Bringing DataOps to Power BI with Azure DevOps

June 15, 2021

About Me

Experience

- 10+ years with Microsoft BI stack

- 7+ years with PowerPivot/Power BI

- 5+ years with Azure DevOps

Credentials

- MCSE: Productivity

- MS: Teamwork Administrator

- MS: Data Analyst

- PMP

Files: https://bit.ly/3w8vqbc

Contact Me

@JKerski

John Kerski

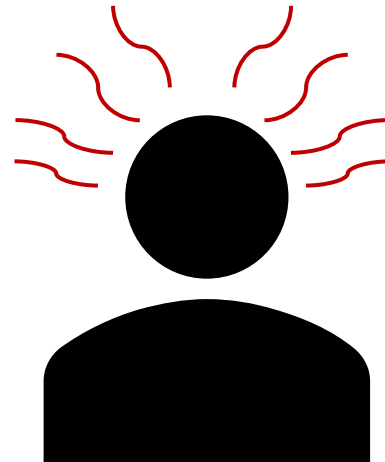# Questions For the Audience

Agenda

- DataOps High-Level
- The Challenges
- Overcoming These Challenges
- Demo

Have you Heard This Before?

This report looks wrong?

Why does it take this long to build?

This doesn't look right...

Why is the dashboard not updated?

Why is it broken?

This was working yesterday...

DataOps

- Manifesto
- DevOps + Agile + Lean Manufacturing
- 18 Principles
  - Make it reproducible
  - Quality is paramount
  - Monitor quality and performance

Make it Reproducible

Reproducible results are required and therefore **we version** everything: data, low-level hardware and software configurations, and the code and configuration specific to each tool in the toolchain.

Make it Reproducible

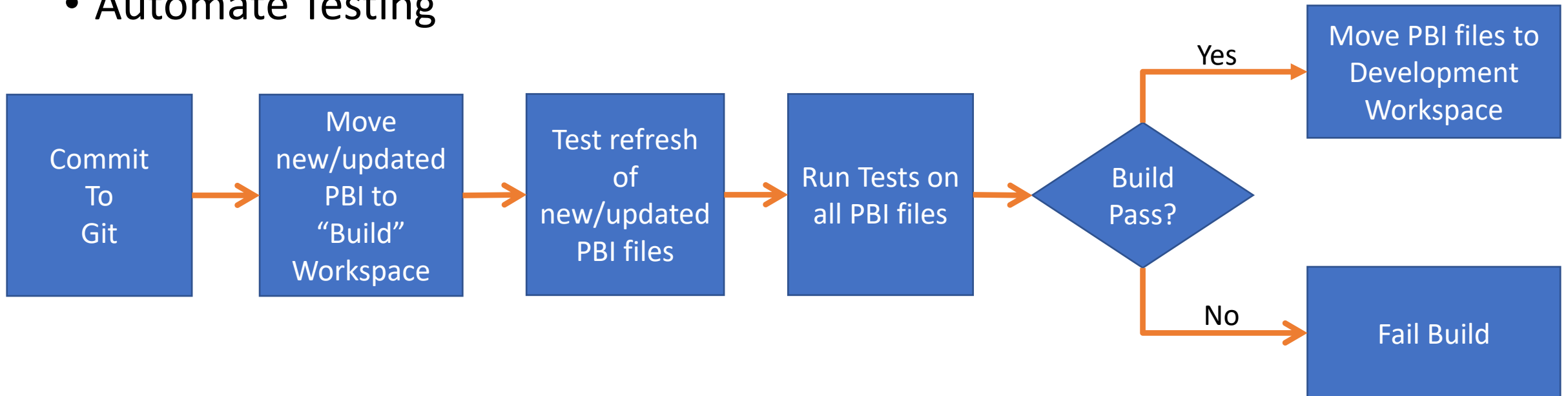- Version Control
  - Azure DevOps/Git
  - OneDrive
- Workspace
  - Automate publishing
  - Eliminate direct publishing
  - Separate the Report from the Data

Quality is Paramount

Analytic pipelines should be built with a foundation capable of **automated detection of abnormalities** and security issues in code, configuration, and data, and should provide continuous feedback to operators for error avoidance.

Quality is Paramount

- Test Your Code
  - Tables
  - Measures
  - Calculated Columns

- Automate Testing

```
Commit To Git → Move new/updated PBI to "Build" Workspace → Test refresh of new/updated PBI files → Run Tests on all PBI files → Build Pass?
                                                                                                                                    Yes → Move PBI files to Development Workspace
                                                                                                                                    No → Fail Build
```

Monitor Quality and Performance

Our goal is to have performance, security and quality measures that are **monitored continuously** to detect unexpected variation and generate operational statistics.

Monitor Quality and Performance

- Automate Monitoring
  - Don't rely on emails
  - Leverage Power BI to monitor Power BI
    - Failed Refreshes
    - Disabled Refreshes

Demo

- Premium is NOT the only option
- Automate On A Budget
  - Premium Per User
  - Azure DevOps

Questions For Me

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