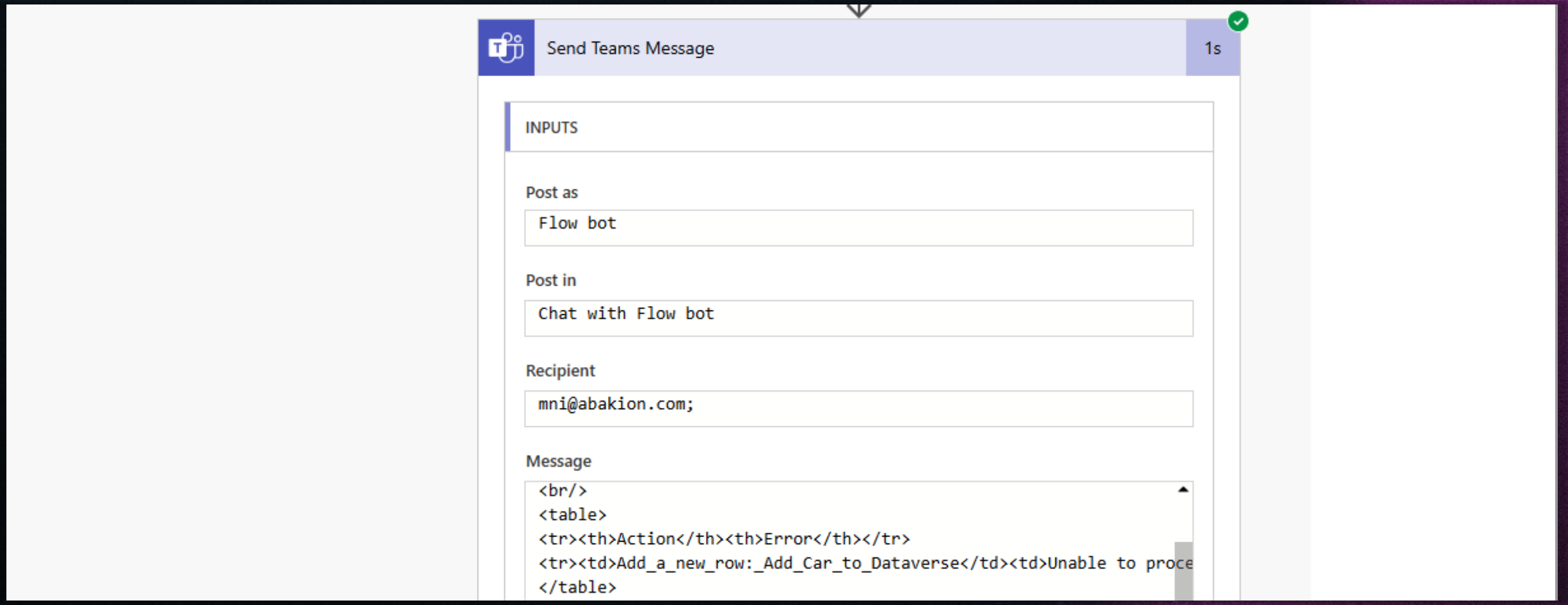
Error message within flow



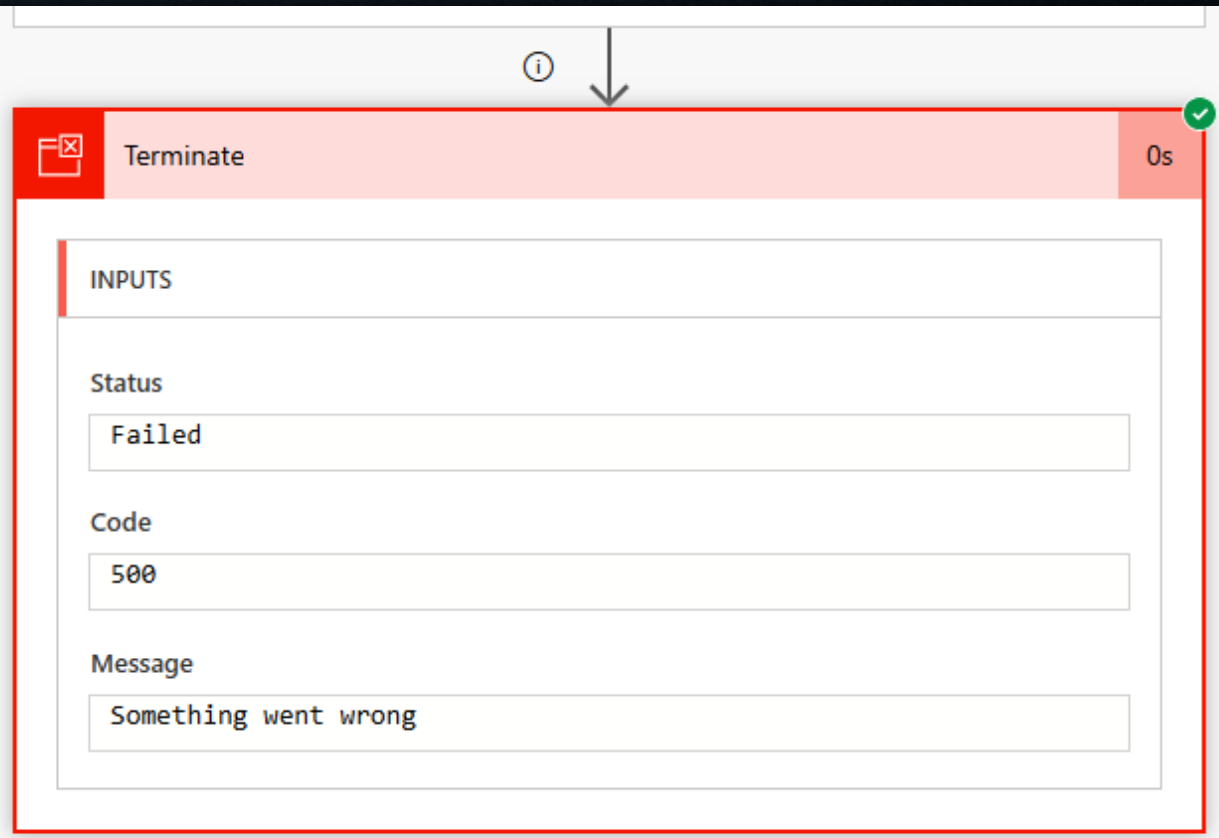
Create the URI for the actual flow run



Send the Teams message

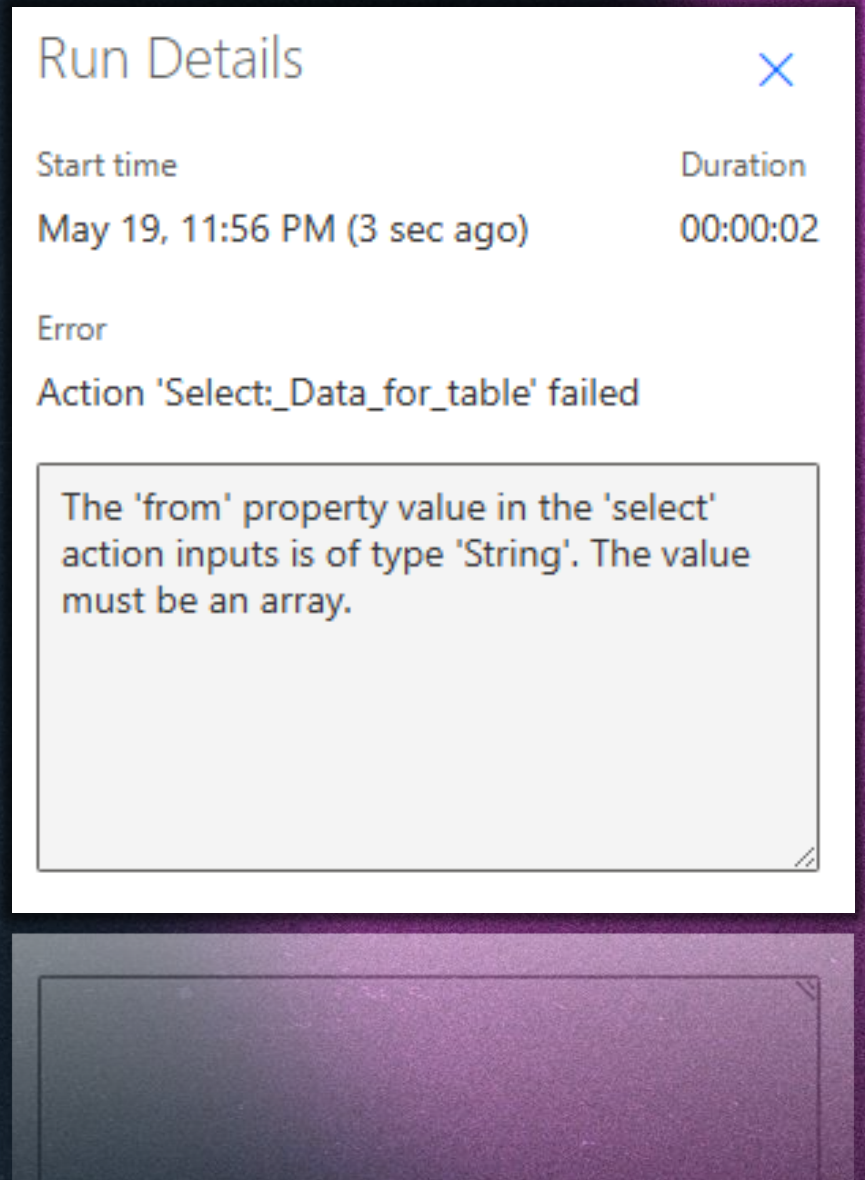


Terminate the flow as failed

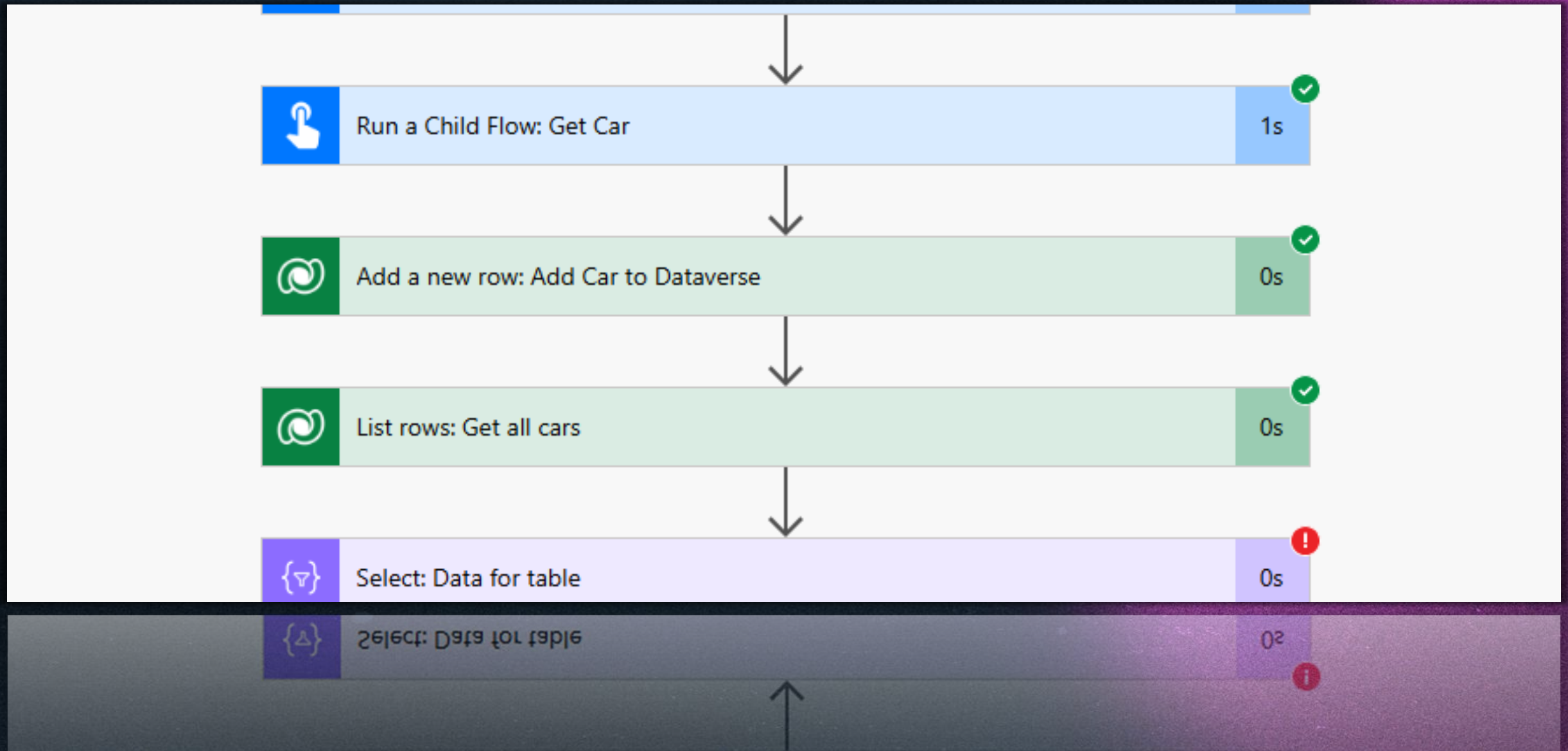


Unexpected Failure

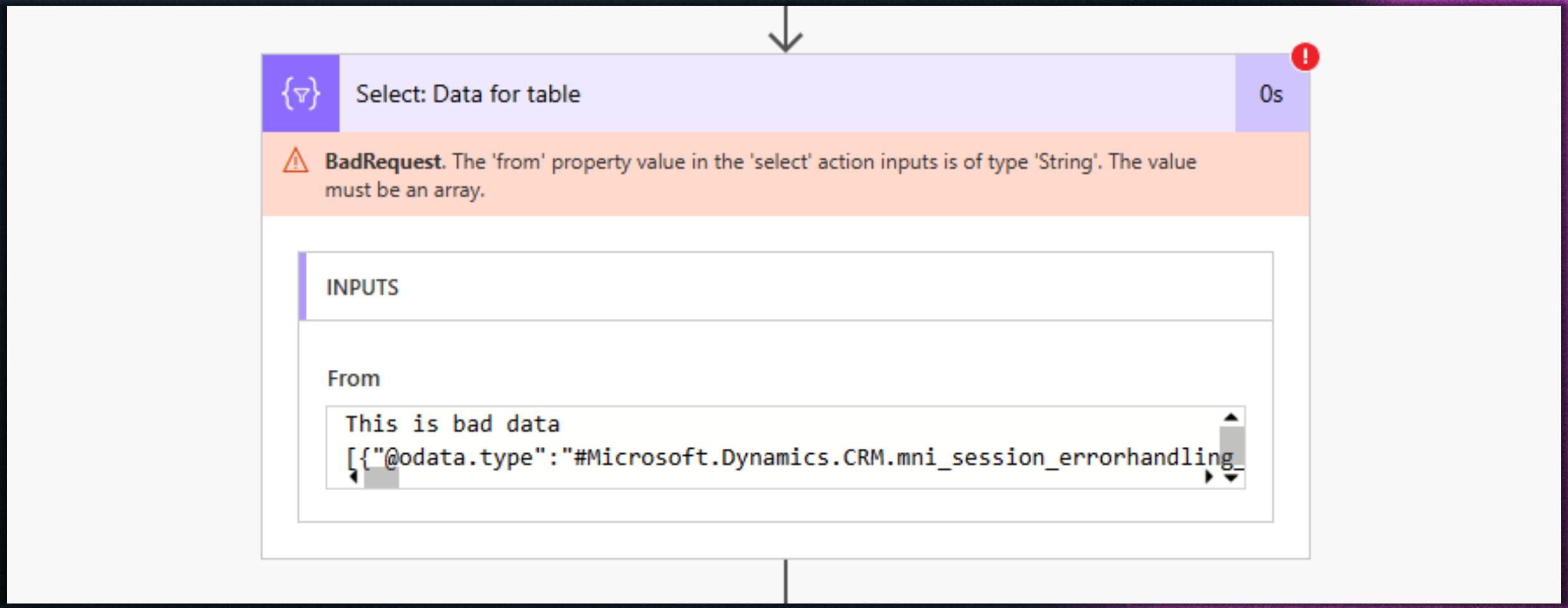
But what if another action fails than the one you expected?



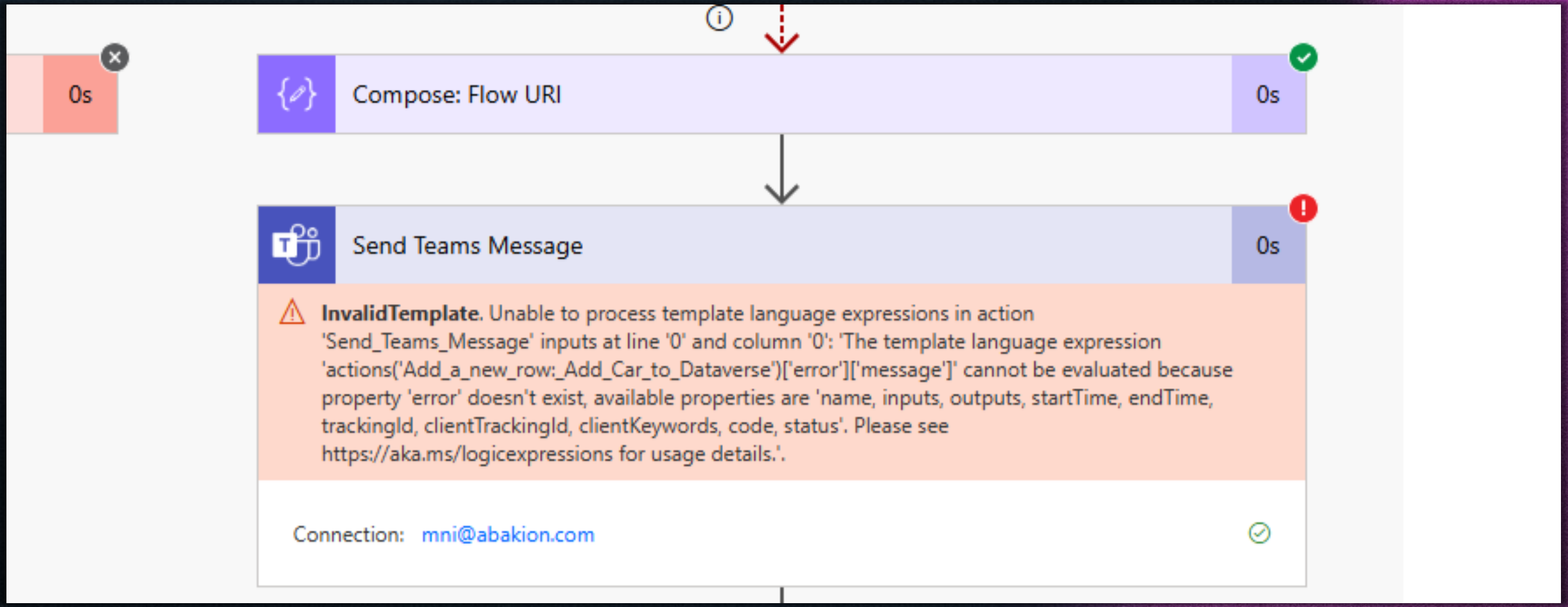
Failure is in another action



Bad Data was introduced to Select: Data for table



Basic error handling



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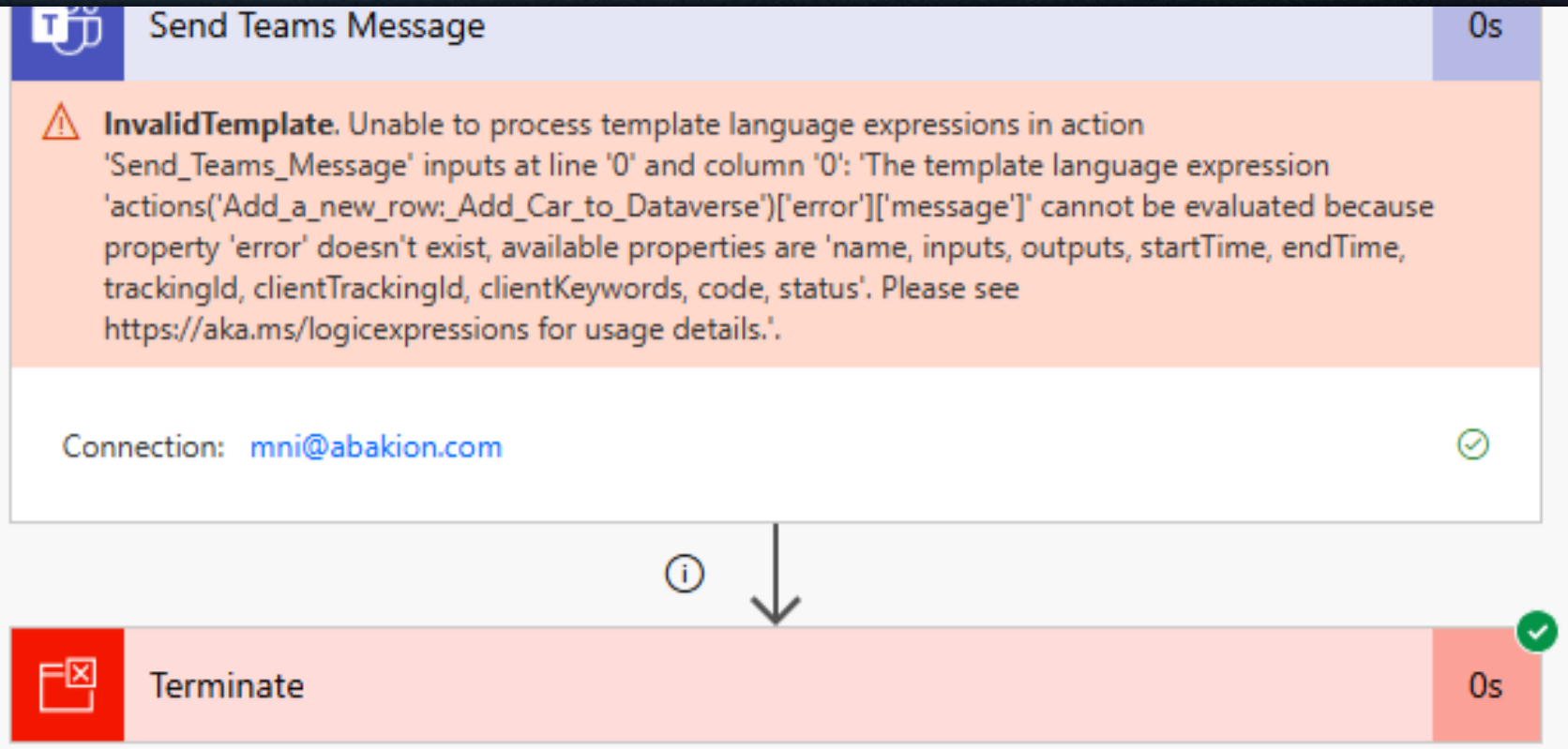


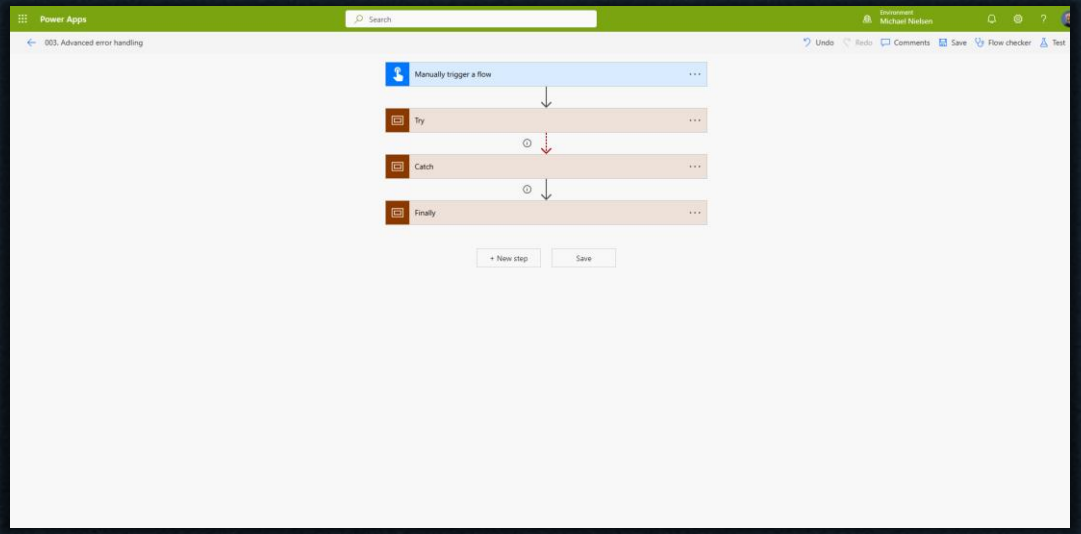
Implement Try-Catch-Finally

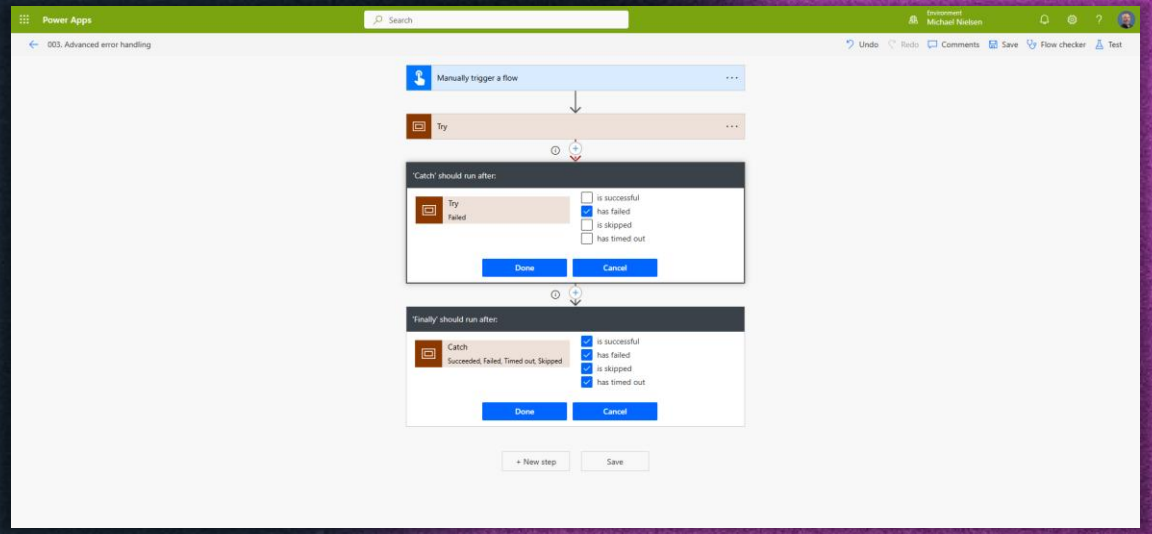
- **Try Scope**
  Encloses the logic where errors can occur.

- **Catch Scope**
  Catches and retrieves any errors that occur in the Try scope.

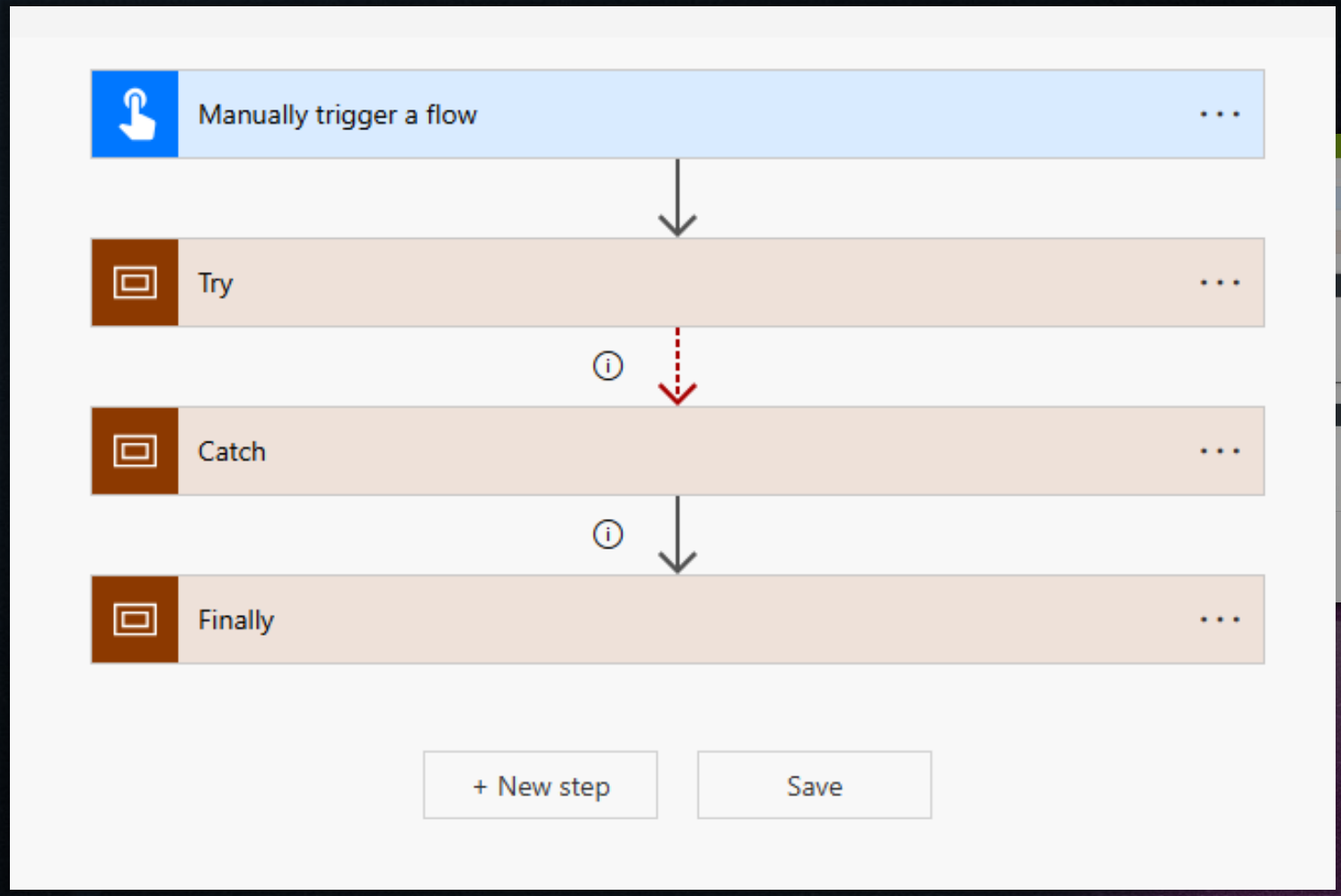
- **Finally Scope**
  Runs regardless of whether an error occurred or not, useful for cleanup operations.

Implement flow with Try-Catch-Finally logic





Implement flow with Try-Catch-Finally logic



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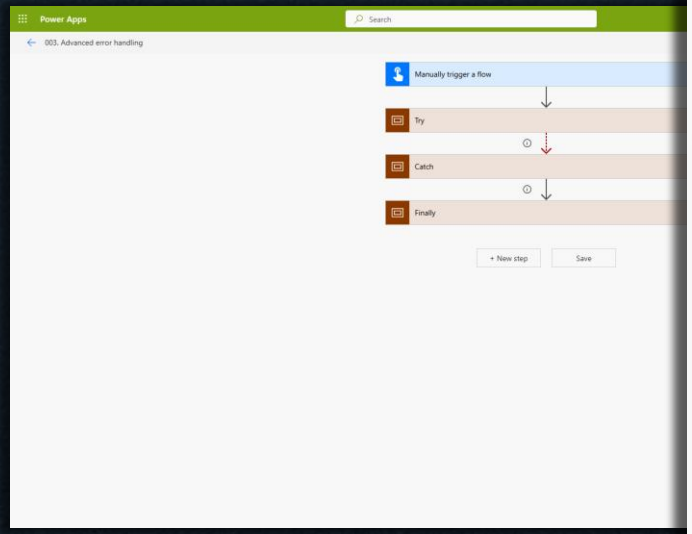
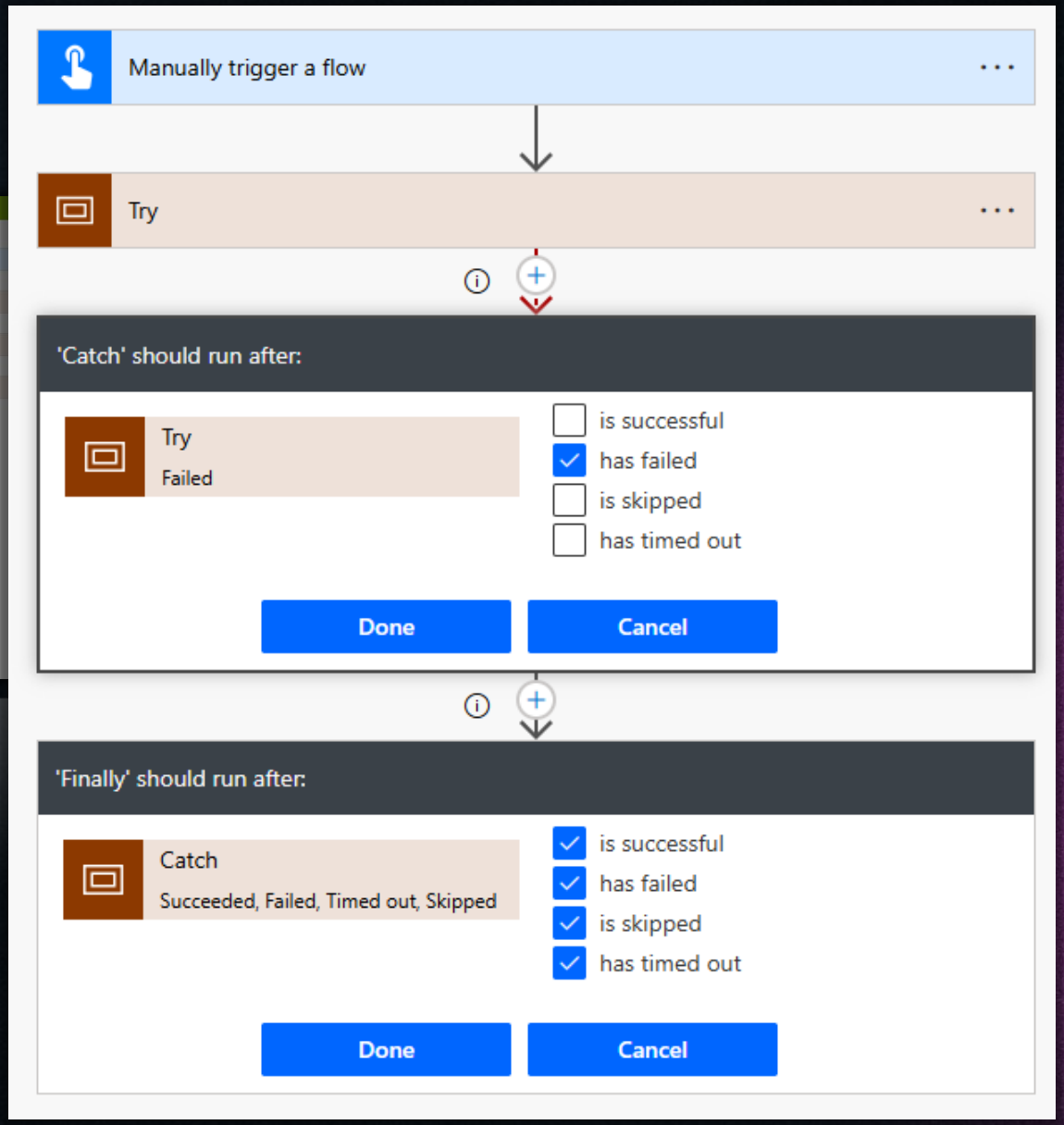
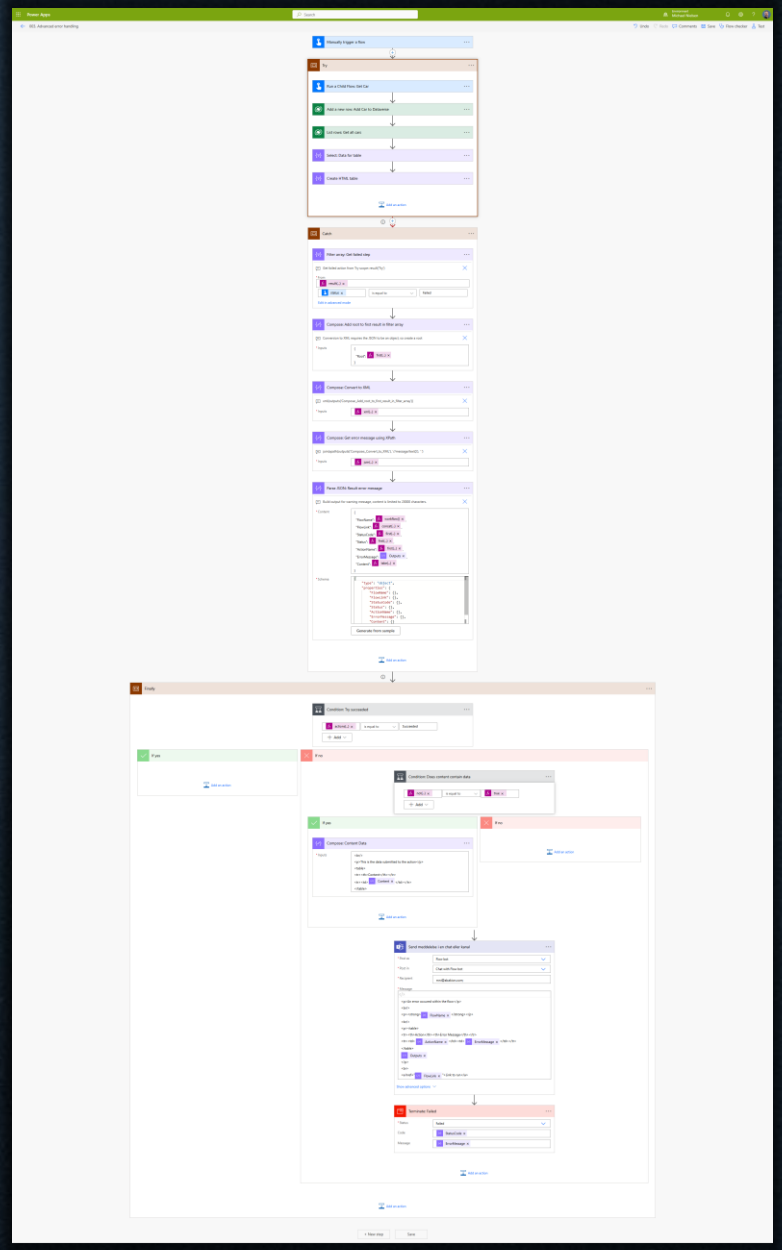
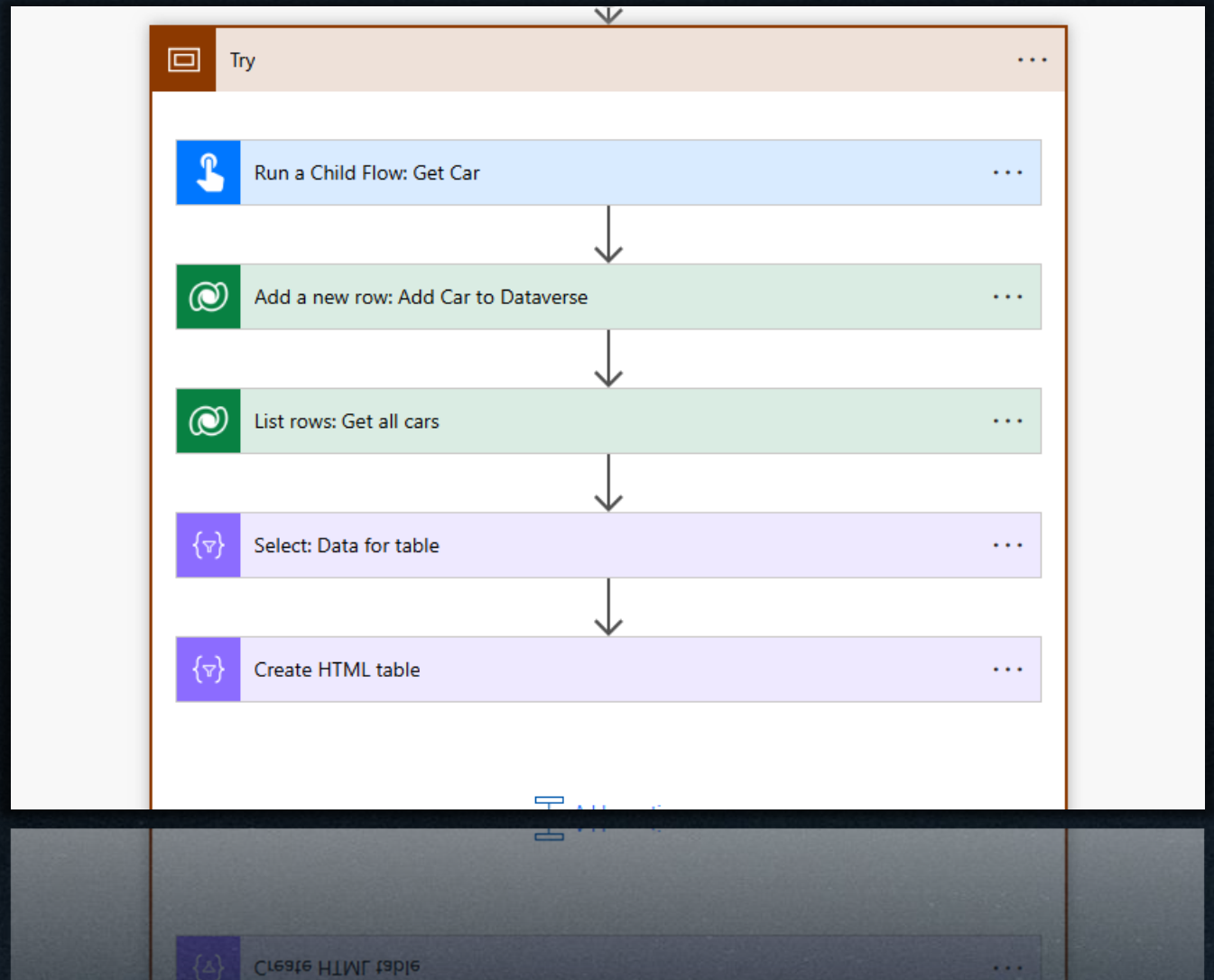




Full flow

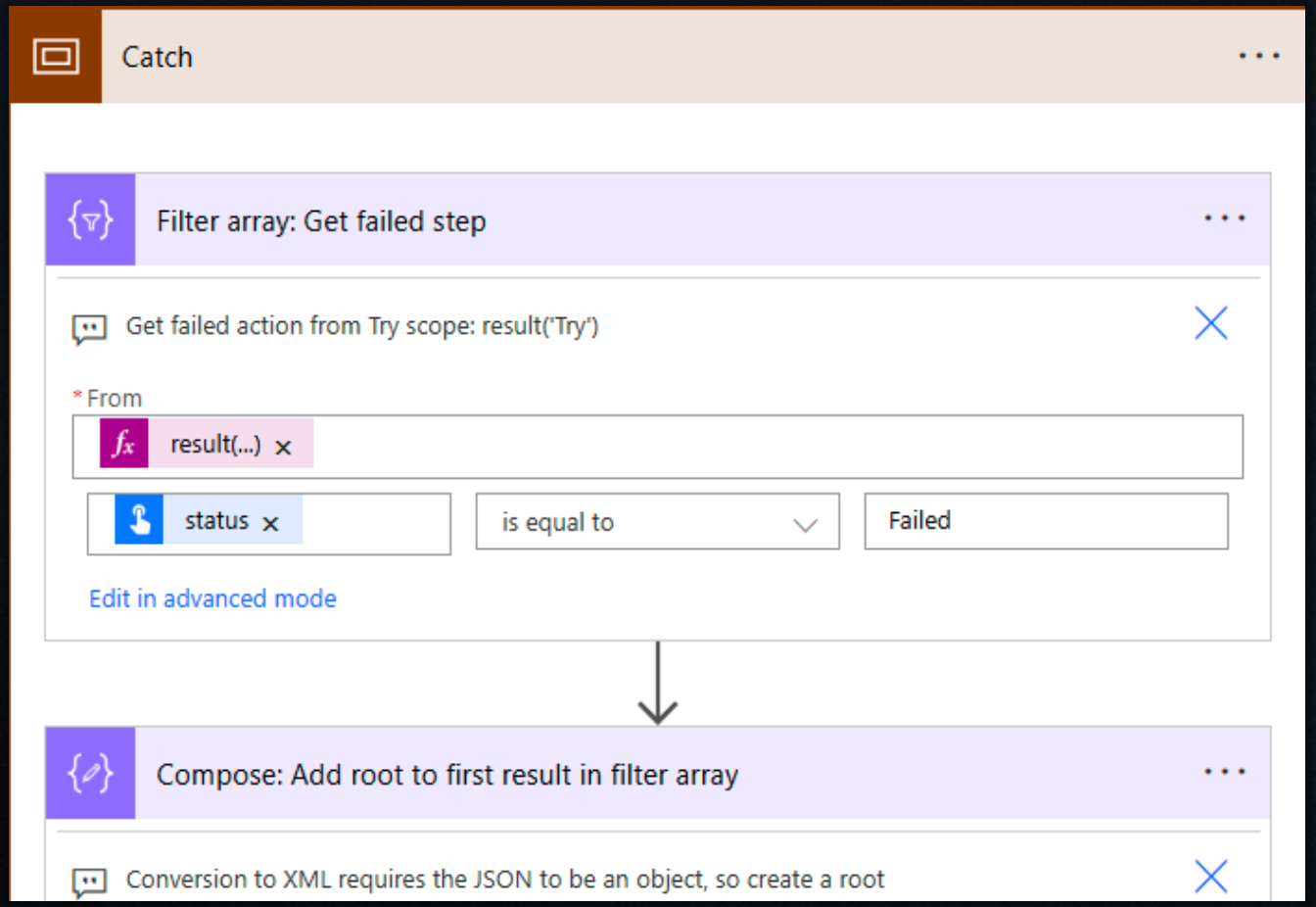


Try Scope



No changes to logic

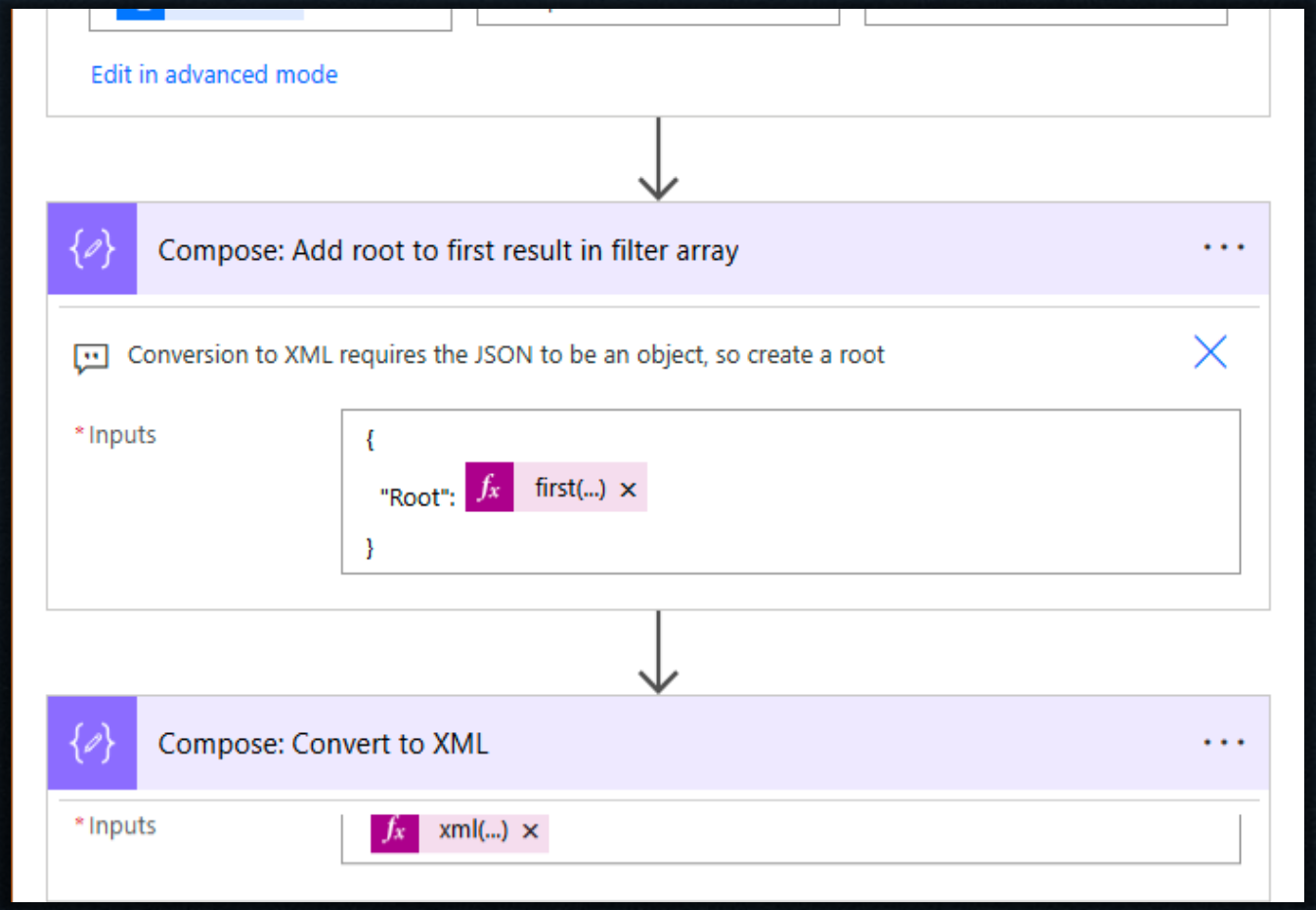
Catch Scope - Filter array



Filter actions within the Try scope container to identify failed steps.

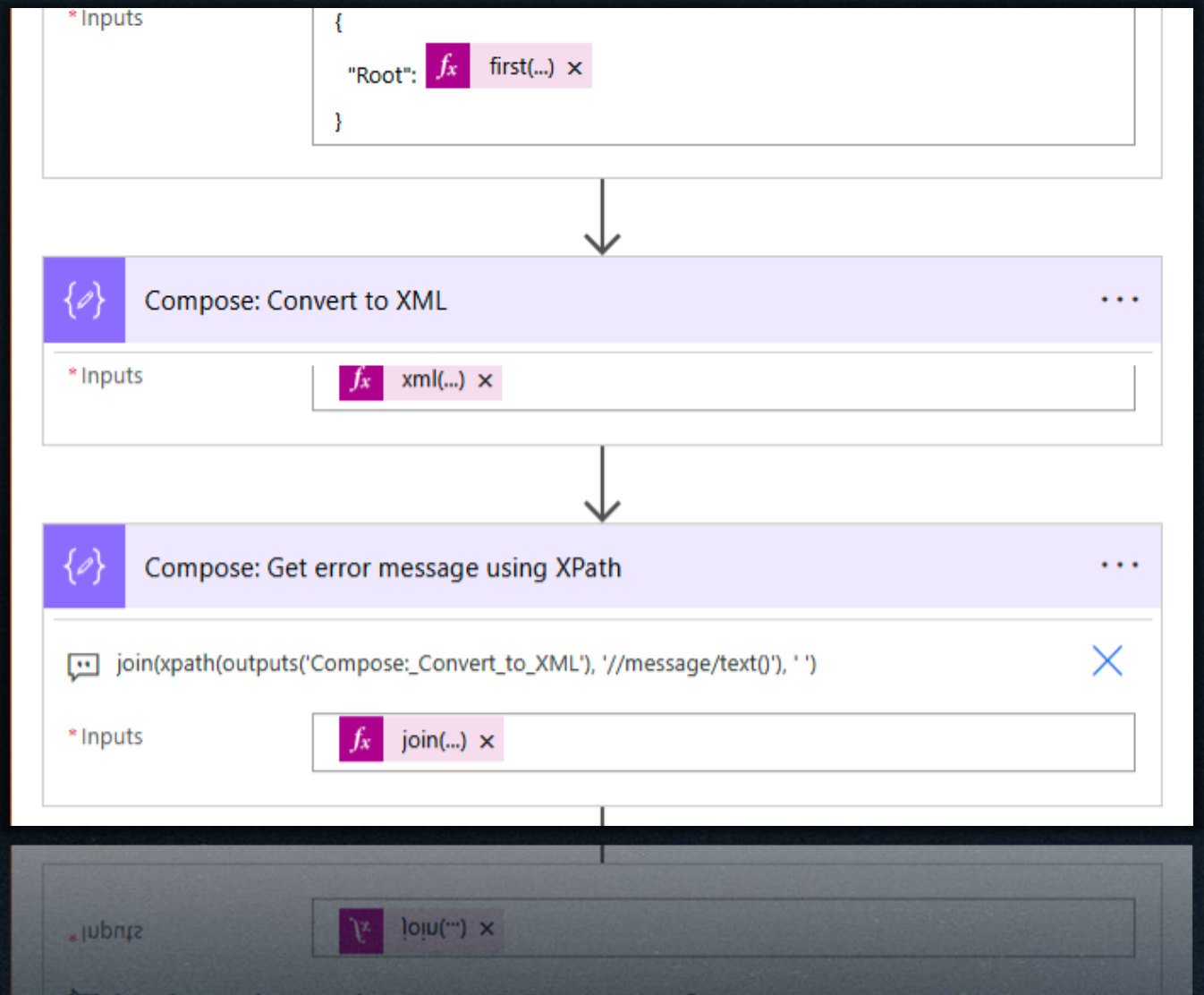
This process filters based on a status of 'Failed'.

Make new JSON object



Next, we need to format the data into an object to ensure proper conversion to XML.

Convert to XML

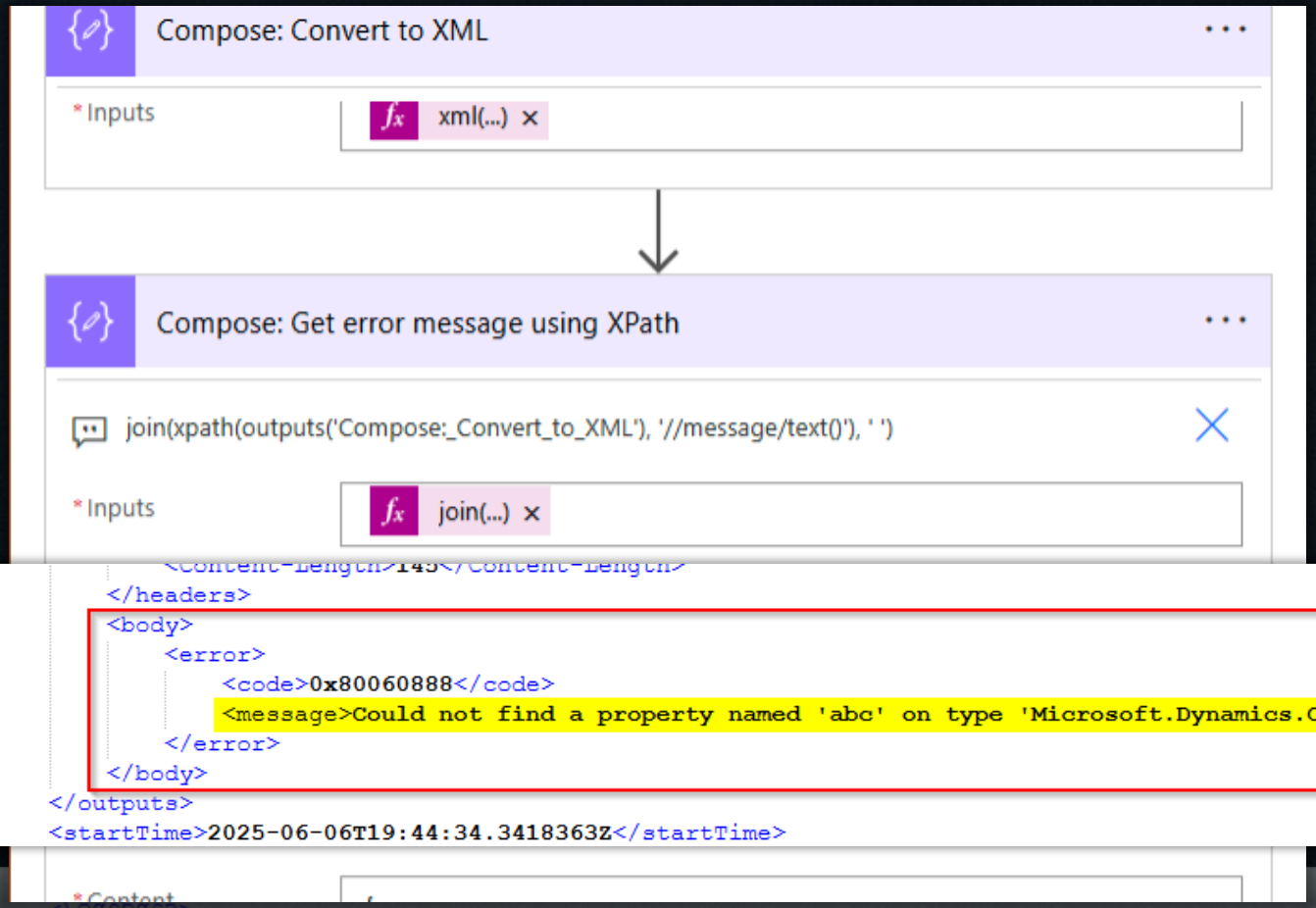


Convert the structured JSON object to XML using the xml() function.

XPATH Magic

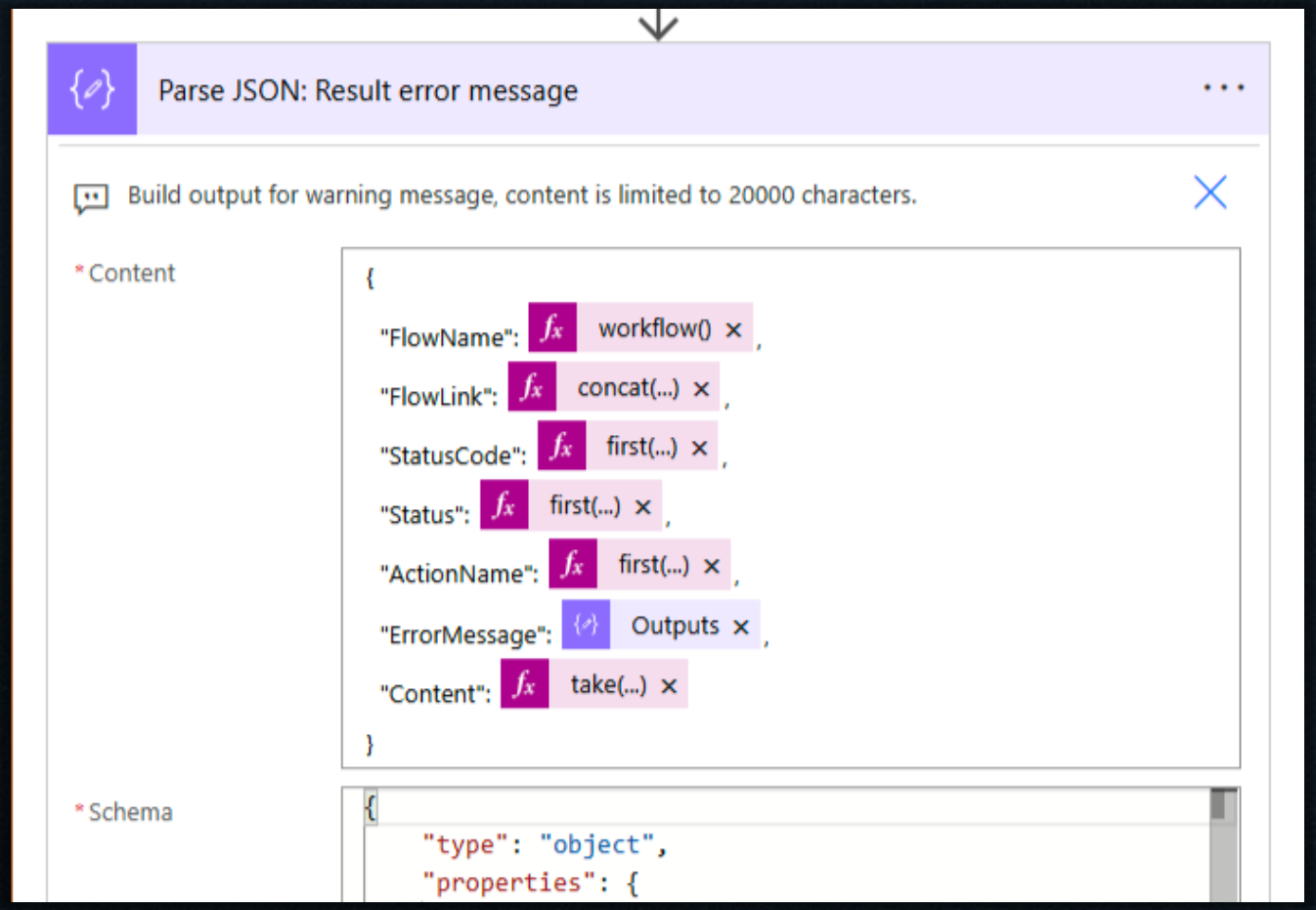
Use XPath to extract all <message> elements from the XML and join them into a single string.

XPATH Magic



Use XPath to extract the contents of all <message> elements from the XML. This allows us to retrieve detailed error messages for logging or notifications.

Result error object



A custom object containing all necessary details for error message.

CATCH SCOPE – Commands (1)

FlowName

```
workflow().tags.flowDisplayName
```

FlowLink

```
concat('https://make.powerautomate.com/environments/',workflow().tags.environmentName,'/flows/',workflow().name, '/runs/',workflow().run.name)
```

StatusCode

```
first(xpath(outputs('Compose:_Convert_to_XML'), '//code/text()'))
```

Status

```
first(xpath(outputs('Compose:_Convert_to_XML'), '//status/text()'))
```

CATCH SCOPE – Commands (2)

ActionName

```
first(xpath(outputs('Compose:_Convert_to_XML'), '//name/text()'))
```

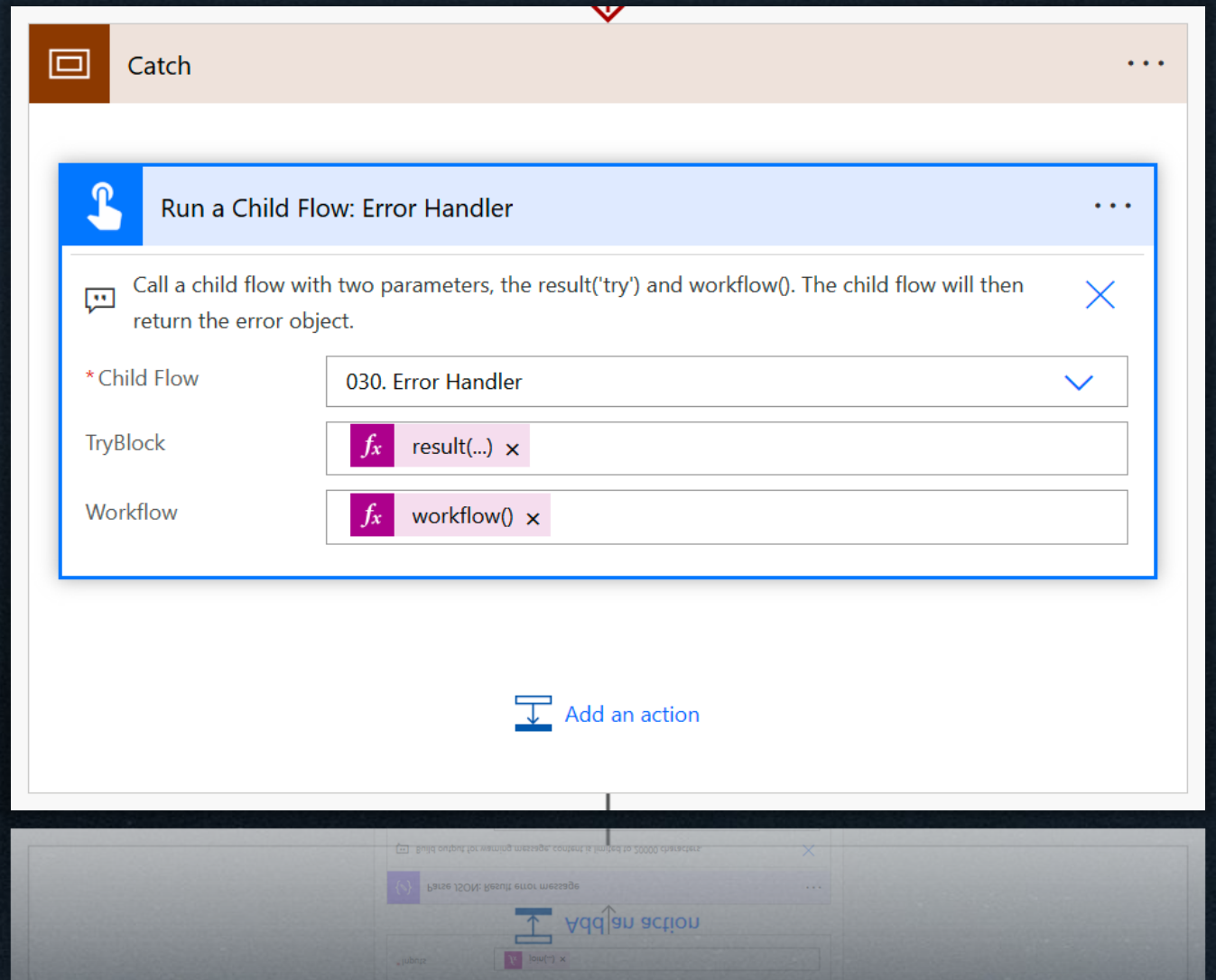
ErrorMessage

```
outputs('Compose:_Get_error_message_using_XPath')
```

Content

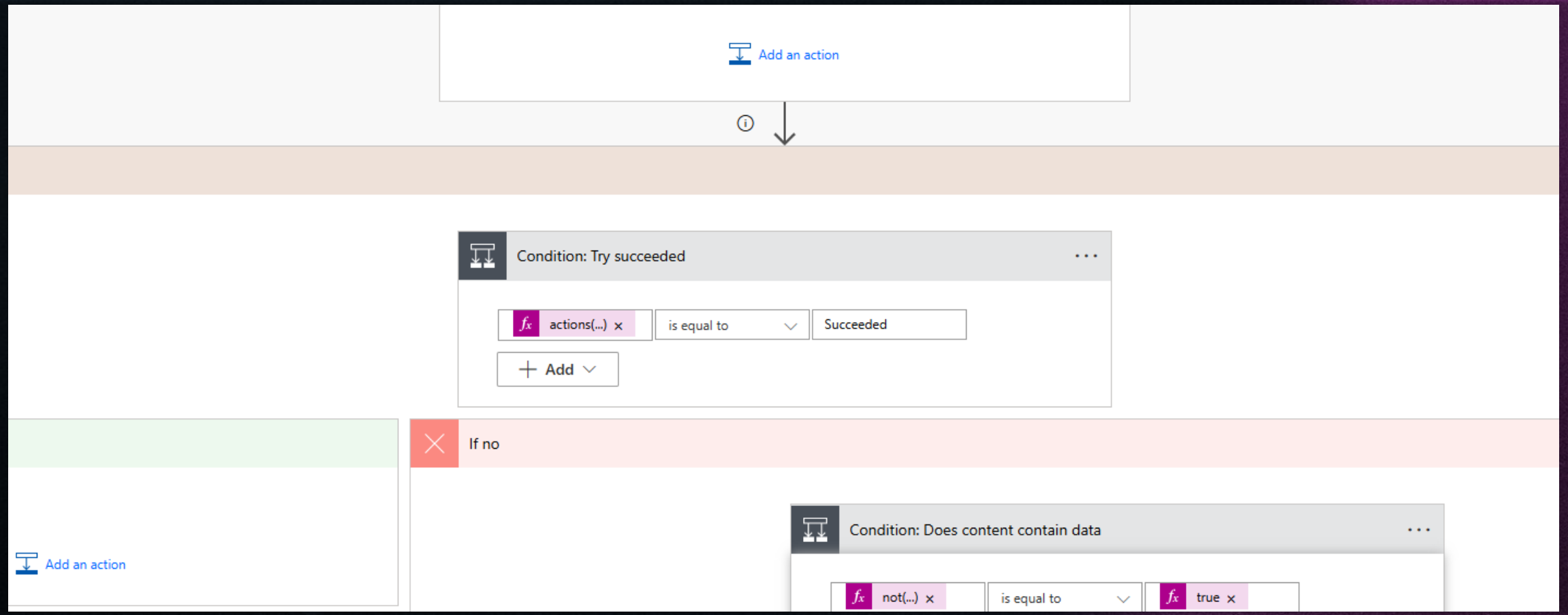
```
take(string(first(body('Filter_array:_Get_failed_step'))), 20000)
```

CATCH SCOPE – Child flow

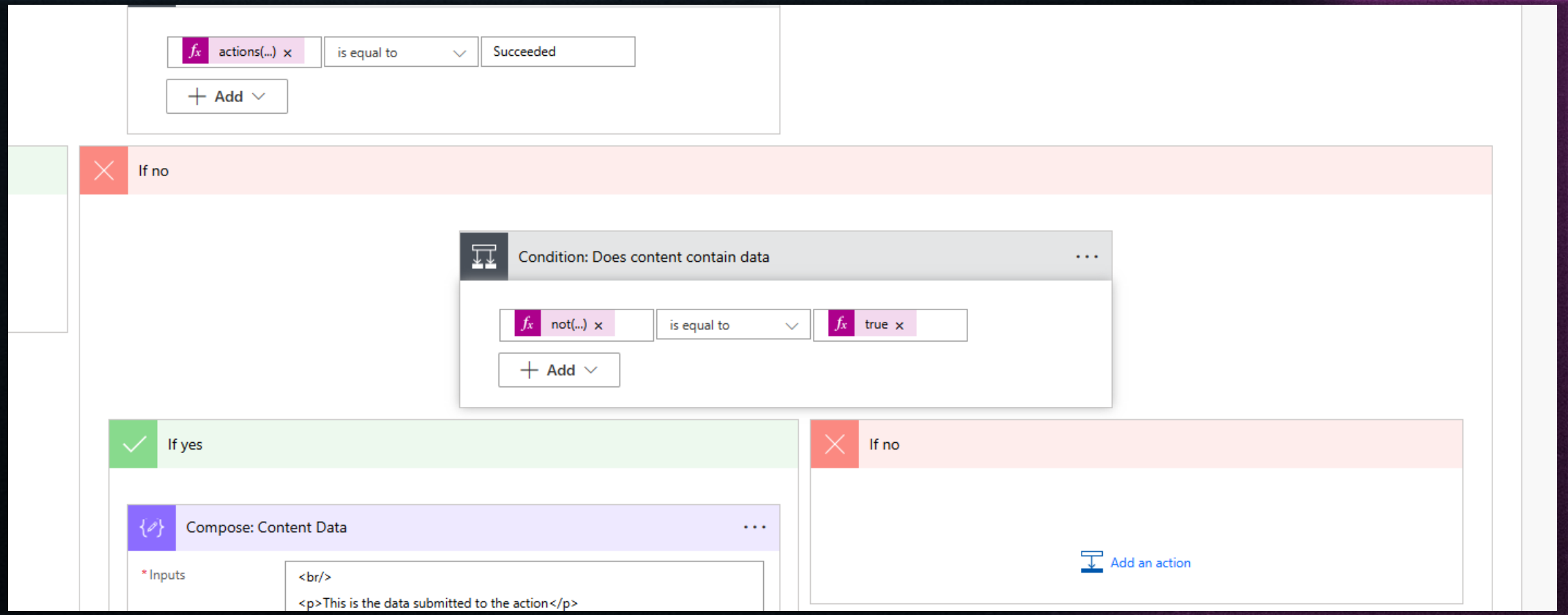


Make the Catch logic into a child flow that can be re-usable across all of your flows.

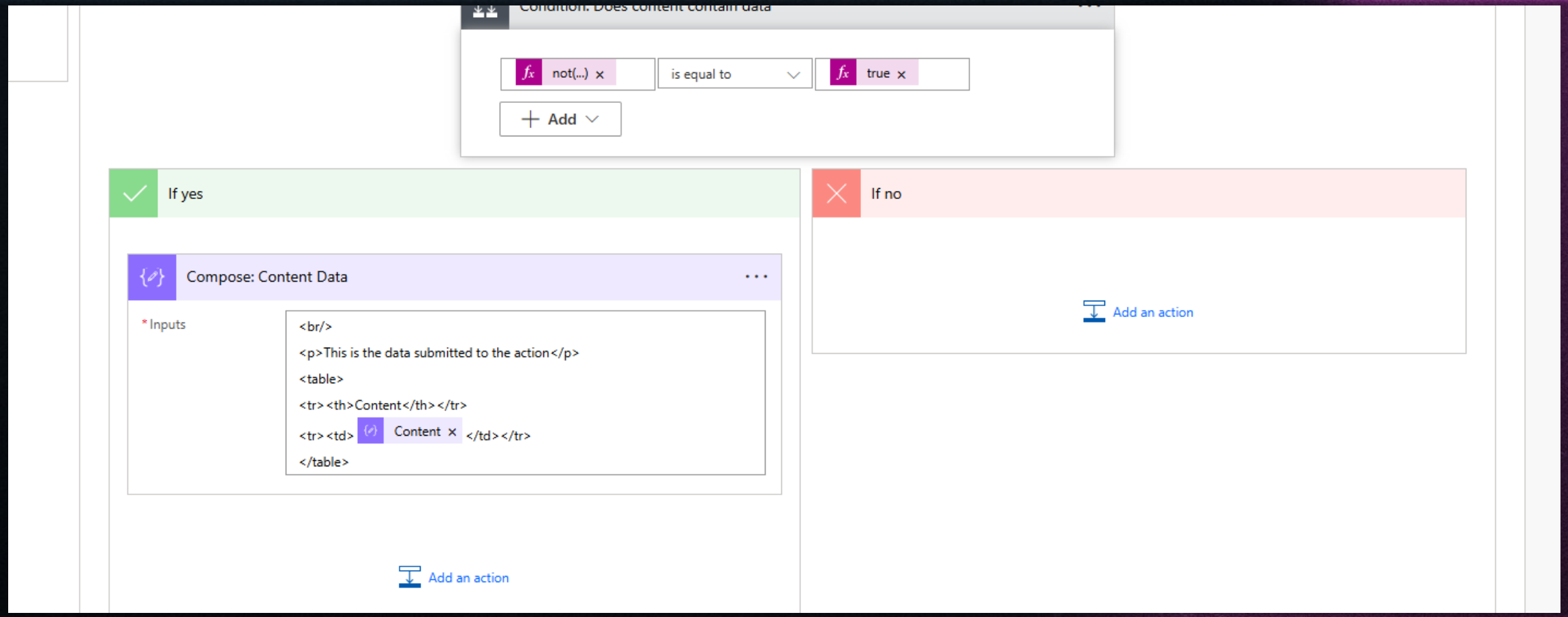
FINALLY SCOPE – Was Try successful?



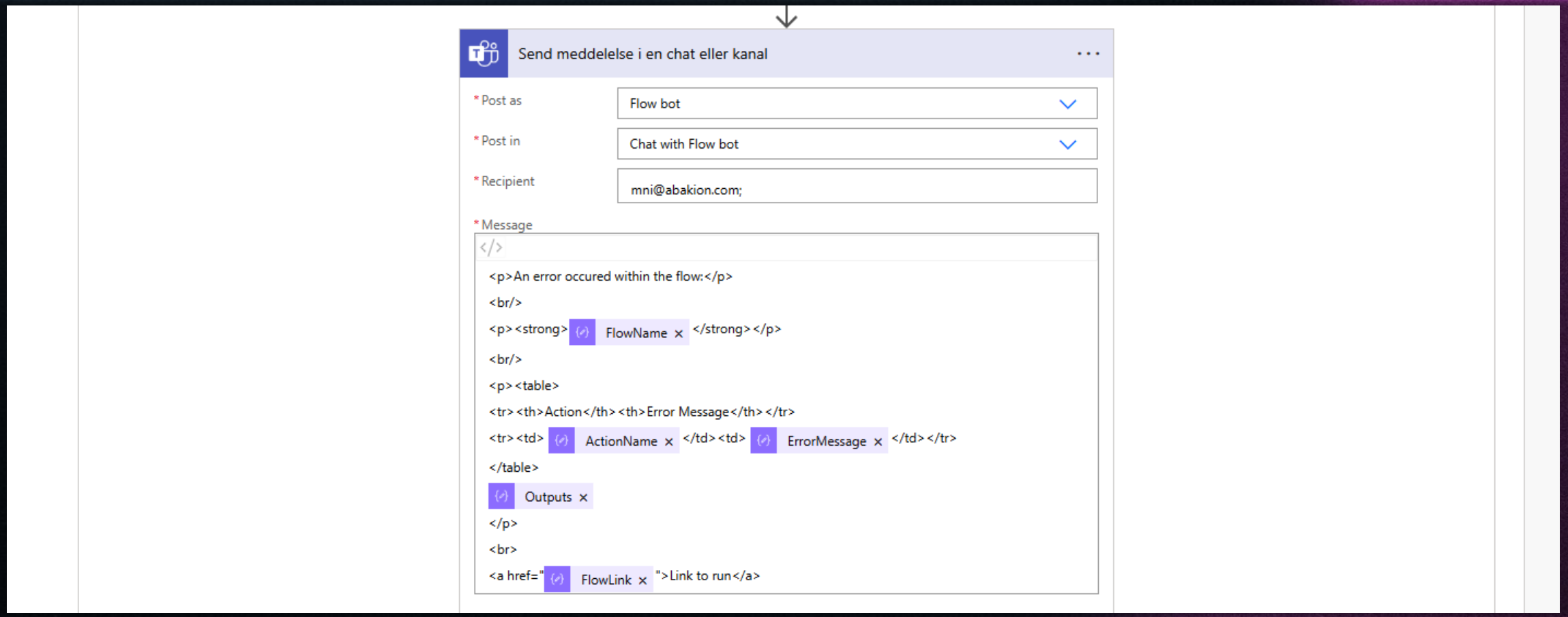
FINALLY SCOPE – Try failed, is there content



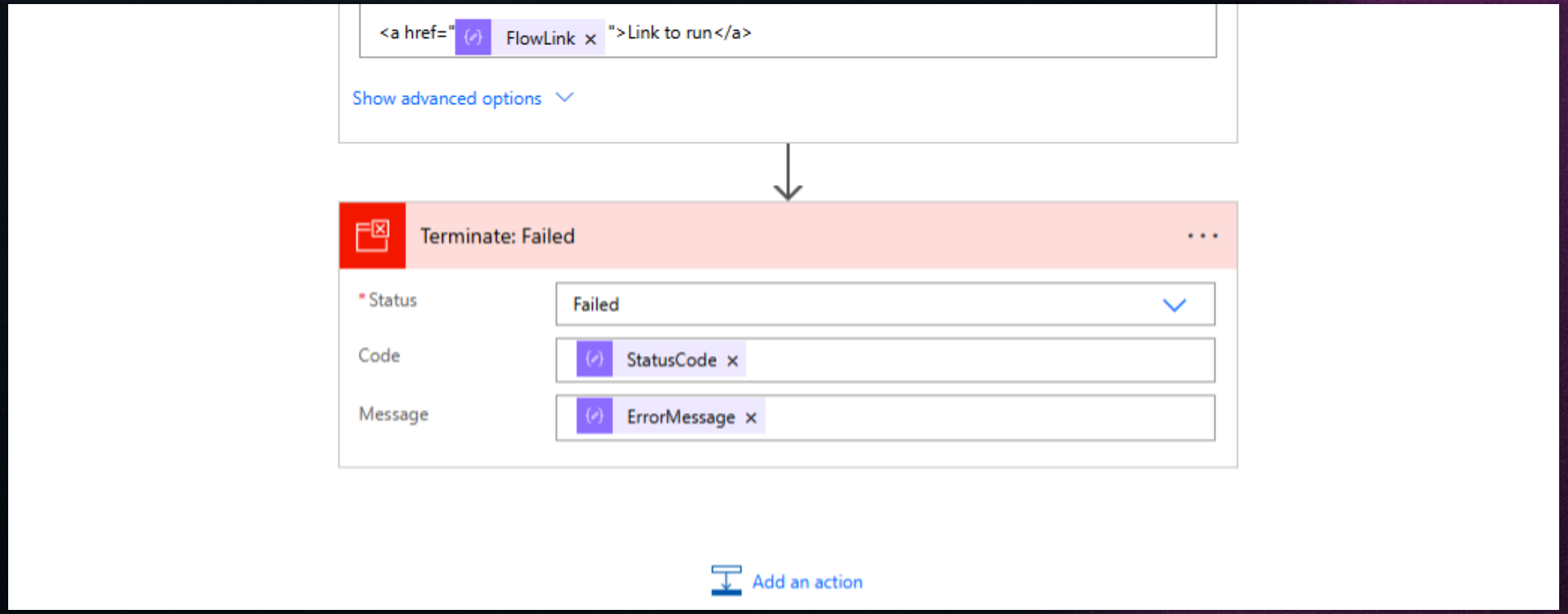
FINALLY SCOPE – Format content



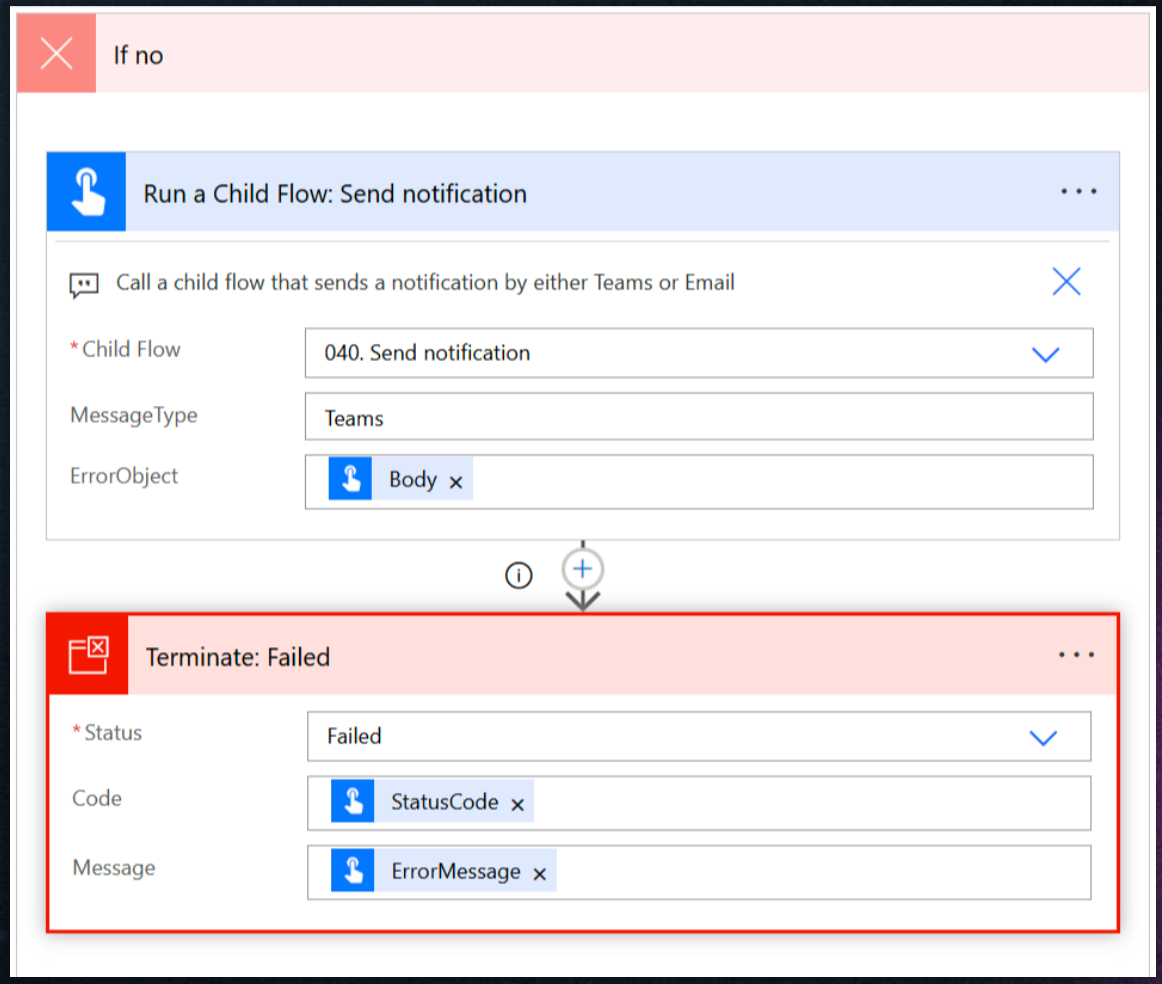
FINALLY SCOPE – Send Teams message



FINALLY SCOPE – Terminate as failed



Child flow for sending notification



This far

- How to setup Try-Catch-Finally
- How to extract the error message and related details
- Use dynamic content to create custom error messages

What is not covered in this kind of error handling

- Loops and conditions are difficult to handle

An action failed. No dependent actions succeeded.

An error occured within the flow:

005. Flow with For Each and Switch - Without additional error handling.

Action	Error Message
Apply_to_each:_Direction	An action failed. No dependent actions succeeded.

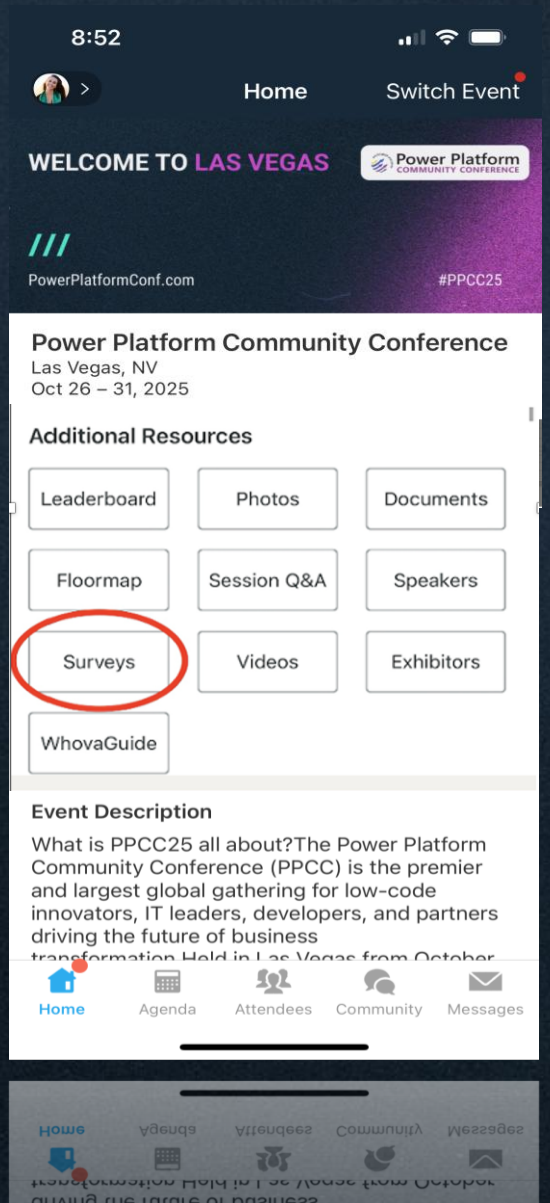
This is the data submitted to the action

Content
{"name":"Apply_to_each:_Direction","inputs":{"foreachItems":[{"Direction":"East"},{"Direction":"West"},{"Direction":"Nowhere"},{"Direction":"East"},{"Direction":"West"},{"Direction":"Nowhere"}]},"inputsMetadata":{"foreachItemsCount":6},"startTime":"2025-06-18T22:51:23.3137558Z","endTime":"2025-06-18T22:51:26.1082844Z","trackingId":"f3f6430d-da8c-44d5-a160-c4281fe962b9","clientTrackingId":"08584513198026585602344733126CU216","clientKeywords":["testFlow"],"code":"ActionFailed","status":"Failed","error":{"code":"ActionFailed","message":"An action failed. No dependent actions succeeded."}}

Link to run

Lets look at it live

Session Feedback Surveys



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- *Click Session Feedback.*
- *Scroll down to find this session title.*
- *Complete the session feedback survey.*
- *Finally, click 'Submit'*
- *It's just that easy!*

THANK YOU

Nicolai Schjørman
Business Unit Manager,
Abakion A/S, Denmark

Michael Nielsen
Senior Power Platform Consultant
Abakion A/S, Denmark

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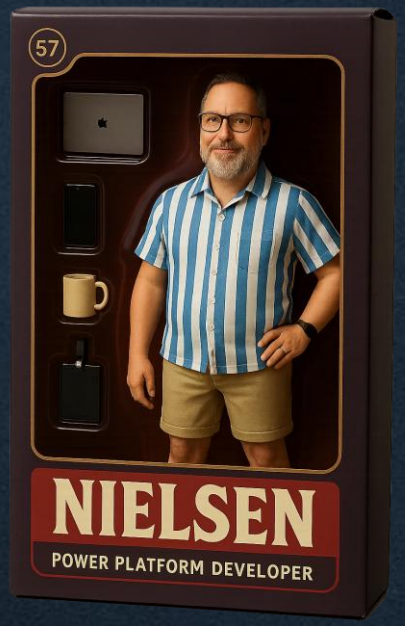

Nicolai Schjørmann
Business Unit Manager
Abakion A/S, Denmark

Michael Nielsen
Senior Power Platform Consultant
Abakion A/S, Denmark

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