A DYNAMICSCON PRESENTATION

POWERED BY DUG

DYNAMICSCON VIRTUAL

MARCH 2023

FINANCE & OPERATIONS

DYNAMICSCON.COM

Multiple Projects on D365FO OneBox using Git

KLEMEN NOVAK

Microsoft
DOCENTRIC
VERTEX
POWERED BY DUG
DYNAMICSCON VIRTUAL

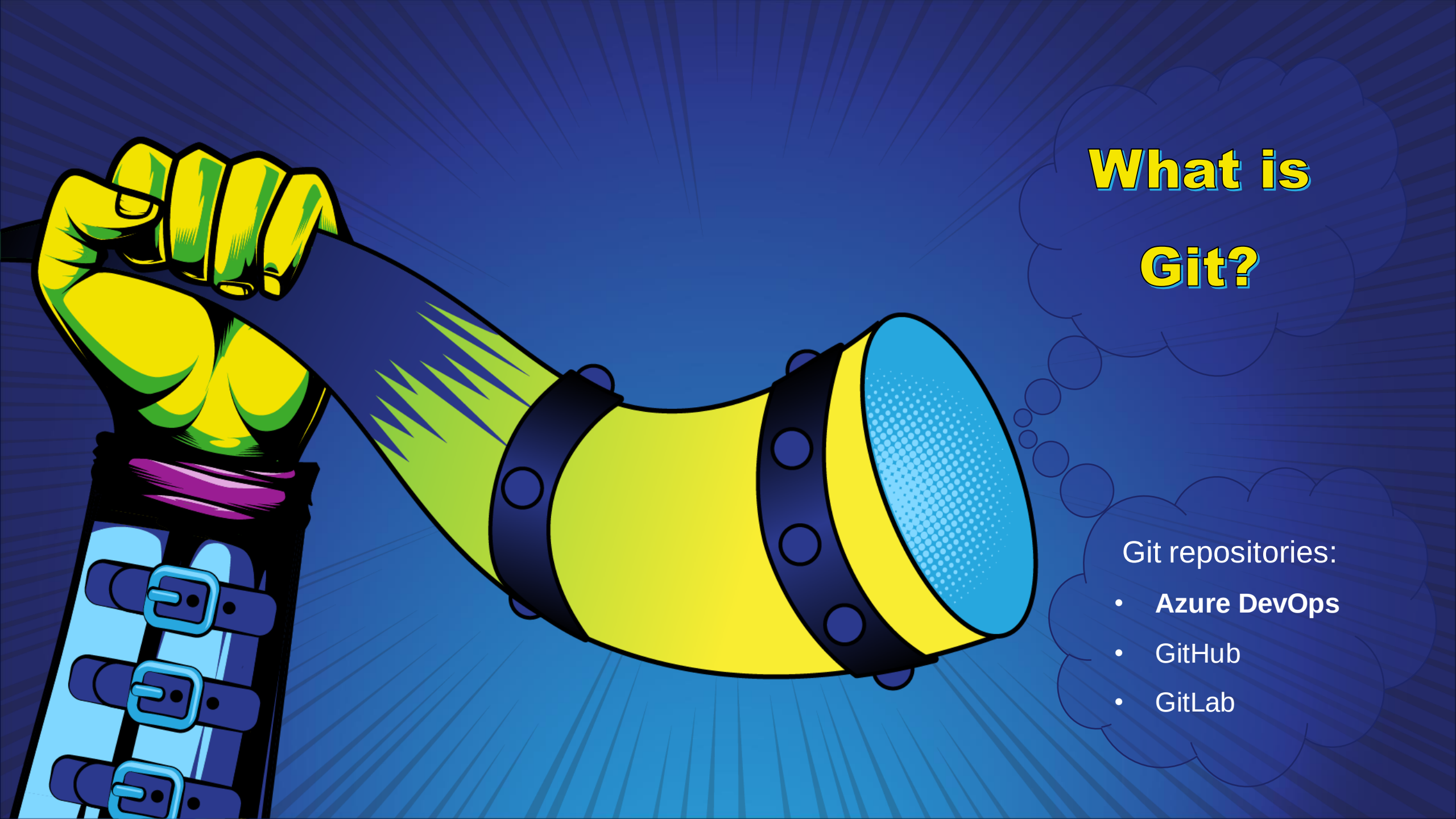
KLEMEN NOVAK

CTO @ DOCENTRIC

Sometimes I still get my hands dirty and write code ;)

TODAY'S AGENDA

- Intro
- Getting started with Git
- Branching strategy
- Pull Requests
- Demo

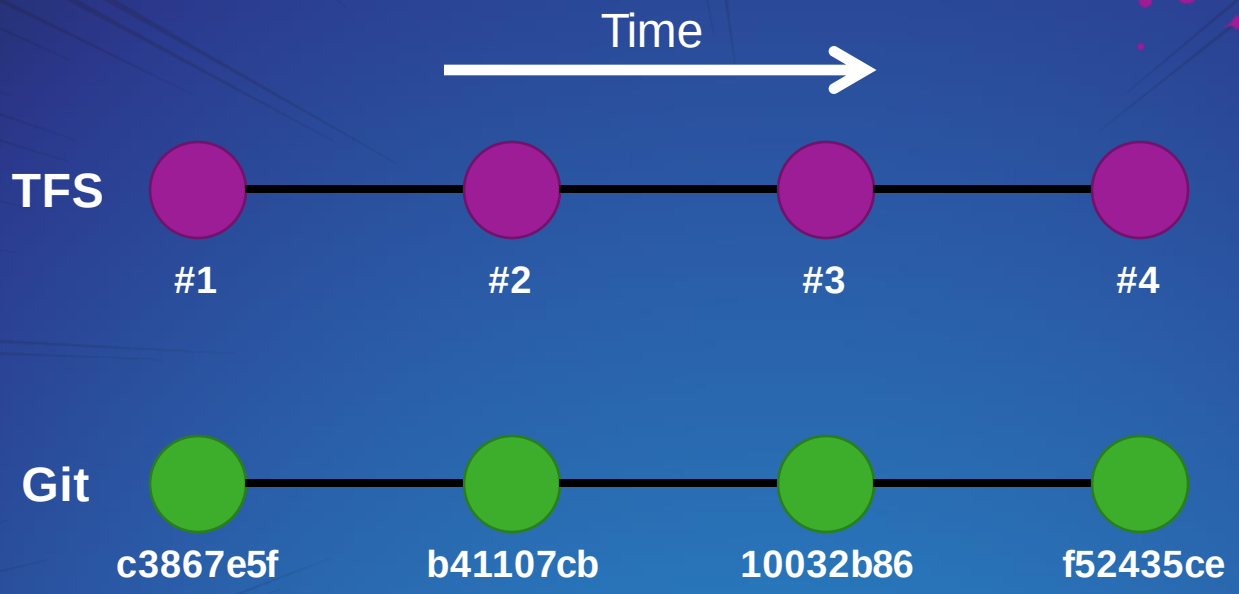


What is Git?

Git repositories:

- **Azure DevOps**
- GitHub
- GitLab

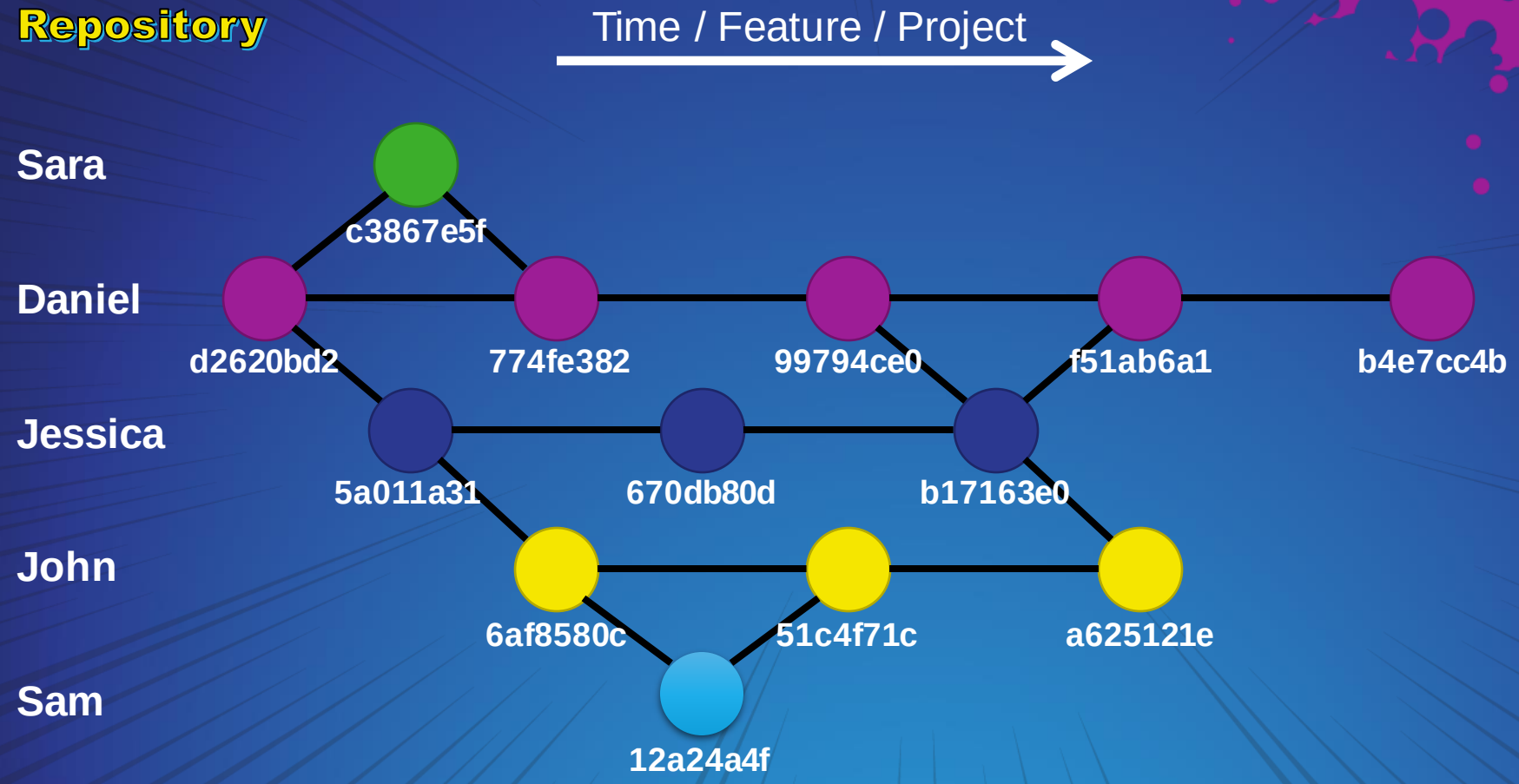
TFS vs Git Commits



Git commit is a hash:

f52435ce2ffeb7d6b8f1573ca8a6bba9d0697520

Git: Distributed version control



Microsoft
DOCENTRIC
VERTEX
POWERED BY DUG
DYNAMICSCON VIRTUAL

The comparison: TFS vs Git

TFS

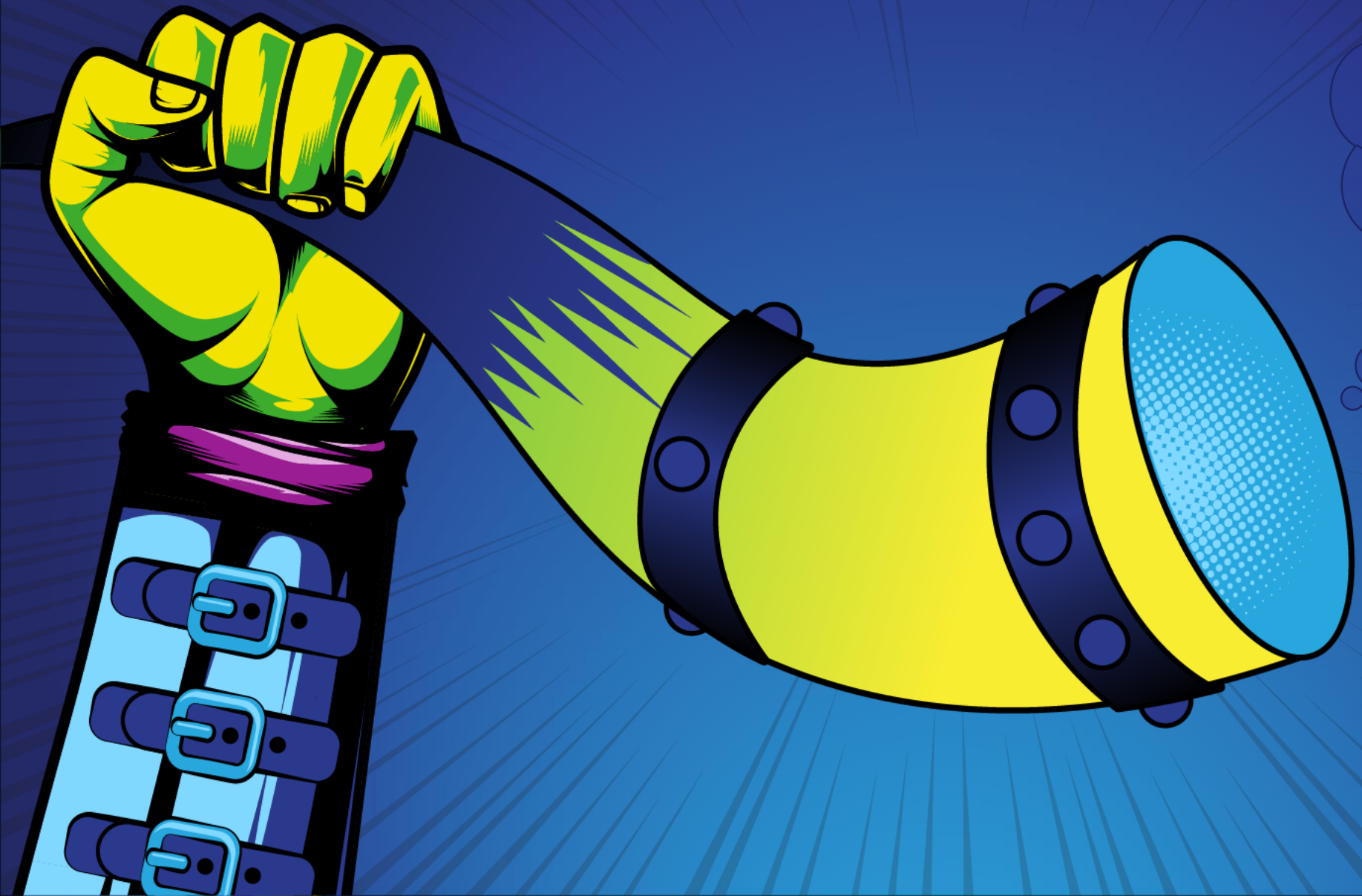
- Push based
- Branches last nearly forever and are hard to work with
- Branches are folders based
- Monolithic
- Supports multiple destination folders

Git

- Modern & Agile
- Working offline (speed)
- Pull-based (Code reviews in one place)
- Branches are short-lived and are easy to work with
- More tools, possible build and deploy automations
- Requires reallocating projects in a single location

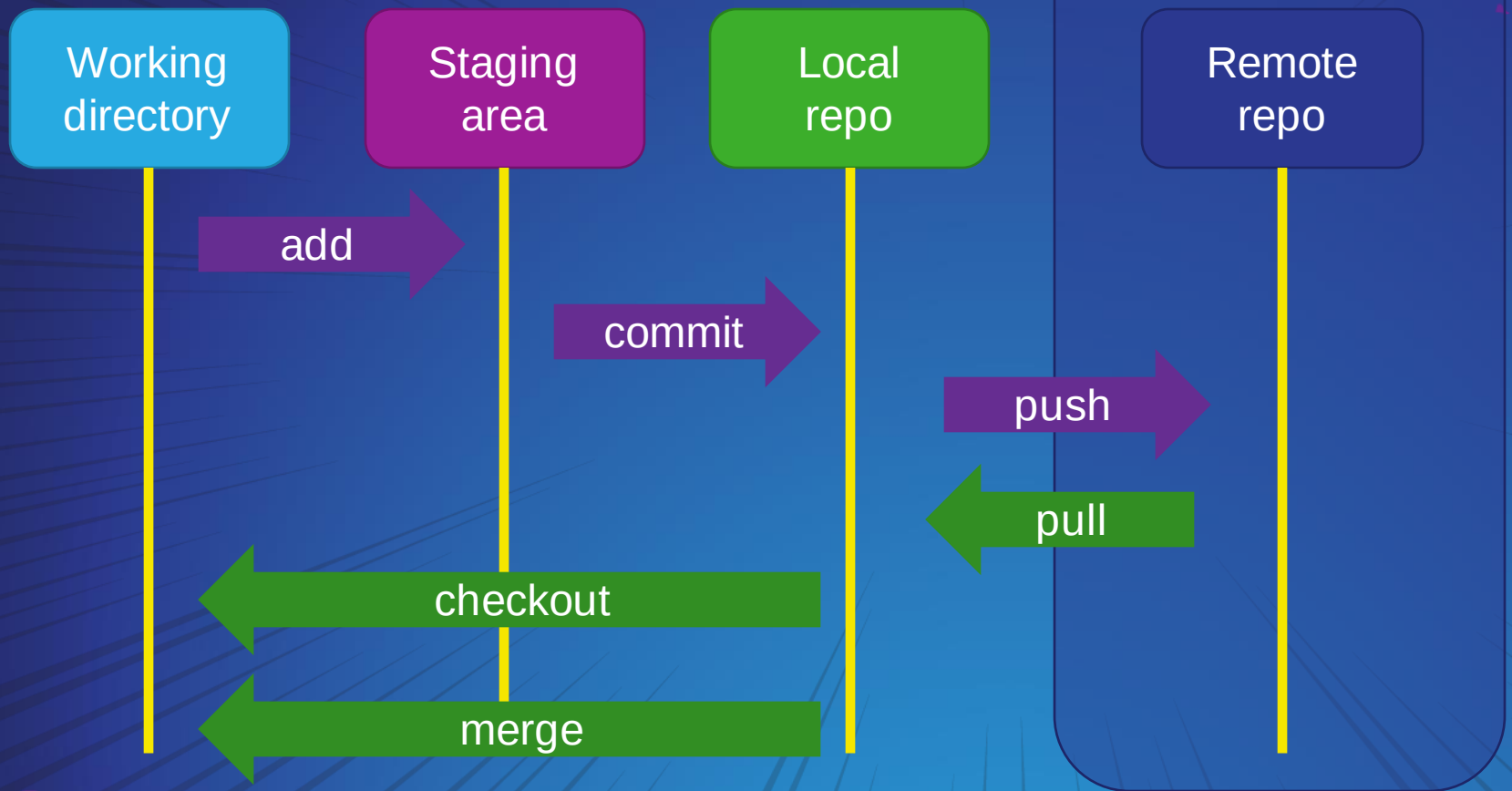
AWESOME RIGHT ;)

Git Basics



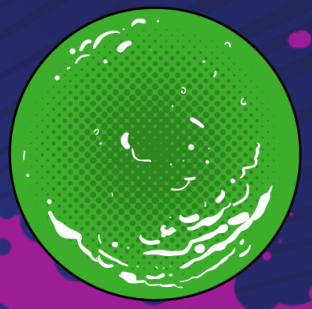
Tell me more ;)

Git Basics



Microsoft
DOCENTRIC
VERTEX
POWERED BY DUG
DYNAMICSCON VIRTUAL

Git Basic Commands



SETUP

Configuring user information used across all local repositories

```
git config –global user.name “Jonh Doe”
git config –global user.email “email”
```

INITIALIZE GIT REPOSITORY

Initializing local repository (inside a folder)

```
git init
```

Cloning remote repository to local repository (by default, the folder will be named the same as the remote repo)

```
git clone [url]
```

STAGE & COMMIT

Check the current state of your branch.

```
git status
```

Add all file changes for next commit.

```
git add –A
```

Commit your staged content as a new commit snapshot locally.

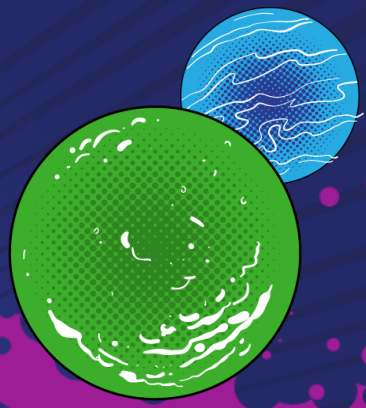
```
git commit –m “[descriptive message]”
```

Git Cheat Sheet: https://education.github.com/git-cheat-sheet-education.pdf

Microsoft DOCENTRIC VERTEX

POWERED BY DUG DYNAMICSCON VIRTUAL

Git Basic Commands



BRANCH & MERGE

List all branches

```
git branch
```

Create a new branch at the current commit

```
git branch [branch name]
```

Switch to another branch and check it out in your working directory

```
git checkout [branch name]
```

Merge the specified branch's history into the current one

```
git merge [branch name]
```

Show all commits in the current branch's history

```
git log
```

SHARE & UPDATE

Add a git URL as an alias.

```
git remote add [alias] [url]
```

Fetch down all the branches from that Git remote (get them listed in the local repository).

```
git fetch [alias]
```

Transmit local branch commits to the remote repository branch (send it to server).

```
git push [alias] [branch]
```

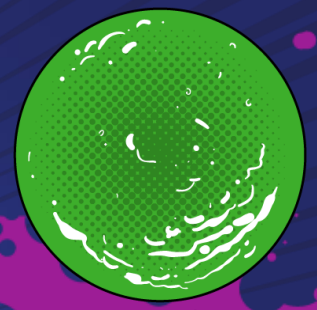
Fetch and merge any commits from the tracking remote branch (get all the changes).

```
git pull
```

Git Cheat Sheet: https://education.github.com/git-cheat-sheet-education.pdf

Microsoft
DOCENTRIC
VERTEX
POWERED BY DUG
DYNAMICSCON VIRTUAL

Git Tools



git CLI

Sourcetree

Visual Studio

Git TortoiseGit

There are other alternatives.

Microsoft

DOCENTRIC

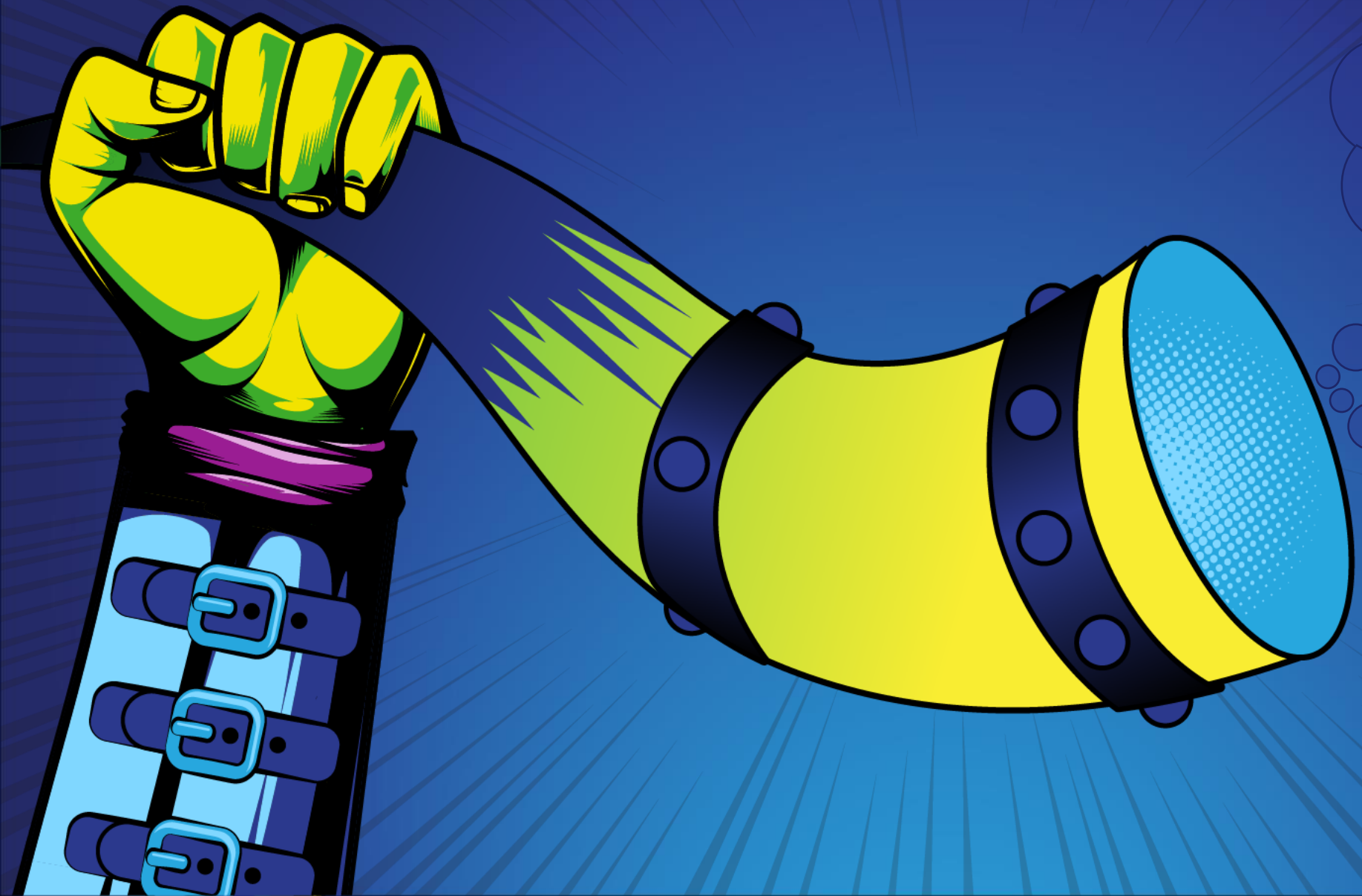
VERTEX

POWERED BY DUG DYNAMICSCON VIRTUAL

Getting started with Git

1. Create Git Repository
2. New Branch
3. Add .gitignore
4. Add .gitattributes
5. Add the code (models and projects)
6. Commit and push to remote

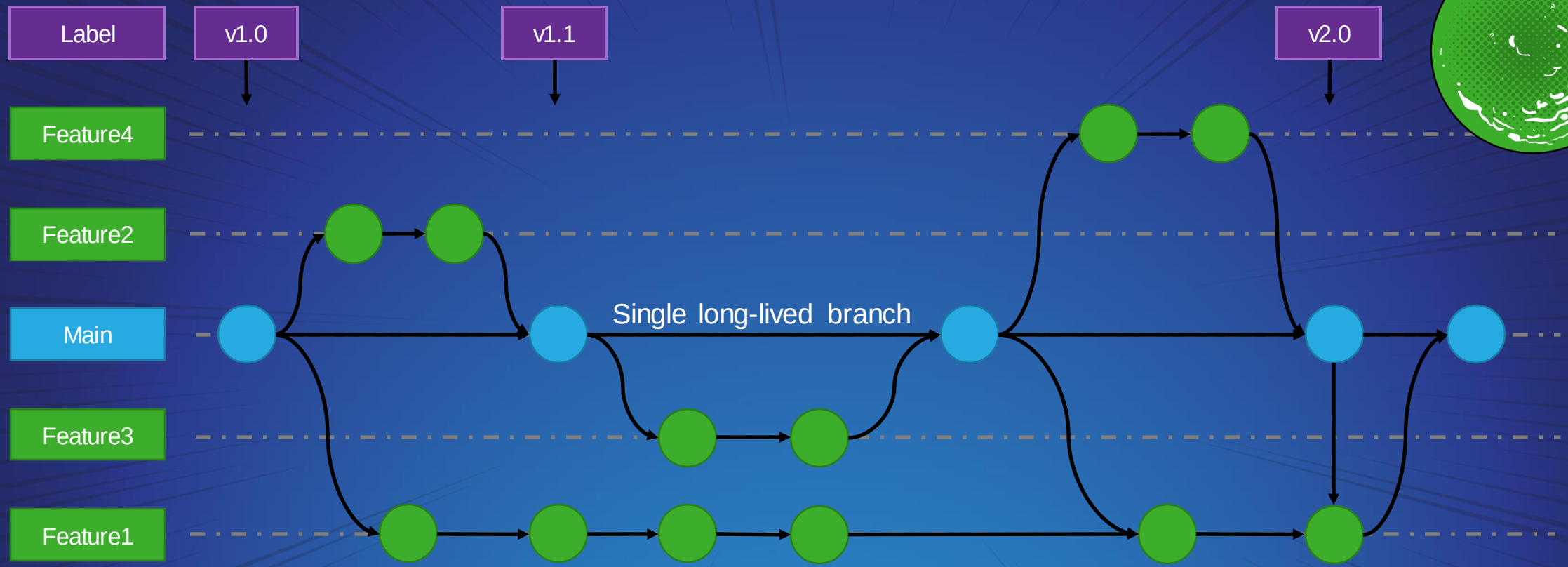
Git Branches



What are Branches?

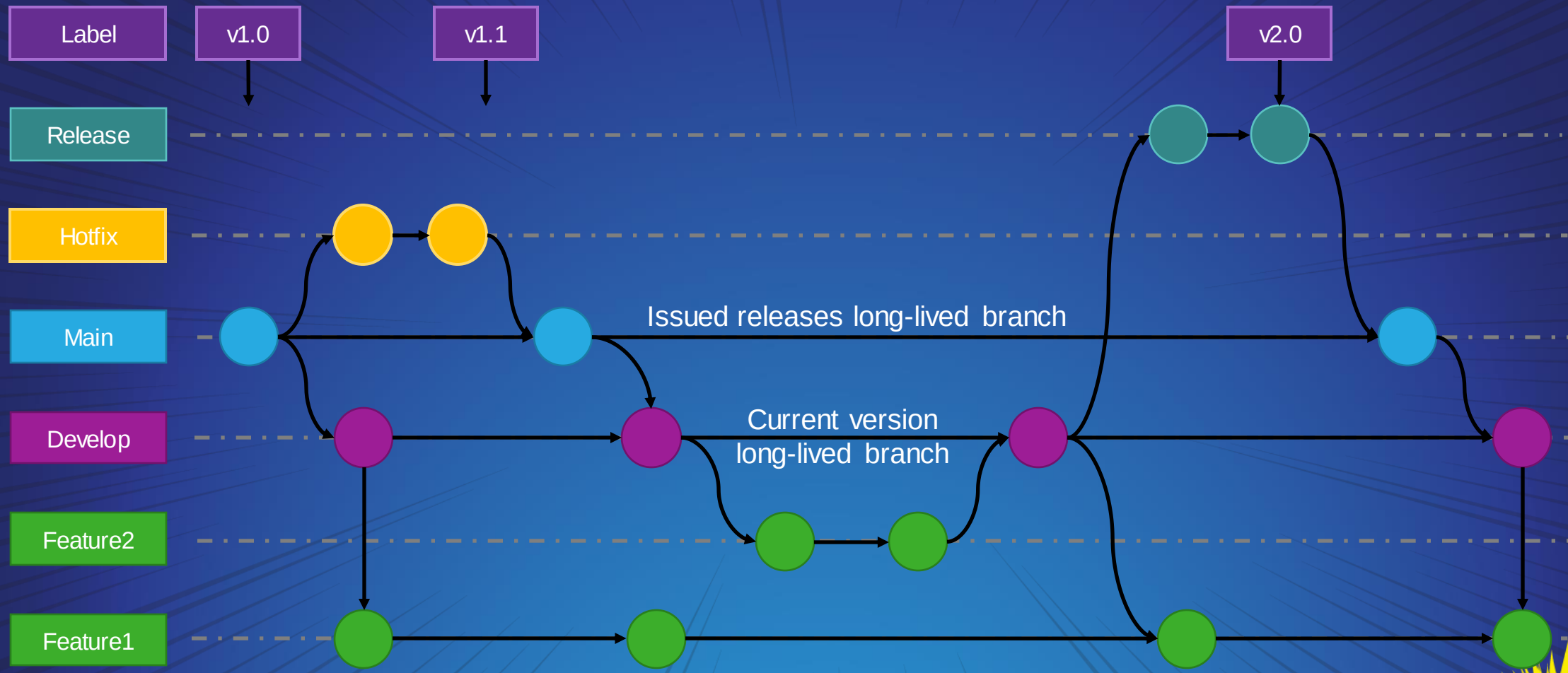
How to work with Branches?

Branching with GitHub flow



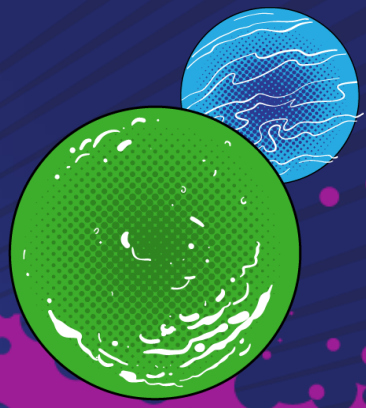
Microsoft
DOCENTRIC
VERTEX
POWERED BY DUG
DYNAMICSCON VIRTUAL

Branching with GitFlow



Microsoft
DOCENTRIC
VERTEX
POWERED BY DUG
DYNAMICSCON VIRTUAL

Branch Workflow Comparison



Github flow

- Simple to use
- A single long-lasting branch (main)
- Intended for each day deployment

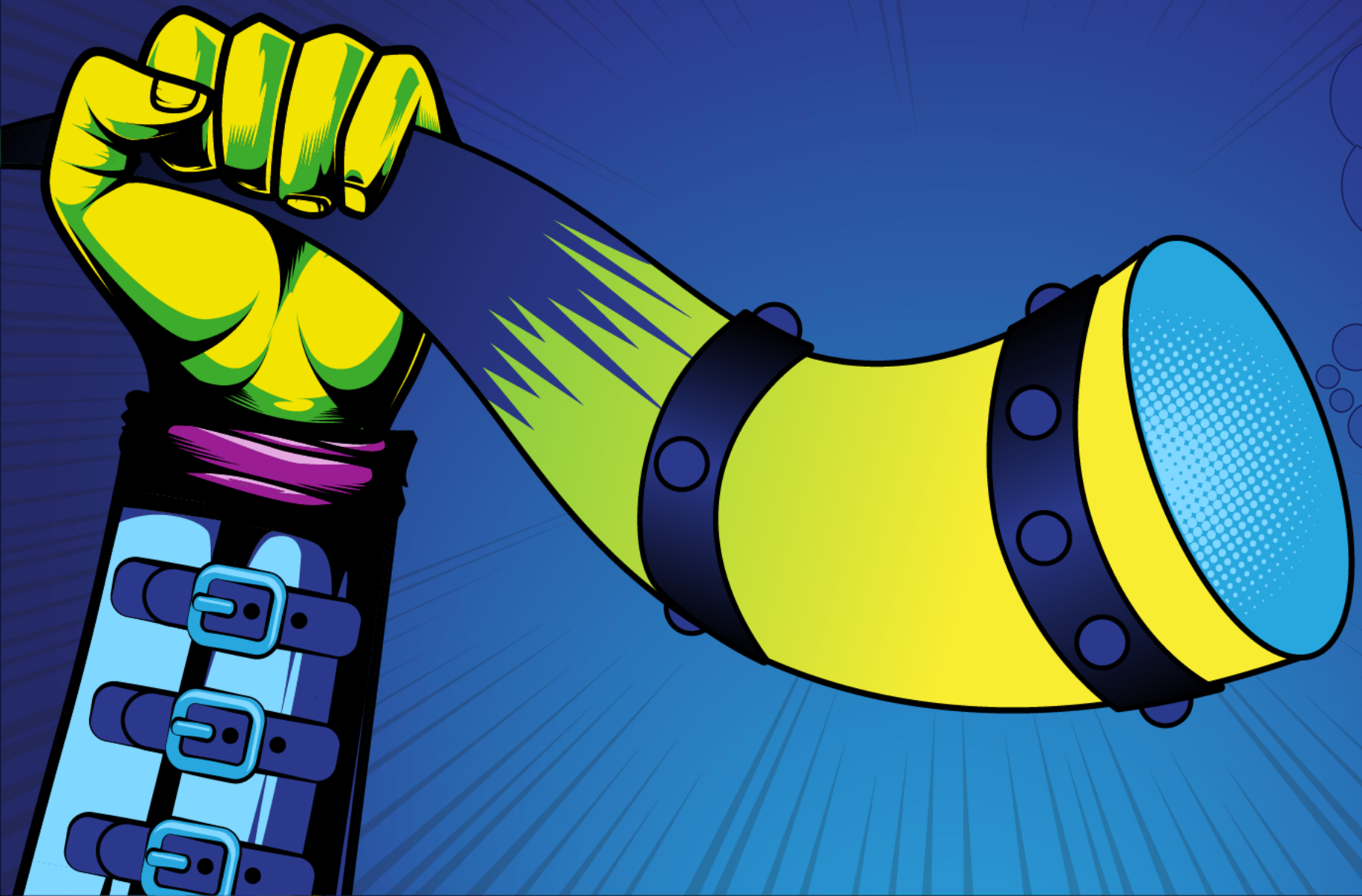
GitFlow

- More complex to use
- Two long-lasting branches (main and develop)
- Easier to create hotfixes, new releases
- Intended for product development

Both options are excellent!

The development process is constantly improving and we can change the branch workflow later without hassle.

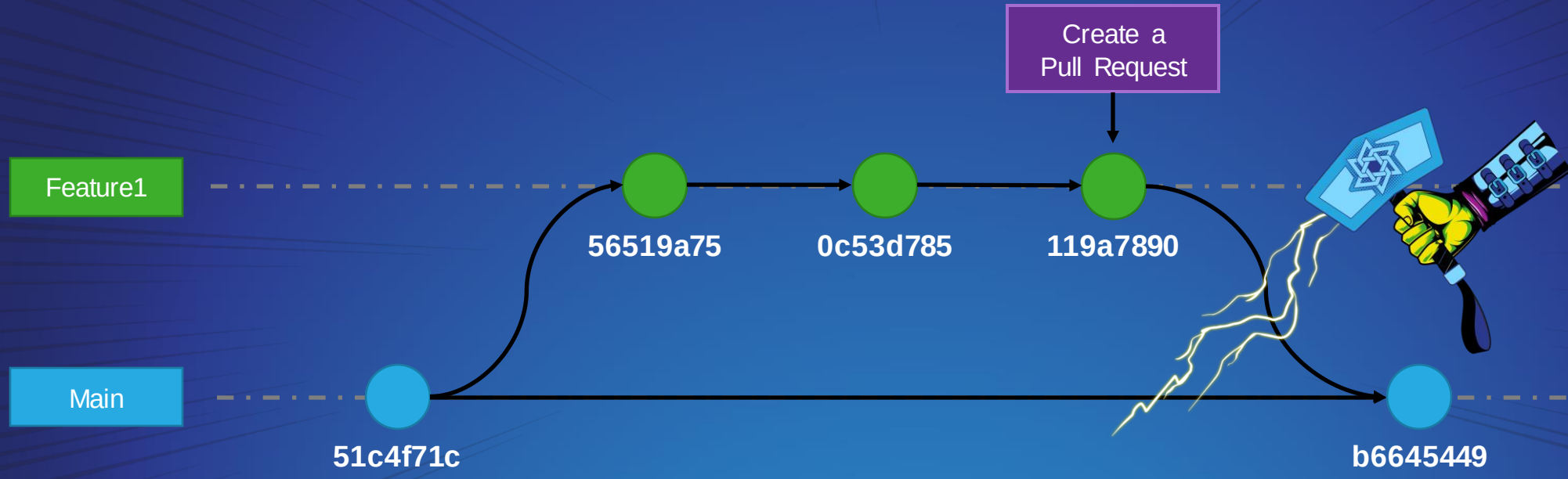
Pull Requests



What are Pull Requests?

How are they related with branches?

Pull Requests



Multiple Projects on D365FO OneBox

FINAL THOUGHTS

That's all folks!

Thank you!

Used resources

- Git template repository
- Gitflow for Visual Studio 2019
- Pull Request for Visual Studio 2019