

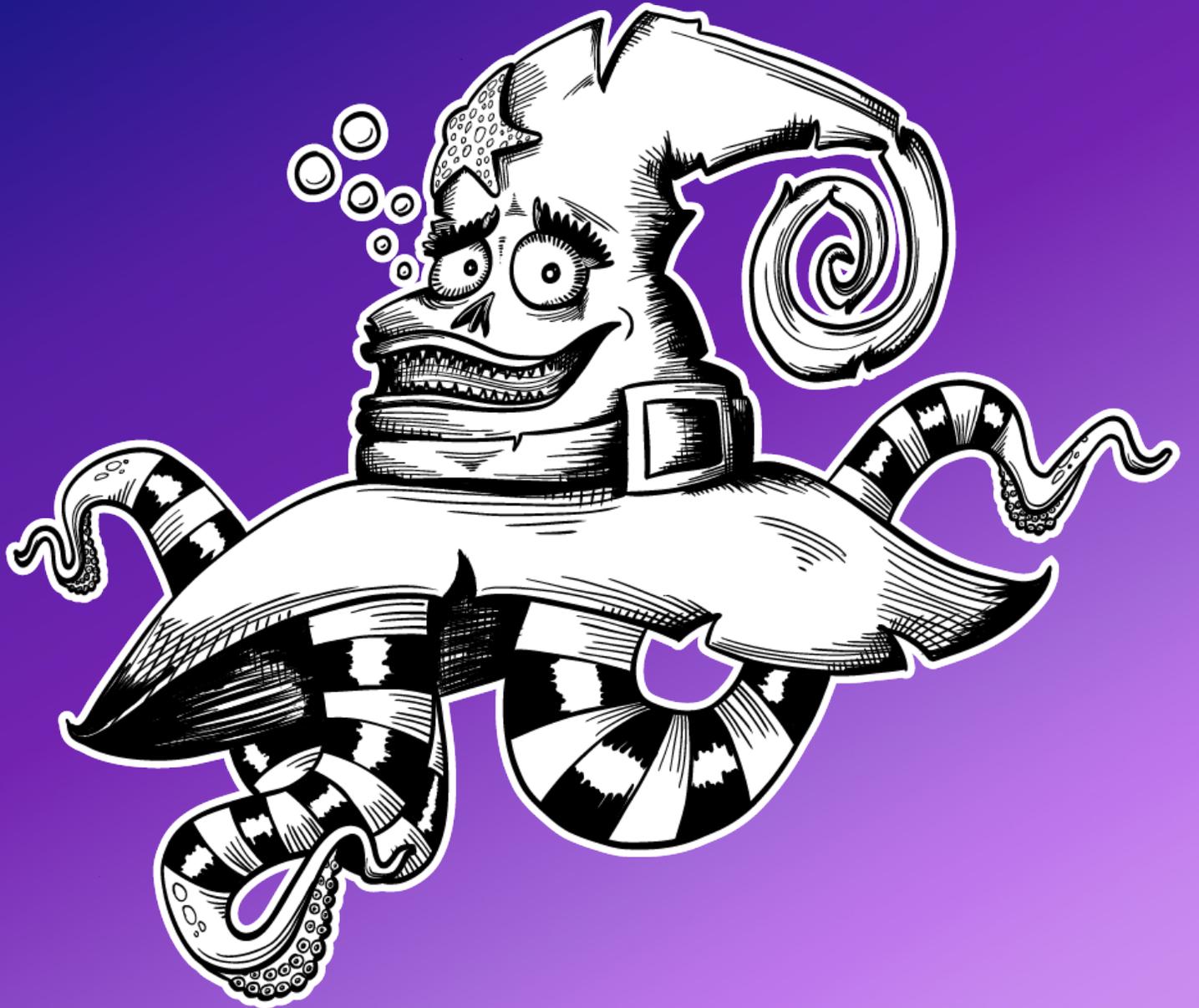
DY
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ICS MINDS

**Microsoft Dynamics 365
and Power Platform Conference**

Pre-Day: MAY 26, 2024

MAY 27 - 29, 2024

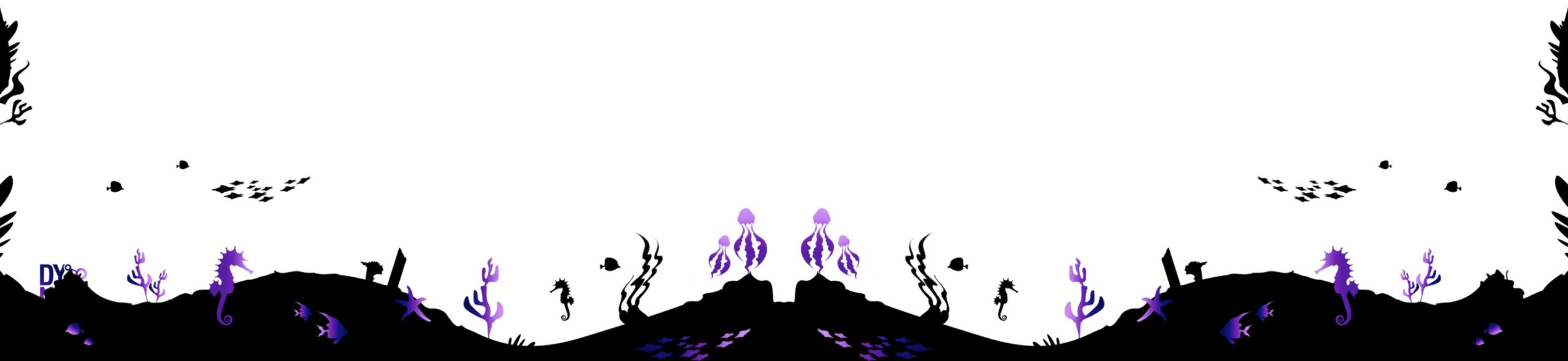
Portorož, Slovenia, Europe





Tobias Fenster
Managing Director 4PS Germany
Dual MS MVP, MS RD, Docker Captain

How everyone can contribute
to the Business Central standard code



Disclaimer: Content by Microsoft
with some updates, presented with
their OK



First Business Central
Application GitHub
repository is created



05/2018



05/2019



06/2019



07/2022



09/2022



04/2023



11/2023

The first modules of the
System Application are
added to the repository

First real code contribution
is made to the System
Application

The Business Central
BaseApp contribution pilot
goes live

AL-Go for GitHub is
introduced on
ALAppExtensions

The Cronus License is
opened up as a developer
license

BCApps is introduced
as true and public open
source repo

BCApps: A community effort

BCApps was officially launched November 2023

Since then, version 24.0 has been built in close collaboration with the community

Microsoft says Thank you to all the contributors!



101 Forks



248 Stars



68 Contributors



861 Merged PRs



77+ of which are shipping in 24.0

Open Source is more than writing code!



It's about
collaborating &
reviewing



It's about learning from others



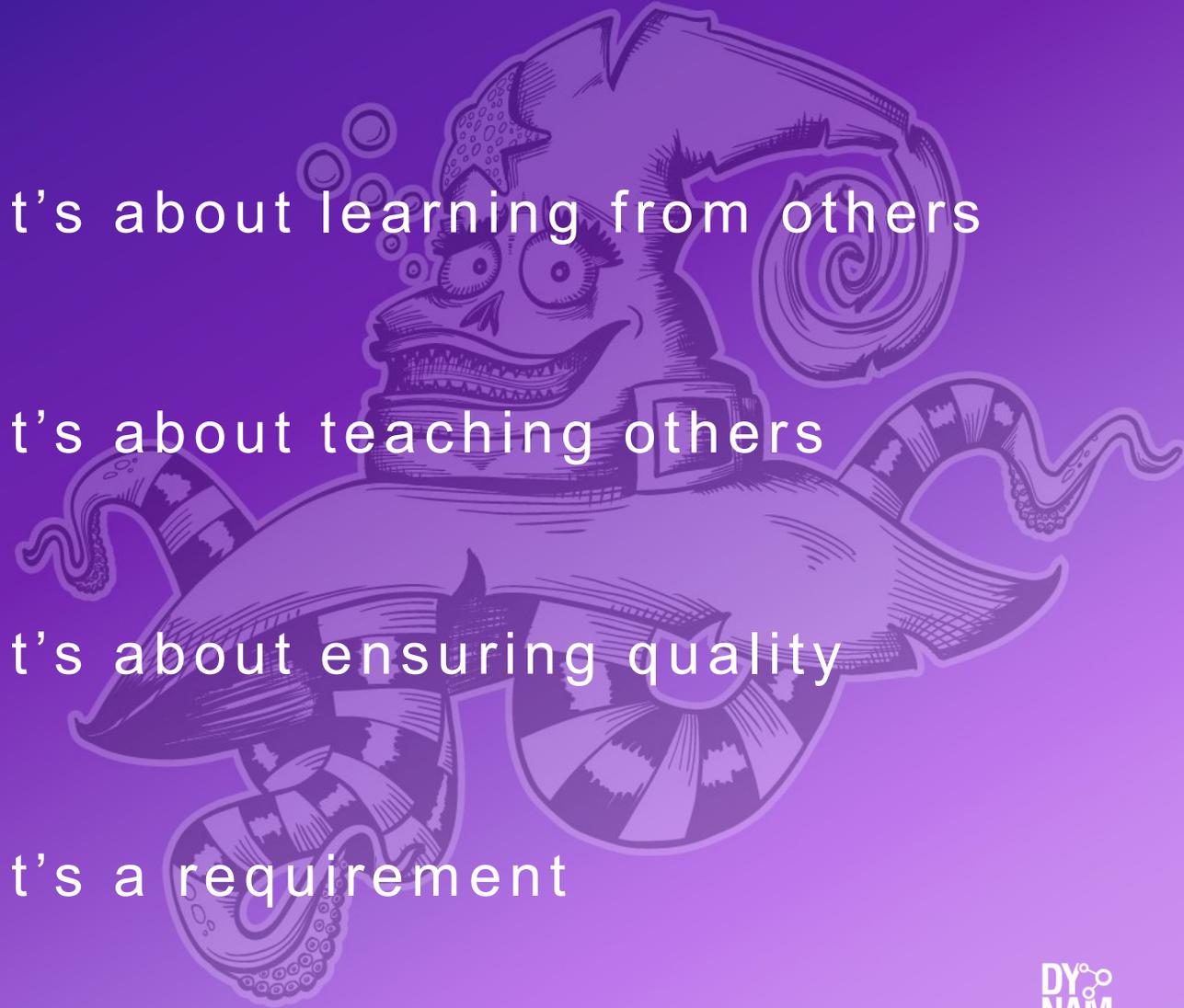
It's about teaching others



It's about ensuring quality

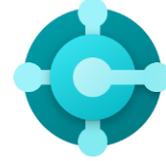


It's a requirement



Why?

Partner
perspective



Make the product better, strengthen BC ecosystem



Solve (annoying) things only once



Build a relation with MS engineers



Attract and keep the best devs



It's fun!

Challenges

Partner
perspective



Where is the limit in sharing?

(Key) intellectual property, size/time,
priorities



How can we legally allow it?

Employee contract

Welcome to BCApps!



Welcome to BCApps: Microsoft Dynamics 365 Business Central Application

The Repository

This repository contains the source code for several *Business Central* applications, developed by Microsoft.

The source code in this repository is available to everyone under the standard [MIT license](#).

✦ BCApps run on [AL-Go for GitHub](#) ✦

Contributing

In this repository, we welcome contributions to the **System Application**, **Business Foundation** and the **Developer Tools**, such as **Test Runner**, **Performance Toolkit** and others.

- If you are looking to contribute to **Microsoft's 1st party apps** you can do so in the [ALAppExtensions](#) repository.
- If you are looking to contribute to the **Base Application** you can do so in the [BusinessCentralApps](#) repository. Please note, that this repository is private but you can request access by filling out [this form](#).

Want to learn more about how to contribute to this repository? Please refer to our [Contribution Guidelines](#).

⚠ IMPORTANT ⚠: This is not the right place to report product defects with customer impact to Microsoft! Issues created in this repository might not get picked up by the Microsoft engineering team and issues reported in this repository do not fall under SLAs (Service Level Agreements) and hence have no guaranteed time to mitigation, just as provided fixes won't get backported to all supported versions of the product.

Getting Started with Contributing

1. It all starts with an idea or a bug
2. Create a GitHub issue
3. Gain approval



[BC Idea]· BCPT Handled event in AddLogEntry #137 Edit New issue

Implement a BC Idea Suggest a BC Idea you would like to implement.	Get started
Fix a bug Create a bug report for a product defect you would like to address yourself	Get started
Report a bug in the contribution process Report a bug in the contribution process	Get started
Report a security vulnerability Please review our security policy for more details.	View policy
Request a feature Please go to https://aka.ms/bcideas to log your idea. Creating an issue here is not the right way.	Open
Report a bug in the product Please follow the steps on https://aka.ms/bcsupport to get support. Creating an issue here is not the right way.	Open

[Edit templates](#)

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4 participants

Setting up your Development Environment

1. Create a fork
2. Set up a container for your dev. Environment (local or COSMO Alpaca)
3. Time to develop!

How to create a local development environment

Prerequisites

- Install and run [Docker Desktop](#). Make sure it is running Windows containers.
- Install [BcContainerHelper PS module](#) (latest available version). `Install-Module BCContainerHelper -AllowPrerelease` would do.

[Here](#) you can read more about *BcContainerHelper*.

Create a development environment

The development environment is a docker container running Business Central locally. In order to create it, simply run `.\build\scripts\DevEnv\NewDevEnv.ps1` with the desired parameters.

For instance, running the following will

1. Build all AL apps that match `.\src\System Application\.`
2. Create a docker container called *BC-SystemApp* with an admin user with the provided credentials.
3. Publish the built apps and their dependencies to *BC-SystemApp*.

```
.\build\scripts\DevEnv\NewDevEnv.ps1 -containerName 'BC-SystemApp' -userName admin -password '<some password>' -projectPaths '.'
```

Disney · PIXAR

FINDING

DEMO



COSMO Alpaca is free for base app contributions! (for 20h / month)

**If you decide to further use it, COSMO will get in touch.
After an agreement, the price will be 0,90 € / hour**



Opening a Pull Request

1. Add a title
2. Provide a summary
3. Link to your issue

Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#). [Learn more about diff comparisons here](#).

base repository: microsoft/BCApps | base: main | head repository: aholstrup1/BCApps | compare: aholstrup/test_violation

✓ Able to merge. These branches can be automatically merged.

Add a title

Title

Add a description

Write | Preview

<!-- Thank you for submitting a Pull Request. If you're new to contributing to BCApps please read our pull request guideline below
* <https://github.com/microsoft/BCApps/Contributing.md>
-->
Summary <!-- Provide a general summary of your changes -->

Work Item(s) <!-- Add the issue number here after the #. The issue needs to be open and approved. Submitting PRs with no linked issues or unapproved issues is highly discouraged. -->
Fixes #

Markdown is supported | Paste, drop, or click to add files

Allow edits and access to secrets by maintainers ? Create pull request

Remember, contributions to this repository should follow its [contributing guidelines](#), [security policy](#), and [code of conduct](#).

Reviewers

- D365 BC Engineering Systems
- D365 BC App Required

At least 2 approving reviews are required to merge this pull request.

Assignees

No one—[assign yourself](#)

Labels

None yet

Projects

None yet

Milestone

No milestone

Development

Use [Closing keywords](#) in the description to automatically close issues

Merging a Pull Request

What is required before merging?

Code Reviews

- Comment Resolution
- Approvals

Checks

- Work Item Validation
- For Microsoft: Validate link to internal work items
- Pull Request Build

The screenshot displays a pull request interface with two main sections highlighted by colored boxes. The top section, outlined in orange, is titled 'Changes requested' and indicates that one review is requesting changes. It lists a change requested by 'JesperSchulz' and notes that there are two unresolved conversations that must be resolved before merging. The bottom section, outlined in blue, is titled 'Some checks were not successful' and shows a list of checks: 'Work Item Validation / Validate link to issues' (failing), 'Pull Request Build / PregelateCheck' (skipped), 'MSDO / Run Microsoft Security DevOps Analysis' (successful), 'PSScriptAnalyzer / PSScriptAnalyzer' (successful), 'Pull request Labeler / Label' (successful), and 'Work Item Validation / For Microsoft: Validate link to internal work items' (skipped and required). At the bottom, a 'Merging is blocked' message states that merging can be performed automatically once the requested changes are addressed. An 'Enable auto-merge (squash)' button is visible, set to 'Automatically merge when all requirements are met'.

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FINDING

DEMO



Our experience



Bert Verbeek – 4PS Group by Hilti

Technical Solution Architect & Microsoft MVP

When we find an **error** in standard BC it is very easy and quick to do it by ourself because we know the issue and have the code. So no hassle to create support tickets etc. And in the next minor we already have the fix we have implemented through the open source project!

We saw the benefits of a **new feature** (batch posting transfer orders) for our end users. So we created the feature and test automation. In the next major release our end users can already take benefit of it!

Our experience



Simon Fischer – 4PS Group by Hilti Senior Developer

It felt wrong to keep such a basic functionality (Azure Blob Storage integration for BC) to myself, knowing that others will have to do the same things **over and over again** - instead of spending time on the actual solution.

The community feedback was very rewarding and it showed me, that there is a will to collaborate more. I hope that the contribution will **encourage others** to do the same.

Our experience



Kilian Seizinger – prisma informatik GmbH
Developer & Microsoft MVP

Contributing **functional improvements** to the BC standard might seem like additional work, but because maintenance is also done by Microsoft and others in the community, it actually is less work in the end.

Saving time by **solving problems** once and for all gives me the opportunity to work on new topics. And I just like the Open Source mindset!

Our experience



Alexander Drogin – KPMG Senior Technical Architect

I find many benefits in being a part of the Open Source community. It's always a **good learning and a very rewarding experience** to work alongside some of the best Business Central developers.

Besides, open source helps me **solve practical problems**. For instance, I've always been troubled by the need to isolate false positive BaseApp tests. Now my own test runs get cleaner with every test I fix.

Our experience



Tom Kapitan – Fusion5

Technical Lead & Microsoft MVP

I hate doing the same development multiple times. And if it's something we (as partners) don't see added value, it's fantastic to have this opportunity to **fix/improve the Business Central code** through the open-source program.

You can do anything - I've tried to **refactor Transformation Rules** (→ go to the BaseApp repo and help me by providing your feedback as a code review) but also improved the **extensibility of D365 Sales integrations** in 7-9 contributions for different parts needed for a proper BC-CE AppSource solution.

Hear directly from two of the top contributors:

**Business Central Open-Source Contributions:
The quickest way how to see your name during Microsoft BC Keynotes**
Tom Kapitan & Alexander Drogin – Wednesday, 12:15, Mediteranea I



Don't be scared!
Learning and teaching
is fun 🥳

Jump into reviews & discussions
You and the product quality can
only benefit!





Docs are Open Source too!

Thanks for your attention! Questions?

Let me know how you liked it:
LinkedIn and X/Twitter - tobiasfenster

