

What's new in Power Platform development: Power Automate and workflows

Ayrton Massey
Software Engineer II

Evgenij Korovin
Principal Software Engineering Manager



Agenda

New & Improved Approval Workflows

- Create approval workflows in Power Automate with minimal setup
- QoL improvements to existing approval workflows
- Support for single/multi-approver workflows

More Power Automate in Business Central

- Quickly create instant flows from a template
- Build portable flows with Dynamic Content
- Choose which Power Platform environment to connect to from Business Central
- Promote templates via AL customactions

External Business Events

- Notify external systems when an event occurs in Business Central
- Subscribe to events via the OData API
- Define custom events in AL

New Power Automate Triggers & Actions

- Trigger Power Automate flows using External Business Events
- Generate a URL to open a Card or List
- Generate an Adaptive Card to send via Teams

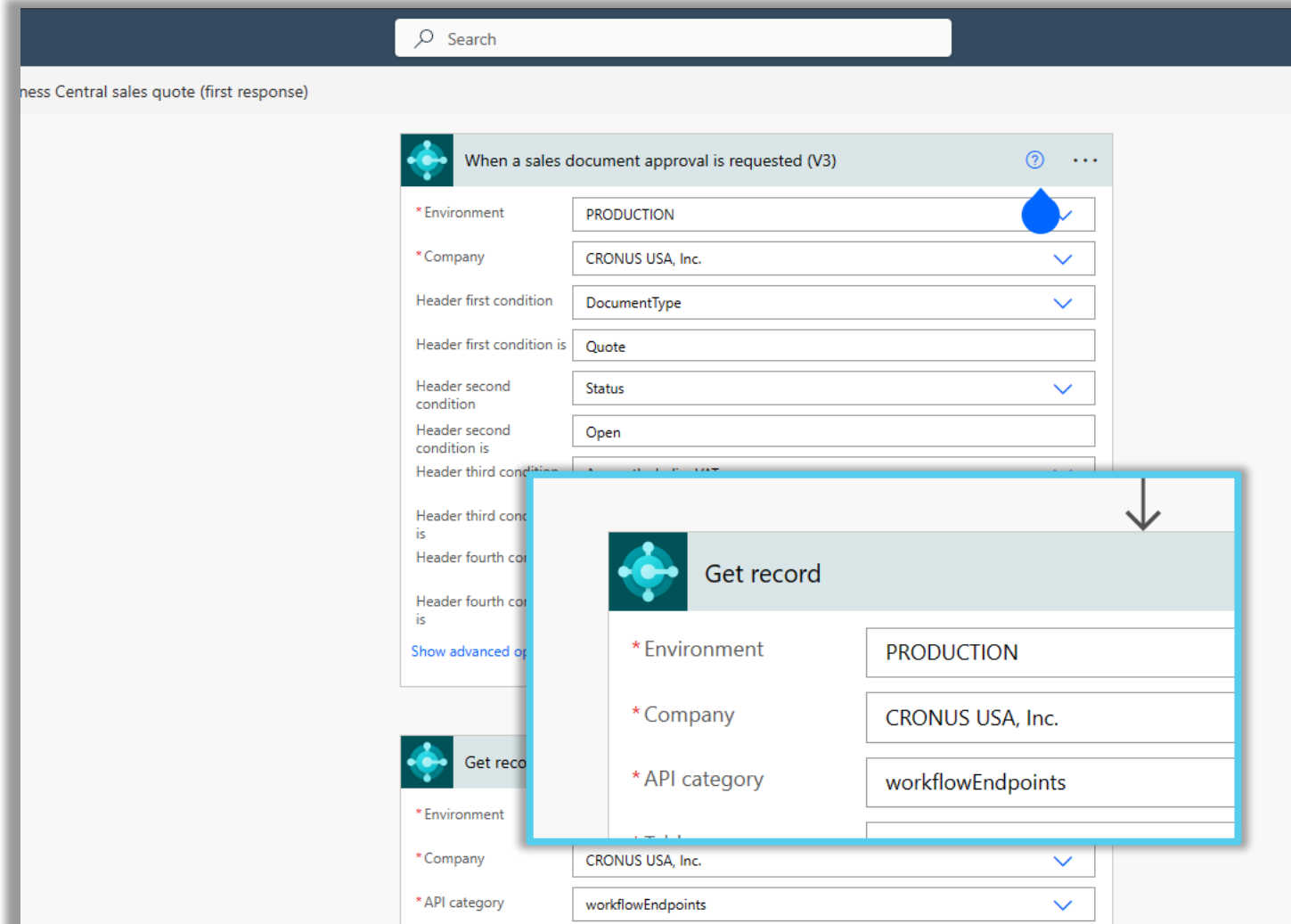


New & Improved Approval Workflows

Power Automate and approvals today

Before 2023 Wave 1

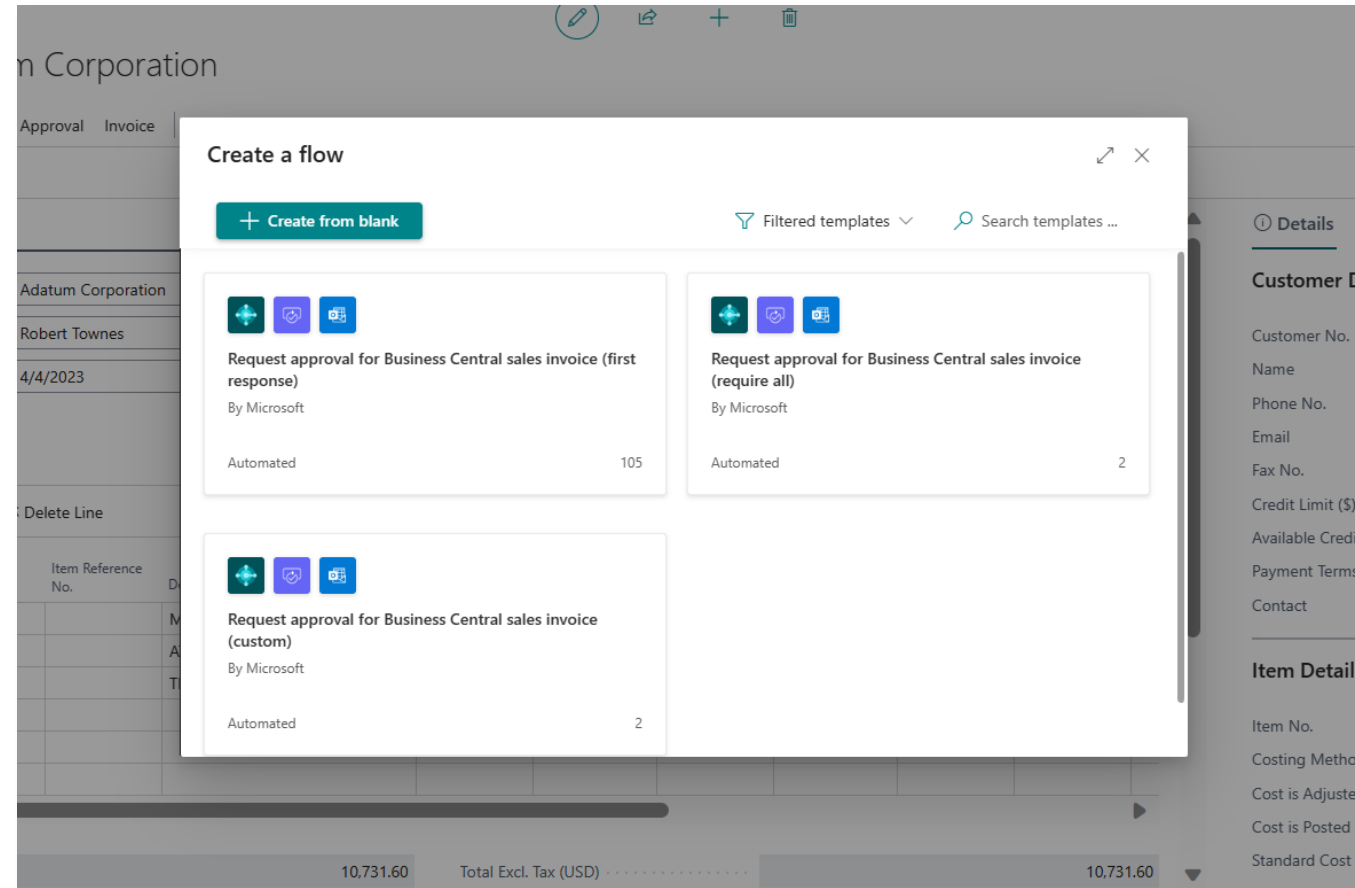
- Approval workflow setup is too complex for end users
- Templates lack variety & flexibility
- Single-approver only
- Missing QoL features



New approval templates for Power Automate

In 2023 Wave 1

- Simplified setup using new templates, without leaving Business Central
- Support for single & multi-approver workflows
- Usability improvements across all templates



Demo: New Approval Workflows

Request approval for a Business Central...

... (first response)

- The first user to respond to the request determines the outcome.

... (require all)

- All users must approve the request for the request to succeed.

... (custom)

- Specify the type of approval (single, multi)
- Set a condition for when this workflow should be used

Need more customization? Try "Edit in advanced mode"!

 [Edit in advanced mode](#)

Availability

Sales Documents

Sales Invoice

Sales Order

Sales Quote

Sales Credit Memo

Entities

Item

Customer

Vendor

Purchase Documents

Purchase Order

Purchase Invoice

New! Purchase Quote

Purchase Credit Memo

Journals

General Journal

Payment Journal

Cash Receipt Journal



**More Power Automate
in Business Central**

Demo:

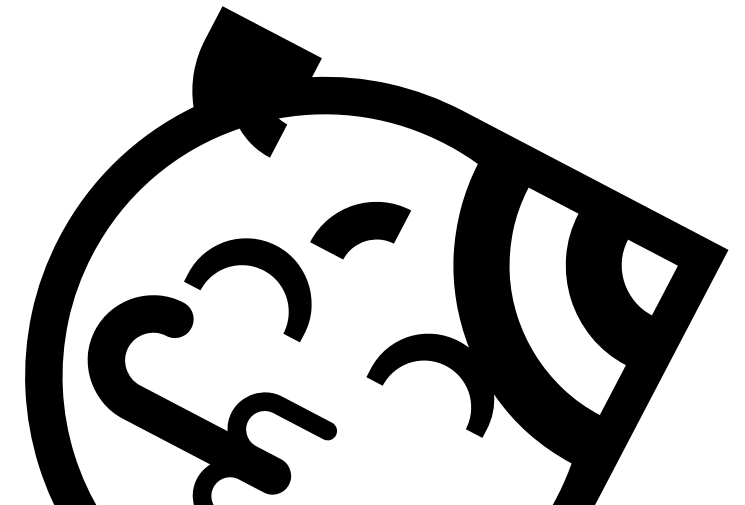
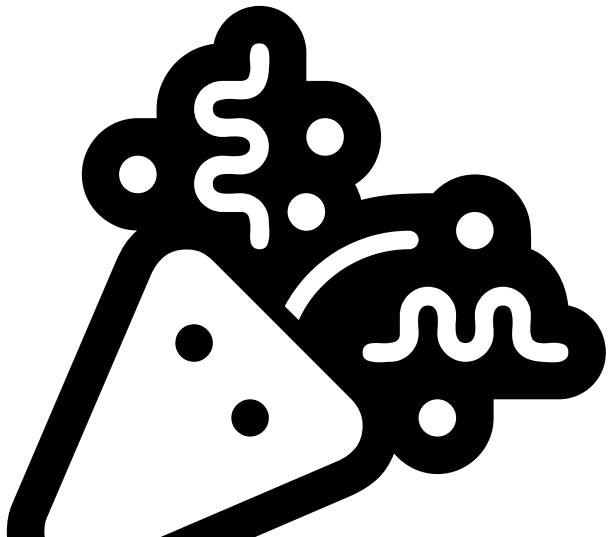
More Power Automate in Business Central



Highly requested feature:



You can now select the Power Platform
environment to connect to!



Demo:
(More) More Power Automate in Business Central

New customaction types

Include Power Automate templates in your own pages using new customaction types:

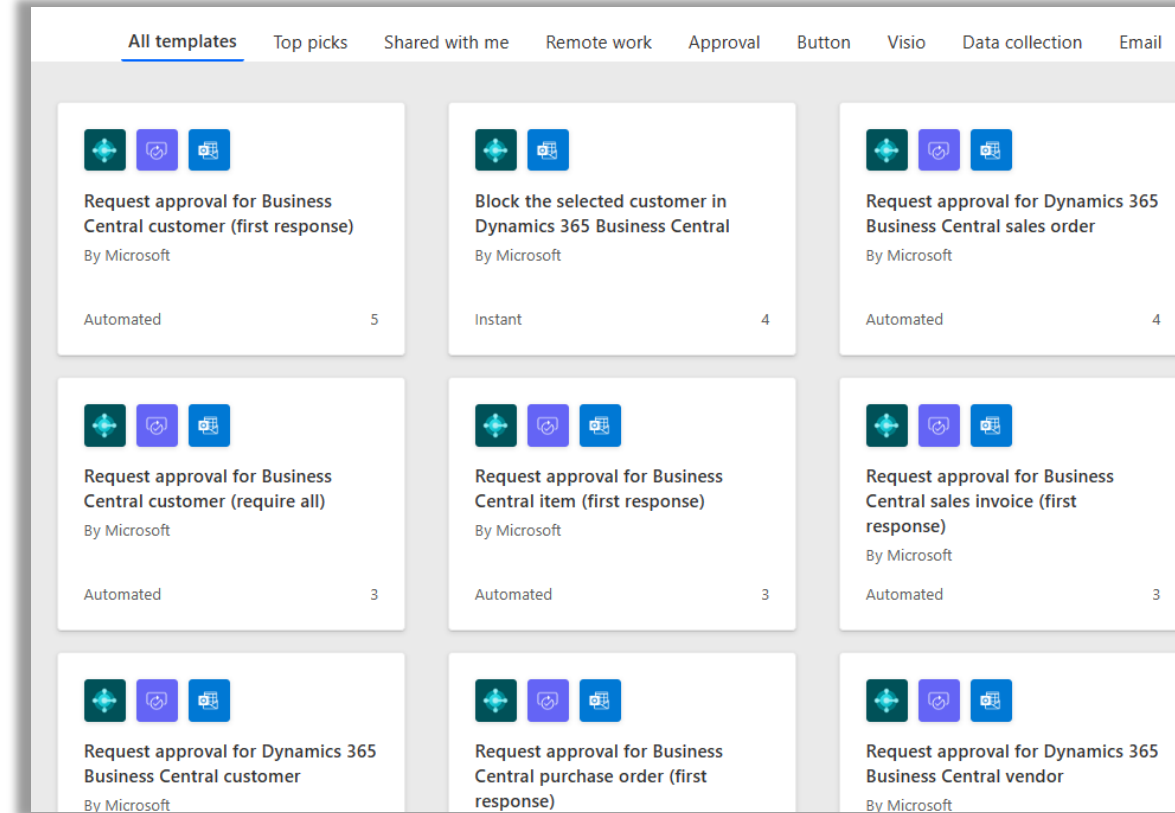
Action	Description
FlowTemplate	Open a specific Power Automate template in Business Central
FlowTemplateGallery	Open the Power Automate template gallery in Business Central, filtered by category

Examples in BaseApp: *"Create a Power Automate approval flow"*

Demo:
Power Automate customactions

How do I create my own Power Automate templates?

- To appear in Business Central, Power Automate templates must be in the **public** gallery*
- We're investigating options to bring your own Power Automate templates – but no news yet



*Docs: <https://learn.microsoft.com/en-us/power-automate/publish-a-template>

External Business Events

What is an External Business Event?

- Notify external systems when an event occurs in Business Central
- Discover & subscribe via OData APIs
- Get notified via HTTP POST to a URL of your choice
- 17 events provided out-of-the-box*
- Create your own events via AL extension

*more on the way, no ETA yet

Docs: <https://learn.microsoft.com/en-us/dynamics365/business-central/dev-itpro/developer/business-events-overview>

What events are available out-of-the-box?

Customers

CustomerBlocked

CustomerUnBlocked

Sales

SalesCreditLimitExceeded

SalesCreditMemoPosted

SalesInvoicePosted

SalesOrderReleased

SalesPaymentPosted

SalesShipmentPosted

Purchases

PurchaseCreditMemoPosted

PurchaseInvoicePosted

PurchaseOrderReleased

PurchasePaymentPosted

PurchaseReceiptPosted

Opportunities

OpportunityActivated

OpportunityLost

OpportunityQuoted

OpportunityWon

How do they differ from AL Events?

Traditional AL events (*Integration, Business, Internal*) are:

- Subscribed to via AL procedure with the **EventSubscriber** attribute
- Handled in AL

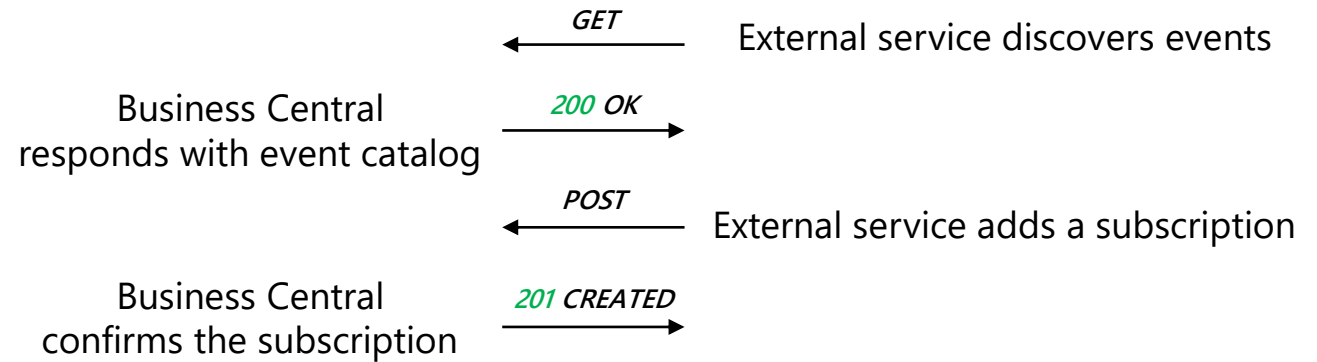
External Business Events are:

- Discovered and subscribed to via **OData**
- Notified via **Webhooks**
- Handled by the external system

External Business Event Flow

Event is defined in AL

Later



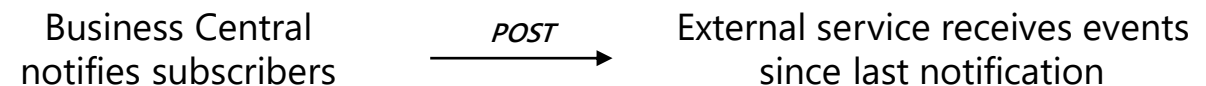
Later

Event occurs in AL

Later

Event occurs in AL

Later



Defining an External Business Event

- Defined in AL via ExternalBusinessEvent attribute on a procedure
- Event raised by calling the procedure from AL
- Subscribers receive parameters of procedure as payload

Syntax

```
[ExternalBusinessEvent(  
    'MyBusinessEvent',           // Name used to discover & subscribe  
    'My business event',        // Name displayed in the UI  
    'Triggered when something happens.', // Description of the event behavior  
    Enum::EventCategory::MyCategory // Category used for filtering  
)]  
local procedure MyBusinessEvent(Foo: Integer; Bar: Text[100]; Baz: Boolean)  
begin  
    // Nothing goes here  
end;
```

Example: Sales Order Released

Preview

```
[ExternalBusinessEvent(  
    'SalesOrderReleased',  
    'Sales order released',  
    'This business event is triggered when a sales order is released...',  
    EventCategory::Sales  
)]  
local procedure SalesOrderReleased(SalesOrderId: Guid; Url: text[250])  
begin  
end;
```

Example: Raising the Event

```
[EventSubscriber(..., 'OnAfterReleaseSalesDoc', ...)]  
local procedure OnAfterReleaseSalesDoc(var SalesHeader: Record "Sales Header")  
var  
    Url: Text[250];  
begin  
    SalesOrderReleased(SalesHeader.SystemId, Url);  
end;
```

Protecting Data

- External Business Events may **expose data** protected by permissions
- Events should define permissions required to create a subscription
- Permissions apply to the subscriber, not the user who triggered the event

Example: Defining Permissions

```
[ExternalBusinessEvent('SalesOrderReleased', ...)]  
[RequiredPermissions(PermissionObjectType::TableData, Database::"Sales Header", 'R')]  
local procedure SalesOrderReleased(SalesOrderId: Guid; Url: text[250])  
begin  
end;
```

Discovering Events

- Events are exposed via OData API
- All OData APIs have the endpoint `/externalbusinessseventdefinitions`
- List events via HTTP GET to any API

Example: Sales Order Released

```
{
  "appId": "6f2c034f-5ebe-4eae-b34c-90a0d4e87687",
  "appName": "_Exclude_Business_Events_",
  "appPublisher": "Microsoft",
  "appVersion": "23.0.10982.0",
  "category": "Sales",
  "description": "This business event is triggered when a sales order is released...",
  "displayName": "Sales order released",
  "name": "SalesOrderReleased",
  "payload": "[{\"Index\":0,\"Name\":\"SalesOrderId\",\"Type\":\"Guid\"},{...}]\"
}
```



```
[
  {
    "Index": 0,
    "Name": "SalesOrderId",
    "Type": "Guid"
  },
  {
    "Index": 1,
    "Name": "Url",
    "Type": "Text[250]"
  }
]
```

Subscribing to Events

- Subscriptions are managed via OData API
- All OData APIs have the endpoint `/externaleventsubscriptions`
- Subscribe via HTTP POST to any API

Example: Sales Order Released

```
{  
  "subscriptionType": "Webhook",  
  "appId": "6f2c034f-5ebe-4eae-b34c-90a0d4e87687",  
  "eventName": "SalesOrderReleased",  
  "companyId": "27415d0b-bb18-475d-b67c-1a325d14fe80",  
  "companyName": "CRONUS USA, Inc.",  
  "notificationUrl": "http://service.example.com:8080/someEndpoint",  
  "clientState": "put whatever you like here" // up to 2048 characters  
}
```

Getting Notified

- Business Central sends a HTTP POST to the `notificationUrl`
- Receive list of events since last notification
- Payload for each event includes `clientState` from subscription

Example Request Body

```
{
  "value": [
    {
      "appId": "6f2c034f-5ebe-4eae-b34c-90a0d4e87687",
      "eventName": "SalesOrderReleased",
      ...
    },
    ...
  ]
}
```

```
{
  "value": [
    {
      "appId": "6f2c034f-5ebe-4eae-b34c-90a0d4e87687",
      "eventName": "SalesOrderReleased",
      "timestamp": "2023-06-13T13:05:39.9070000Z",
      "initiatingUserAADObjectId": "827e6333-77b8-4b4d-b541-e4407f7b33f5",
      "companyName": "CRONUS USA, Inc.",
      "companyId": "1953db95-d2ff-ed11-8f75-6045bdc8a9d1",
      "payload": {
        "SalesOrderId": "b94d76fc-ea09-ee11-8f6e-000d3a64730b",
        "Url": "https://api.businesscentral.dynamics.com/v2.0/527590bd-..."
      },
      "clientState": "whatever you put here" // up to 2048 characters
    }
  ]
}
```

Demo: External Business Events

Reminder: It's in Preview

- External Business Events are still being developed
- Many aspects are subject to change
- Please try them out and give us your feedback!
- Expected GA is 2024 Wave 1

New in Power Automate

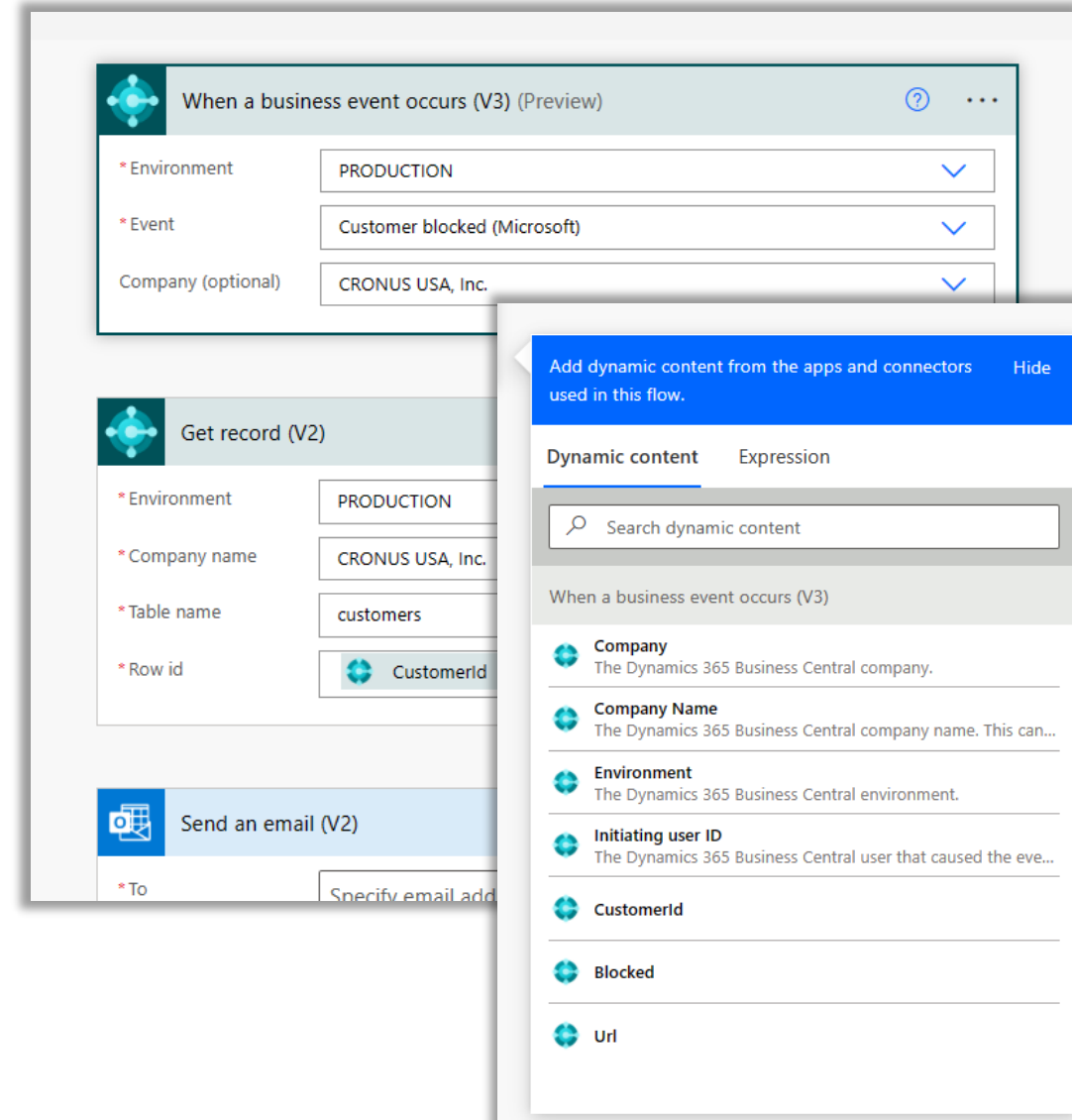
Preview

External Business Events in Power Automate

- External Business Events can trigger Power Automate flows
- Use the new flow trigger in Power Automate:

“When a business event occurs”

- Event payload is surfaced as Dynamic Content



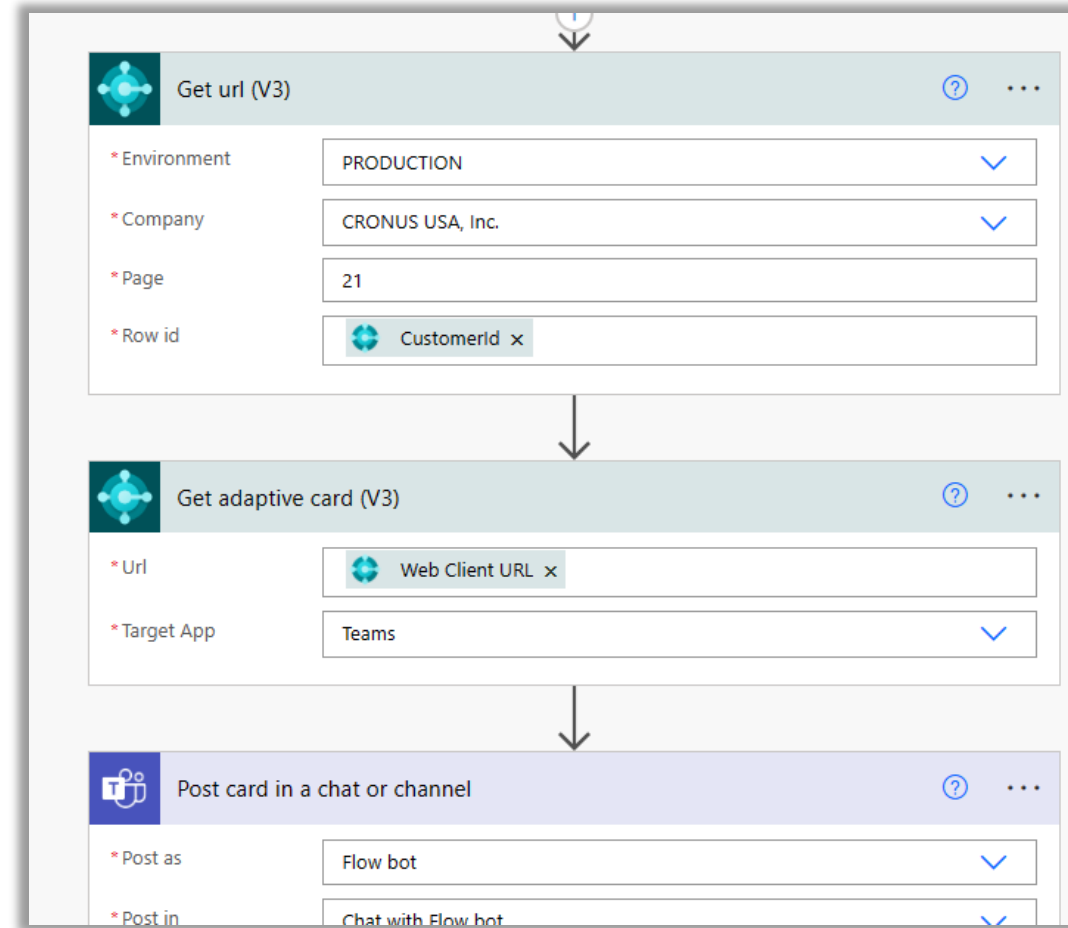
Send Adaptive Cards via Power Automate

- Two new Power Automate actions to enable sending Adaptive Cards:

"Get url"

"Get adaptive card"

- Combine these actions to generate an Adaptive Card*
- Send the card via Teams, Outlook and other integrations

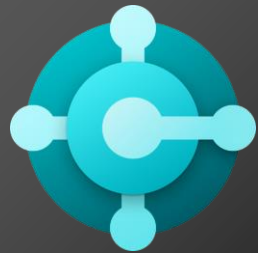


* The card generated will be the same as the one generated when you paste a link into Teams

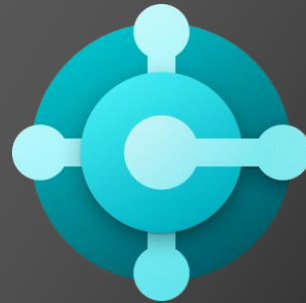
Access data with only a Microsoft 365 license



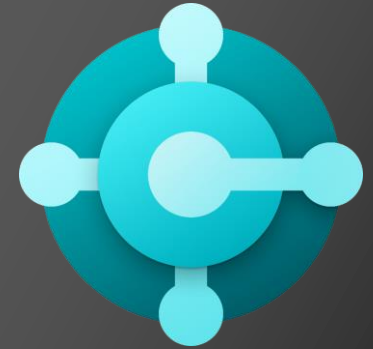
Microsoft 365



Business Central
Team Members







Business Central
Essentials



Business Central
Premium

Access data with only a Microsoft 365 license

	 Microsoft 365	 Business Central Team Members	 Business Central Essentials	 Business Central Premium
Read data	●	●	●	●
Write data		● *	●	●
Simplified UI	●			
Full UI		●	●	●
Access from Business Central Web app, mobile apps, APIs		●	●	●
Access from Teams	●	●	●	●
Access from Outlook, Excel		●	●	●
Manufacturing & Service Order Management				●

* Limited write access intended for self-serve scenarios

Demo: New Power Automate Triggers & Actions

Q&A

Any Questions?



Get in touch!



**Have a
question?**

aka.ms/BCYammer



**Join the
conversation**

[twitter.com/
MSDyn365BC](https://twitter.com/MSDyn365BC)



**Looking for
resources?**

aka.ms/BCAll



**Submit
your ideas**

aka.ms/BCIdeas



**Join our office
hours**

aka.ms/BCOfficeHours



Power Automate at BCTechDays 2023



Find us in the Expo Area:

Thursday, 22 Jun
13:00 – 13:30

Friday, 22 Jun
12:30 – 13:00



Power Automate at BCTechDays 2023



Introducing flexible Power App solutions for Business Central

Friday, 23 Jun

11:00 – 12:30

Room 5



Thank
You!

