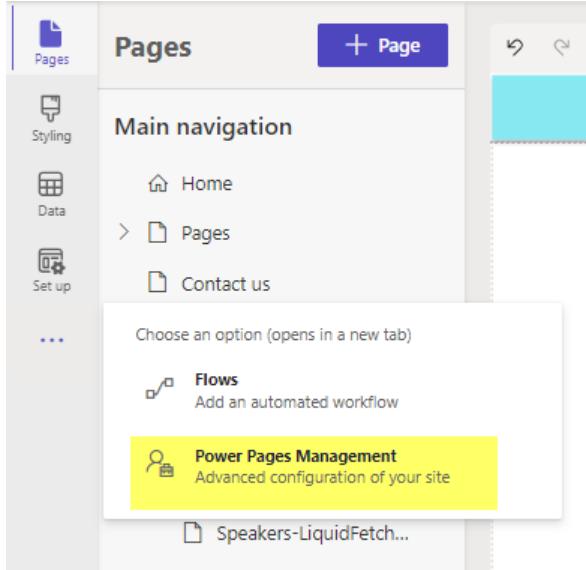


## Power Pages Masterclass (by Arpit Shrivastava / Piotr Rusak)

### Lab 002 Intermediate + Advanced Design

#### Part 1 – Power Pages Management (Model Driven App) - introduction

- 1) Open Power Pages Design Studio and start Editing Website that you were editing in Lab 001
- 2) Locate 3 dots in Left Nav Bar => open flyout menu and select Power Pages Management



- 3) Power Pages Management Model Driven app will be opened in new tab of your browser

This Model Driven App contains all configuration tables used by Websites in your environment.

If you created more than 1 Website you will see here data from multiple websites.  
Be aware of this: and always locate entries connected specifically with Website which was designed in Lab 001

- 4) Exercise: Review all 3 sections in Power Pages Management app with all tables included:

#### Website (6 tables)

Websites

Page Templates

Redirects

Site Markers

Site Settings

Settings

## **Content (9 tables)**

Content Snippets

Basic Forms

Lists

Shortcuts

Web Files

Multistep Forms

Web Link Sets

Web Pages

Web Templates

## **Security (8 tables)**

Contacts

Table Permissions

Column Permissions

Invitations

Publishing State Transition Rules

Web Page Access Control Rules

Web Roles

Website Access Permissions

Trainer will shortly describe each table / section intended use 😊

## Part 2 – Power Pages Management (Model Driven App) – edit some of the config tables

- 1) Create 2 sample Content Snippets – to be used in code later

Open Content Snippets  
Create New Content Snippet (Text type)

### New Content Snippet - Unsaved

#### General

Name	*	BalticSummit
Website	*	<a href="#">Power Platform Masterclass - pp4ever</a>
Display Name	---	
Type	Text	
Content Snippet Language	English	

Value + Hello World Baltic Summit!

Create New Content Snippet (HTML type)

### BalticSummitHTML - Saved Content Snippet

#### General Related ▾

Name	*	BalticSummitHTML
Website	*	<a href="#">Power Platform Masterclass - pp4ever</a>
Display Name	---	
Type	HTML	
Content Snippet Language	English	

#### Value (HTML)

```
1 <div>Hello World <span style="color: #9DC4FF;">Baltic</span> <span style="color: #C7F7EC;">Summit</span>!</div>
```

We will use those snippets later 😊

2) Open Basic Forms section

In Lab 001 we created Basic Form “Speaker Form” from Power Pages Design Studio – you should find it on list with Basic Forms

	Name ↑ ▾	Website ▾	Table Name ▾	Mode ▾	Form Name ▾
	simple contact us form	Power Pla...	feedback	Insert	simple contact us ...
	Speaker Form	Power Pla...	bs_speaker	Insert	Portal Speaker Form

Open this form

The screenshot shows the 'Speaker Form' edit screen in Power Pages Design Studio. At the top, there's a toolbar with various icons like Save, New, Delete, Refresh, and Check Access. Below the toolbar, the title bar says 'Speaker Form 1 ed' and 'Basic Form'. The tabs at the top are General, Form Options (which is selected), On Success Settings, Additional Settings, Associated Table Reference, Basic Form Metadata, and Related. Under the 'Form Options' tab, there's a section for 'Additional Settings'. One of the settings, 'Auto Generate Steps From Tabs', is highlighted with a yellow box and has a red circle with the number 3 above it, indicating it's the current focus.

Change setting: “Auto Generate Steps From Tabs”

From Power Pages Design Studio => Sync + Preview page “Speakers-BasicForm”

There are much more settings that you can use in Basic Form – play with them after workshop.

### 3) Open Multi Step Forms section

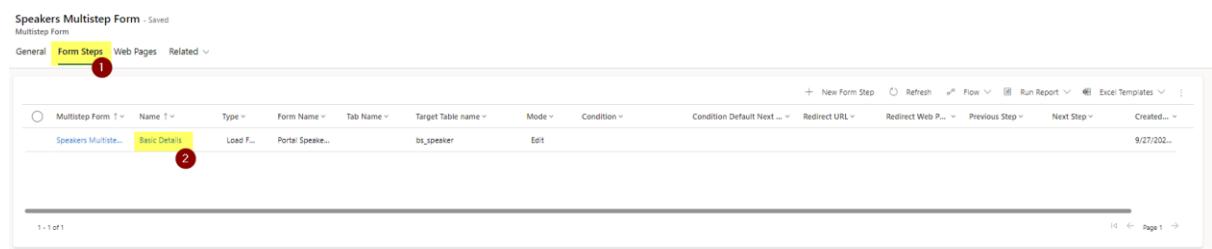
In Lab 001 we created Multi Step Form “Speakers Multistep Form” from Power Pages Design Studio (the one that did not work) – now it is time to fix this.



Name	Website	Start Step	Authentication Required
Speakers Multistep Form	Power Platform Masterclass - po4ever	Basic Details	

Open Speakers Multistep Form

Go to Form Steps and Open Basic Details Step for Multistep Form



Step	Type	Form Name	Tab Name	Target Table name	Mode	Condition	Condition Default Next	Redirect URL	Redirect Web P...	Previous Step	Next Step	Created...
1	Multistep Form	Speakers Multistep Form	Basic Details	Portal Speaker...	ts_speaker	Edit						9/27/202...
2	Load F...											

In Form Definition Tab:

- Select Tab Name General
- In Record Source => Source Type specify: Query String
- In Primary Key Query String Parameter Name specify: Speaker (bs\_speakerId)

Save & Close

### 4) Open Lists section

We want to connect pages:

Speakers-Lists with

Speakers-BasicForm (Create form for list)

Speakers-AdvancedForm (View + Edit form for list)

+ enable also ability to DELETE speaker from the list

Locate created in Lab 001 List titled “Speakers” => open it

Go to Options tab and Enable

Gird Configuration Options

View Actions: Create + Download (Create connect to Webpage "Speakers-BasicForm")

Item Actions: Details + Edit + Delete (Details + Edit connect to Webpage "Speakers-AdvancedForm")



After applying this change you can Sync + Preview all 3 Webpages

Speakers-List

Speakers-BasicForm

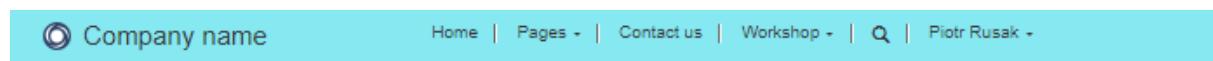
Speakers-AdvancedForm

You can also test Download and Delete features available in List

## Part 3 – Liquid introduction

- 1) Liquid was build by Shopify – you can learn it from here  
<https://shopify.github.io/liquid/basics/introduction/> (warning: not everything works with Microsoft based version of Liquid !)
- 2) Microsoft documentation about Liquid: <https://learn.microsoft.com/en-us/power-pages/configure/liquid/liquid-overview>
- 3) Short lesson about Liquid language in Power Pages.
- 4) Open Webpage **Liquid** in Power Pages Design Studio
- 5) Edit page content using VS Code for Web
- 6) Paste between <div class="..."> ... </div> code that you can find here:  
<https://github.com/PRusakPL/BalticSummit2023/blob/main/Assets/Liquid.WebPage.html>  
Sync + Preview from Power Pages Design Studio

You should get following result



The screenshot shows a light blue header bar with a circular icon and the text "Company name". To its right are several navigation links: "Home", "Pages", "Contact us", "Workshop", a search icon, and "Piotr Rusak".

### [1] Liquid Operators

Liquid code:

```
{% if page.title contains 'Liquid' %}  
The title contains the word Liquid.  
{% endif %}
```

Output

The title contains the word Liquid.

### [2] Liquid Objects

Liquid code:

```
{% assign speaker = entities.bs_speaker['de5ec211-285d-ce11-be6f-000d3a2f6f99'] %}  
{% if speaker %}  
{{ speaker.bs_name }} ({{ speaker.bs_role }})  
{% else %}  
No speaker record found.  
{% endif %}
```

Output

Arpit Shrivastava (Power Platform Architect)

### [3] Liquid Tags

Liquid code:

```
{% if user.fullname == 'Piotr Rusak' %}  
Hello, Piotr.  
{% elif user.fullname == 'Arpit Shrivastava' %}  
Hello, Arpit.  
{% else %}  
Hello, Student.  
{% endif %}
```

Output

Hello, Piotr.

Trainer will explain all 6 examples of Liquid code 😊

Last example presents FetchXml code – retrieving Speakers from Dataverse table and enumerating over those records.

## Part 4 – Recreating Baltic Summit page with speakers using data from Dataverse + liquid + fetchXml

- 1) Open Webpage Speakers-LiquidFetchXml in Power Pages Design Studio
- 2) Edit page content using VS Code for Web
- 3) Paste between <div class="..."> ... </div> code that you can find here:  
<https://github.com/PRusakPL/BalticSummit2023/blob/main/Assets/Speakers-LiquidFetchXml.WebPage.html>

Sync + Preview from Power Pages Design Studio

You should get following result



**Arpit Shrivastava**  
MVP | MCT | Power Community Ambassador  
Power Platform Architect

[LinkedIn →](#) | [Twitter →](#)



**Piotr Rusak**  
Microsoft 365 / Power Platform Architect at Bossard Group  
Power Platform Specialist

[LinkedIn →](#)



**Karol Ługowski**  
Practice Leader at Xebia | Power Platform Solution Architect and Team Leader  
Power Platform Architect, Team Leader

[LinkedIn →](#)



**Magdalena Kączkowska/PowerGirl**  
Power Platform | PowerApps | Power Automate | Power BI | WomenInTech | Power Platform Polska Community | LCMC Community | TWF.Community  
Senior Analyst

[LinkedIn →](#)

In my demo I added just 4 speakers from Baltic Summit web page =>

<https://balticsummit.pl/speakers>

Trainer will explain some patterns used in code (html + bootstrap 3 + liquid)

## Part 5 – Using Web API code in Power Pages

- 1) Download Dataverse REST Builder managed solution from here =>  
<https://github.com/GuidoPreite/DRB/releases>
- 2) Install this solution using Solutions sections in <https://make.powerapps.com>
- 3) Trainer will present how to use Dataverse REST builder to help generate Web API code for CRUD Dataverse operations
- 4) Create Web Template with Pages Web API helper function.

Open Web Templates section

Create new Web Template with Name “**PagesWebAPIHelper**” as follows

Source you can download from this web page:

<https://github.com/PRusakPL/BalticSummit2023/blob/main/Assets/PagesWebAPIHelper.WebTemplate.html>

New Web Template - Unsaved

General

Name: \* PagesWebAPIHelper

Website: \* Power Platform Masterclass - pp4ever

Source

```
1 <script>
2   function(webapi, $) {
3     Function safe$ajax($axOptions) {
4       var deferredAjax = $.Deferred();
5
6       shell.gettokenDeferred().done(function (token) {
7         // add headers for AJAX
8         if (!($axOptions.headers)) {
9           $axOptions.headers = {};
10          $axOptions.headers['__RequestVerificationToken'] = token;
11        }
12      });
13    } else {
14      $axOptions.headers['__RequestVerificationToken'] = token;
15    }
16    $axOptions.headers['Content-Type'] = 'application/json';
17    $axOptions.type = 'POST';
18    $axOptions.data = JSON.stringify(data);
19    $axOptions.xhrFields = { withCredentials: true };
20    $axOptions.errorThrown = function (jqXHR, textStatus, errorThrown) {
21      validateSession(data, textStatus, jqXHR, deferredAjax.resolve);
22    };
23    $axOptions.success = function (jqXHR, textStatus, errorThrown) {
24      validateSession(data, textStatus, jqXHR, deferredAjax.resolve);
25    };
26    $axOptions.complete = function (jqXHR, textStatus) {
27      validateSession(data, textStatus, jqXHR, deferredAjax.resolve);
28    };
29  })(window.webapi = window.webapi || {}, jQuery);
30 </script>
```

MIME type set to empty

This Web Template will be used in our demo with Custom Web API

- 5) Go to Site Settings to enable WEB API access for Speakers table

In View – Active Site Setting look for Webapi in filter text box (to make sure you have not enabled / disabled this before)

Active Site Settings* ▾		
Name ▾	Value ▾	Website ▾
Webapi/bs_speaker/enabled	True	Power Platform Masterclass - pp4ever
Webapi/bs_speaker/fields	*	Power Platform Masterclass - pp4ever
Webapi/error/innererror	True	Power Platform Masterclass - pp4ever

6) Create 3 Site Settings as follows

Active Site Settings* ▾		
○ Name ▾	Value ▾	Website ▾
Webapi/bs_speaker/enabled	True	Power Platform Masterclass - pp4ever
Webapi/bs_speaker/fields	*	Power Platform Masterclass - pp4ever
Webapi/error/innererror	True	Power Platform Masterclass - pp4ever

Those settings enable Web API operations on Speaker table

One of those settings also enable detailed error messages retrieved from Web API (general setting for Power Pages Web API)

Here be careful – you need to use singular noun for table **bs\_speaker**

7) Time to edit page “Speakers-WebAPI” – open this in Power Pages Design Studio and edit this page in VS Code for Web

Localize this code in VS Code for Web

```

Power Platform Masterclass > web-pages > Web-API > Web-API.en-US.webpage.copy.html > div.row.sectionBlockLayout.text-left > div.container > div.col-md-12.columnBlockLayout
1   <div class="row sectionBlockLayout text-left" style="min-height: auto; padding: 8px;">
2     <div class="container" style="display: flex; flex-wrap: wrap;">
3       <div class="col-md-12 columnBlockLayout" style="padding: 16px; margin: 60px 0px; min-height: 200px;">
4         </div>
5       </div>
6     </div>
7   </div>
8

```

Paste content of file stored here

<https://github.com/PRusakPL/BalticSummit2023/blob/main/Assets/Speakers-WebAPI.WebPage.html> in between `<div clas="..."> ... </div>`

Save VS Code file / Sync + Preview

Trainer will explain code and you will test if new Speaker can be added to Dataverse using Web API queries.

## Part 6 – Calling Power Automate flow from Power Pages

- 1) First check version of Power Pages – go to [https://{{portal.url}}/\\_services/about](https://{{portal.url}}/_services/about)

Version displayed on top is your version of Power Pages

Portals 9.5.8.10 bd522f15-69f6-4df9-bfd8-a1271798fd9c

Details

Geo	EUR
Org ID	96fa578e-3d50-ee11-94d2-000d3a48677d
Portal ID	bd522f15-69f6-4df9-bfd8-a1271798fd9c
Portal type	DefaultPortalTemplate_V2
Tenant ID	063c1b53-0faf-4718-9c08-b39ec429b83e
Auth key expiration date	9/4/2025 3:28:41 PM UTC

Tools

[Clear cache](#) Warning: Clearing the cache will result in a temporary slowness in your portal as it reloads data from Dynamics 365

[Clear config](#) Warning: Clear config will clear the config data from cache and will cause a temporary slowness on first page load

Your Power Pages site version must be **9.5.4.xx** or later for this feature to work.

- 2) To start using Power Automate flow in Power Pages you need to first prepare flow. Open Power Pages Design Studio and go to Set up workspace
- 3) Open Baltic Summit solution
- 4) Inside Solution Add new Instant flow

+ New > [Add existing](#) [Publish all customizations](#) ...

App >

Automation > **Cloud flow** [Automated](#)

Card

Custom connector

**Instant**

Desktop flow

Scheduled

Process

More >

- 5) On next screen press Skip (as Power Pages trigger is not available from this screen)

Triggered manually from any device, easy-to-share instant flows automate tasks so you don't have to repeat yourself.

Examples:

- Get an automatic mobile alert whenever a VIP client emails you
- Save all your email attachments to a folder automatically

Flow name  
Add a name or we'll generate one

Choose how to trigger this flow \*

- Manually trigger a flow Flow button for mobile
- PowerApps PowerApps
- Run a flow from Copilot Skills
- When Power Virtual Agents calls a fl... Power Virtual Agents
- When a flow step is run from a busin... Microsoft Dataverse
- For a selected message (V2) Microsoft Teams
- From the compose box (V2)

Skip Create Cancel

- 6) Filter triggers typing “Power Pages” in search bar => then pick trigger “When Power Pages calls flow”

Power Pages

All Built-in Standard Premium Custom My clipboard

Power BI Power Pages OneNote (Business) Power Virtual Agents Power Virtual Agents (V2) TPC Portal Power Form 7

Power Query Dataflows Power Textor Microsoft Bookings App Power Forms Showcase Workshop Almabase Defender for Cloud Apps

Triggers Actions See more

Power BI button clicked Power BI

When Power Pages calls a flow Power Pages

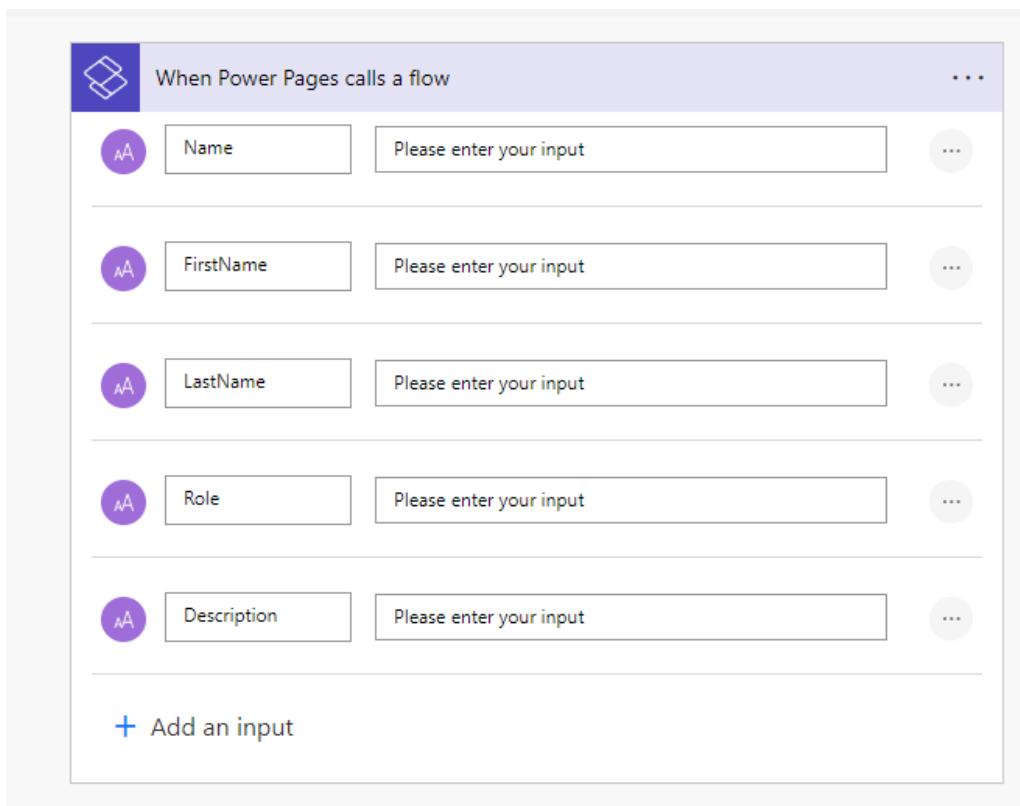
When someone assigns a new owner to a goal (preview) Power BI

When status of a goal changes (preview) Power BI

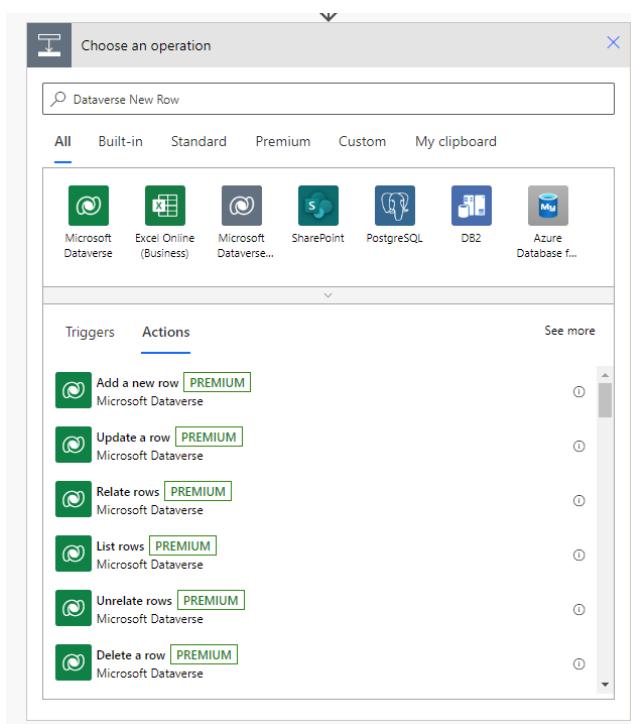
When current value of a goal changes (preview) Power BI

When someone adds or edits a goal check-in (preview) Power BI

7) Add 5 Text input parameters to this trigger (like follow):



8) Add action “Add new row” (Dataverse) to flow



9) Configure this action to add all input parameters:

Add a new row

*Table name	Speakers	▼
*Full Name	triggerBody()['text'] x	
Description	triggerBody()['text_4'] x	
First Name	triggerBody()['text_1'] x	
Image URL		
Import Sequence Number	Sequence number of the import that created this record.	
Last Name	triggerBody()['text_2'] x	
LinkedIn URL		
Owner (Owners)	Owner Id	
Record Created On	Date and time that the record was migrated.	
Role	triggerBody()['text_3'] x	
Speaker	Unique identifier for entity instances	
Status Reason	Reason for the status of the Speaker	▼
Time Zone Rule Version Number	For internal use only.	
UTC Conversion Time Zone Code	Time zone code that was in use when the record was created.	
X URL		

[Hide advanced options ^](#)

## 10) Return values to Power Pages

Power Pages

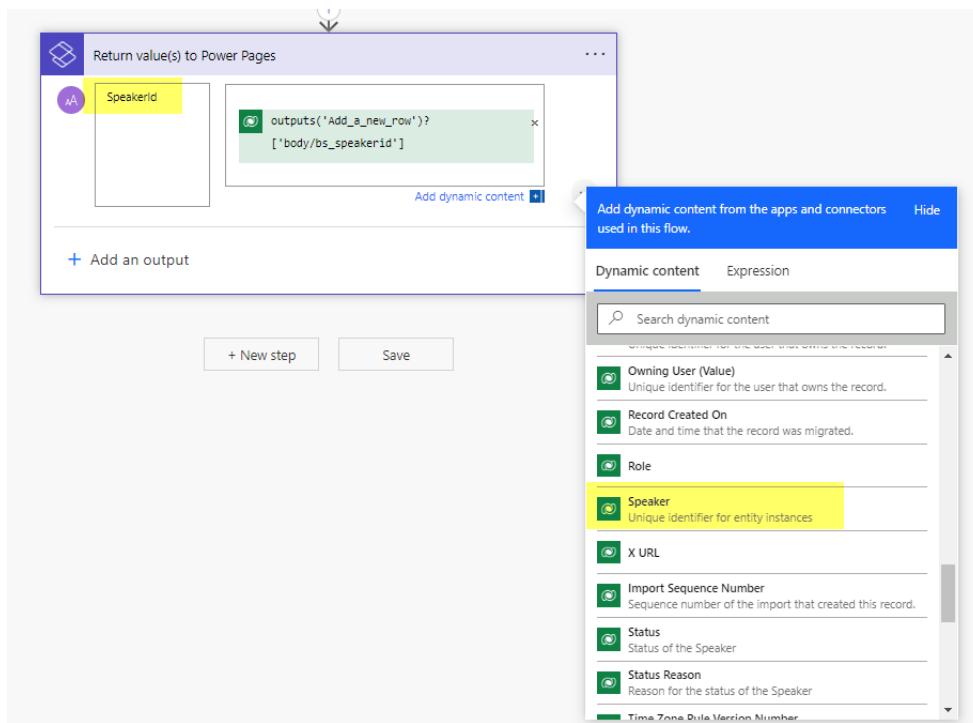
Search connectors and actions

Triggers Actions See more

Return value(s) to Power Pages Power Pages

Don't see what you need? Help us decide which connectors and triggers to add next with [UserVoice](#)

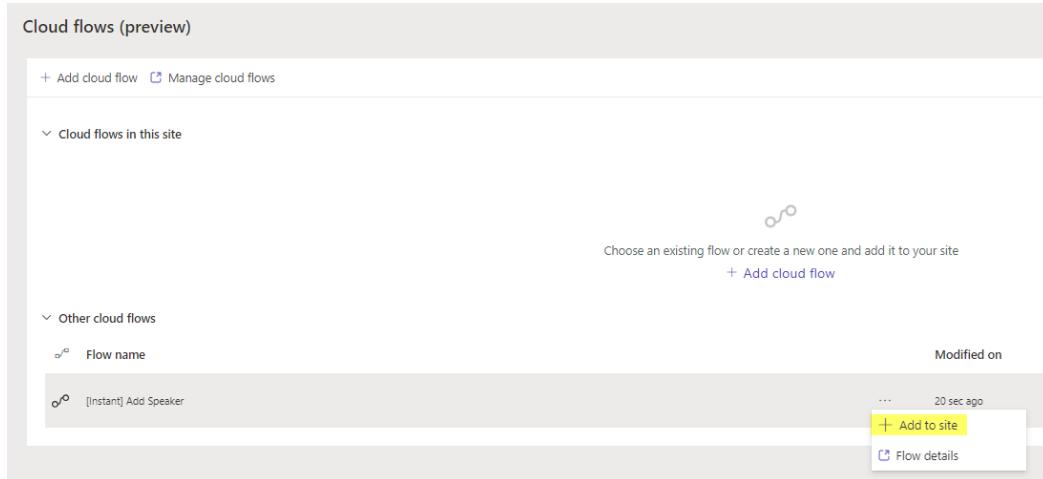
11) Specify one value to return – SpeakerId



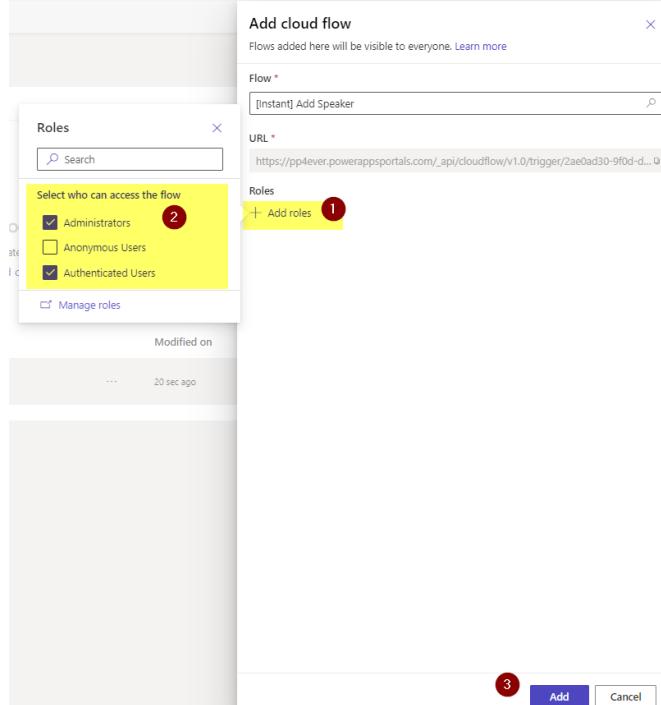
12) Save flow with name “[Instant] Add Speaker”

13) Go back to Power Pages Design Studio – open Set Up workspace

14) Open Integrations => Cloud flows (preview) section

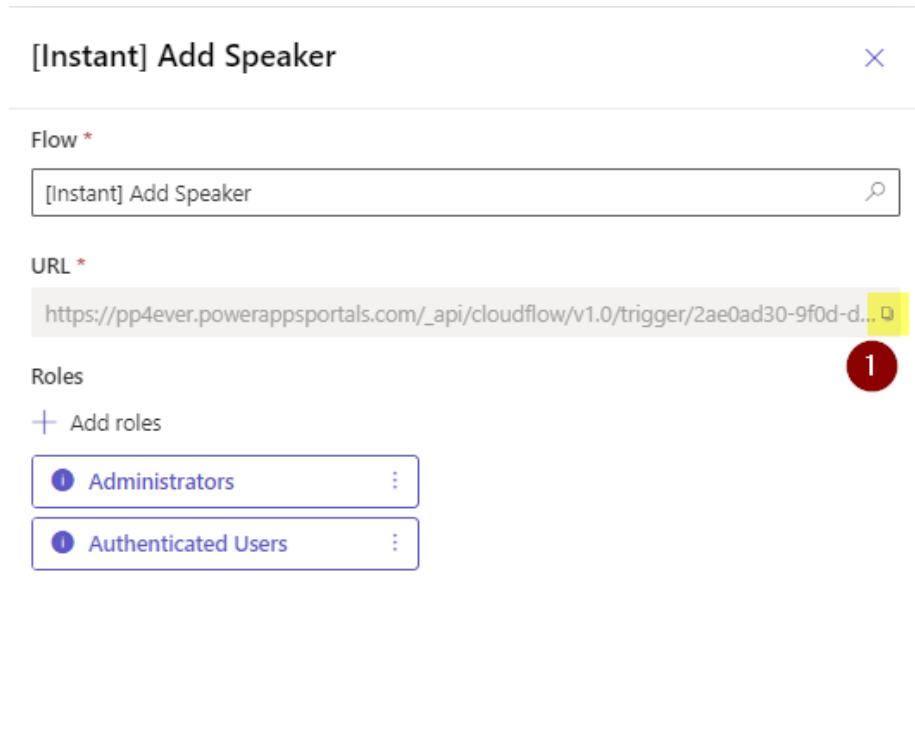


## Add newly created flow to Website



When adding flow make sure appropriate Web Roles would be able to call this flow.

- 15) After adding this flow – open it for editing and copy its URL (save this URL – will be needed in one of next steps)



My URL: [https://pp4ever.powerappspartners.com/\\_api/cloudflow/v1.0/trigger/2ae0ad30-9f0d-dace-f50c-8501e1d710d9](https://pp4ever.powerappspartners.com/_api/cloudflow/v1.0/trigger/2ae0ad30-9f0d-dace-f50c-8501e1d710d9)

- 16) Open Webpage **Speakers-Flow** in Power Pages Design Studio
- 17) Edit page content using VS Code for Web
- 18) Paste between <div class="..."> ... </div> code that you can find here:  
<https://github.com/PRusakPL/BalticSummit2023/blob/main/Assets/Speakers-Flow.WebPage.html>

1 part of the code need to be adopted with your flow URL – find variable

```
var flowUrl =  
"https://pp4ever.powerappsportals.com/_api/cloudflow/v1.0/trig  
ger/2ae0ad30-9f0d-dace-f50c-8501e1d710d9";
```

and replace its value with your flow URL

Sync + Preview from Power Pages Design Studio

You should get following result

## Power Automate integration example - Create Speaker using Power Automate call



The form consists of five input fields:

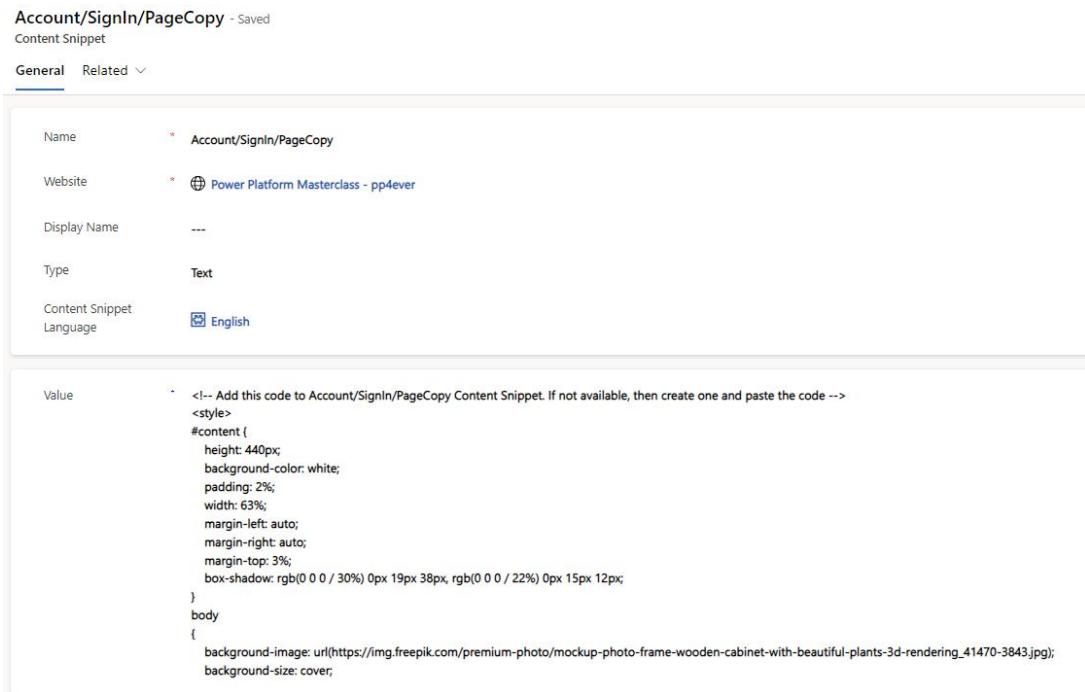
- Full Name:
- First Name:
- Last Name:
- Role:
- Description:

Below the input fields is a green **Submit** button.

- 19) Test this form by calling flow.  
Review results in Developer Tools console.  
Review results on Speakers-List page (remove newly added records after testing)  
Review in Power Automate flow run history -

## Part 7 – Customizing style of specific Power Pages parts

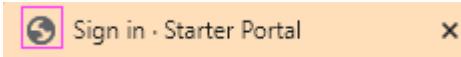
- 1) There is possibility to customize Look & Feel of Sign In / Register and Redeem Invitation screen in Power Pages  
More about this method is explained here:  
<https://ulrikke.akerbak.com/2020/02/16/customize-the-sign-in-and-registration-page-in-power-app-portals/>
- 2) Let's do this together for our Sign In page
- 3) Go and download content for Content Snippet here =>  
<https://github.com/PRusakPL/BalticSummit2023/blob/main/Assets/LoginPage.ContentSnippet.css>
- 4) Go to Power Pages Management App and open section Content Snippets
- 5) Verify if Content snippet with name Account/SignIn/PageCopy does not exist
- 6) Create or edit this snippet in following way:



The screenshot shows the 'Content Snippet' blade in the Power Pages Management App. The snippet is named 'Account/SignIn/PageCopy'. The 'Value' field contains the following CSS code:

```
<!-- Add this code to Account/SignIn/PageCopy Content Snippet. If not available, then create one and paste the code -->
<style>
#content {
    height: 440px;
    background-color: white;
    padding: 2%;
    width: 63%;
    margin-left: auto;
    margin-right: auto;
    margin-top: 3%;
    box-shadow: rgba(0, 0, 0, 0.3) 0px 19px 38px, rgba(0, 0, 0, 0.22) 0px 15px 12px;
}
body {
    background-image: url(https://img.freepik.com/premium-photo/mockup-photo-frame-wooden-cabinet-with-beautiful-plants-3d-rendering_41470-3843.jpg);
    background-size: cover;
}
```

Sync + Preview from Power Pages Design Studio (check Sign In page – this should look custom now 😊 )

- 7) Second CSS customization that we would like to quickly do with Power Pages Management App would be adding favicon to our website.  
Without customization our favicon for Website will look plain:  

- 8) Download favicon.ico file from here:  
<https://github.com/PRusakPL/BalticSummit2023/blob/main/Assets/favicon.ico>
- 9) Open Power Pages Management App and locate section Web Files
- 10) Check in Web Files list if there is no favicon.ico file already here

11) Create or Edit existing favicon.ico file in following way:

## Metadata

New Web File - Unsaved

General

Name	favicon.ico
Website	Power Platform Masterclass - pp4ever
Parent Page	Home
Partial Url	favicon.ico
Display Date	---
Release Date	---
File Content	This record hasn't been created yet. To enable file upload, create this record
Cloud Blob Address	---
Content-Disposition	inline

Publishing State: Published

After Saving new Web File metadata upload favicon.ico to File Content field

favicon.ico - Saved  
Web File

General Related

File Content

Choose File No file chosen

Open

Name	Status	Date modified	Type	Size
favicon.ico	2	28/09/2023 07:06	IrfanView ICO File	16 KB
Liquid.WebPage.html		28/09/2023 06:30	Chrome HTML Do...	6 KB
LoginPage.ContentSnippet.css		28/09/2023 07:02	CSSfile	1 KB
PagesWebAPILHelper.WebTemplate.html		27/09/2023 16:26	Chrome HTML Do...	1 KB
Sample.css		27/09/2023 11:26	CSSfile	1 KB
Speakers-Flow.WebPage.html		27/09/2023 21:05	Chrome HTML Do...	5 KB
Speakers-LiquidFetchXml.WebPage.html		27/09/2023 19:15	Chrome HTML Do...	2 KB
Speakers-WebAPI.WebPage.html		27/09/2023 16:07	Chrome HTML Do...	5 KB

Sync + Preview in Power Pages Design Studio

Warning: favicons for websites are cached on browser and system level too (sometimes clearing this cache might be tough)

You should see this as favicon



## Part 8 – Using PAC CLI to List Power Pages Websites / Download and Upload content of Website

- 1) Editing code of your website in VS Code for Web might be something annoying. Especially if you would like to do some work offline or you would like to check in code to any Source Code repository (like Azure DevOps Git or GitHub)
- 2) Microsoft delivered way of Downloading and then Uploading (syncing back) Power Pages website code – by using PAC CLI (Power Platform Command Line Interface)
- 3) The easiest method to use PAC CLI is to install this as extension in your Visual Studio Code installed locally (how you can install this PAC CLI: <https://learn.microsoft.com/en-us/power-platform/developer/cli/introduction>)
- 4) Assuming you have this tool installed and you opened VS Studio Code terminal – you can type:

```
pac
```

- 5) You should get following list of commands available

```
PS C:\Scripts> pac
Microsoft PowerPlatform CLI
Version: 1.27.6+g0f62afb
Online documentation: https://aka.ms/PowerPlatformCLI
Feedback, Suggestions, Issues: https://github.com/microsoft/powerplatform-build-tools/discussions

Usage: pac [admin] [application] [auth] [canvas] [catalog] [connection] [connector] [copilot] [data] [help] [modelbuilder] [org] [package] [pcf] [pipeline]
       [overpages] [solution] [telemetry] [test] [tool] [virtual-agent]

admin                                Work with your Power Platform Admin Account
application                          Commands for listing and installing available Dataverse applications from AppSource
auth                                 Manage how you authenticate to various services
canvas                               Operating with Power Apps .msapp files
catalog                             (Preview) Commands for working with Catalog in Power Platform
connection                           (Preview) Commands for working with Dataverse connection.
connector                           (Preview) Commands for working with Power Platform Connectors
copilot                             Tools and utilities for copilot scenarios
data                                Import and export data from Dataverse.
help                                Show help for the Microsoft Power Platform CLI.
modelbuilder []                     Code Generator for Dataverse APIs and Tables
org                                 Work with your Dataverse organization.
package                            Commands for working with Dataverse package projects
pcf                                Commands for working with Power Apps component framework projects
pipeline                           Work with Pipelines
plugin                             Commands for working with Dataverse plug-in class library
powerpages                         Commands for working with Power Pages website.
solution                           Commands for working with Dataverse solution projects
telemetry                          Manage telemetry settings.
test                               (Preview) Execution of automated tests for a Power App
tool                               Power Platform tools that can be installed and launched.
virtual-agent                      Commands for working with Power Virtual Agent bots
```

- 6) First trainer will introduce you with 2 most important commands:

```
pac auth
pac org (alias: pac env)
```

This will be needed to authenticate yourself as System Administrator and make sure you selected proper Power Platform Environment

- 7) After assuring you are connected to correct Power Platform Environment you can run command:

```
pac powerpages (aliases: pac pages | pac paportal)
```



You should get following list of commands:

```
PS C:\Scripts> pac powerpages
Microsoft PowerPlatform CLI
Version: 1.27.0+g9f62afb
Online documentation: https://aka.ms/PowerPlatformCLI
Feedback, Suggestions, Issues: https://github.com/microsoft/powerplatform-build-tools/discussions

Error: You're missing a sub-command.

Usage: pac powerpages [list] [download] [upload] [bootstrap-migrate]

list                                List all Power Pages websites from the current Dataverse environment.
download                            Download Power Pages website content from the current Dataverse environment.
upload                               Upload Power Pages website content to current Dataverse environment.
bootstrap-migrate                   Migrates HTML code from bootstrap V3 to V5.
```

**list** – will list all Power Pages websites available in your environment (recommendation: include parameter **-v** to see which model is used by website [v2 means Enhanced Data Model])

```
PS C:\Scripts> pac powerpages list -v
Connected to... First Dev
Connected as admin@pp4ever.onmicrosoft.com

Completed listing Power Pages websites

Index      Website Id          Friendly Name          Data Model Version
[1]       d53fcfa2d-6750-ee11-be6d-000d3a2f6f99    Power Platform Masterclass - pp4ever           v2
```

**download** – downloads content of Website to local disk (so user can edit code locally / push this to code repository)

```
PS C:\Scripts> pac pages download --path C:\Scripts\PowerPagesSample -id d53fcfa2d-6750-ee11-be6d-000d3a2f6f99 -o -mv 2

Information:
Be careful when you're updating public sites. The changes you make are visible to anyone immediately. To check site visibility go to https://make.powerpages.microsoft.com.
To get additional information, please visit https://go.microsoft.com/fwlink/?linkid=2204350

Started downloading website d53fcfa2d-6750-ee11-be6d-000d3a2f6f99
Connected to... First Dev
Connected as admin@pp4ever.onmicrosoft.com
Downloading - webfiles
Downloading - powerpagecomponent
Downloading - powerpagesite
Downloading - powerpagesitelanguage
Downloaded - powerpagesite
Downloaded - powerpagesitelanguage
Downloaded - powerpagecomponent
Downloaded - webfiles
Processing - adx_website
Processing - adx_sitesetting
Processing - adx_websiteaccess
Processing - adx_entitypermission
Processing - adx_cloudflowconsumer
Processing - adx_publishingstate
Processing - adx_adplacement
Processing - adx_pollplacement
Processing - adx_webfile
Processing - adx_portallanguage
Processing - adx_sitemarker
Processing - adx_websitelanguage
Processing - adx_webpageaccesscontrolrule
Processing - adx_webrole
Processing - adx_pagetemplate
Processing - adx_webtemplate
Processing - adx_webpage
Processing - annotation
Processing - adx_entityform
Processing - adx_contentsnippet
Processing - adx_weblinkset
Processing - adx_entitylist
Processing - adx_webform
Processing - adx_weblink
Processing - adx_entityformmetadata
Processing - adx_webformstep
Updating manifest...
Manifest updated successfully.
Power Pages website download succeeded in 8.6988719 secs.
```

**upload** – sync back changes made locally back to Dataverse configuration tables (be careful here: you might overwrite someone's else work)

```
PS C:\Scripts> pac pages upload -p C:\Scripts\PowerPagesSample\power-platform-masterclass---pp4ever -mv 2

Information:
Be careful when you're updating public sites. The changes you make are visible to anyone immediately. To check site visibility go to https://make.powerpages.microsoft.com/.
To get additional information, please visit https://go.microsoft.com/fwlink/?linkid=2204350

Started uploading website data
Connected to... First Dev
Connected as admin@pp4ever.onmicrosoft.com

Loading Power Pages website manifest...
Manifest loaded successfully.

Updated record(s) for table: powerpagecomponent [webpage]

Power Pages website upload succeeded in 4.31 secs.
```