Merlin
Guided Tour - CICD

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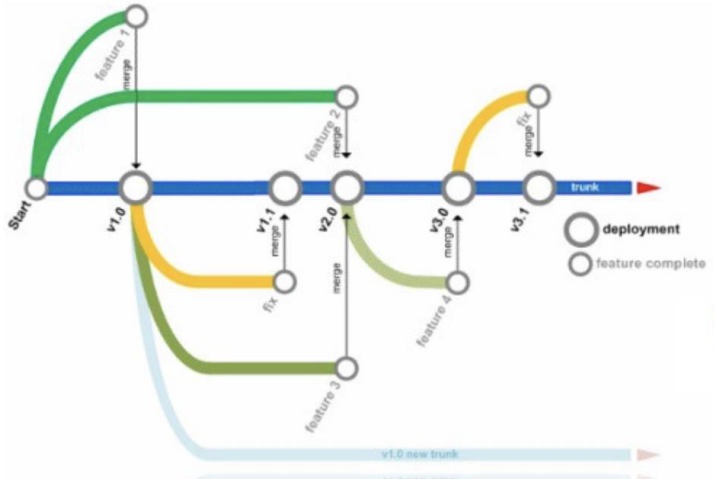
Modernization Engine for Lifecycle Integration

Merlin

A safe, secure IBM i focused modern development ecosystem

What Issues does Merlin Help Solve

Modern / Centralized Source Control and Branching



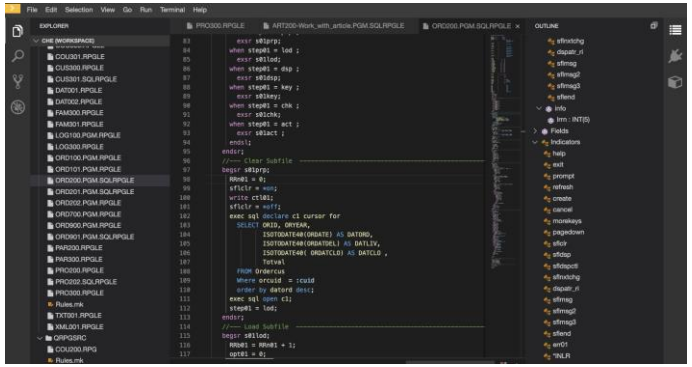
Modern RPG

```
ctl-opt bnddir('ACCRCV');
dcl-f custfile usage(*update);
dcl-ds custDs likerec(custRec);
dcl-f report printer;

read custfile custDs;
dow not %eof;
   if dueDate > %date(); // overdue?
      sendOverdueNotice();
      write reportFmt;
      exec sql insert :name, :duedate into
            mylib/myfile;
```

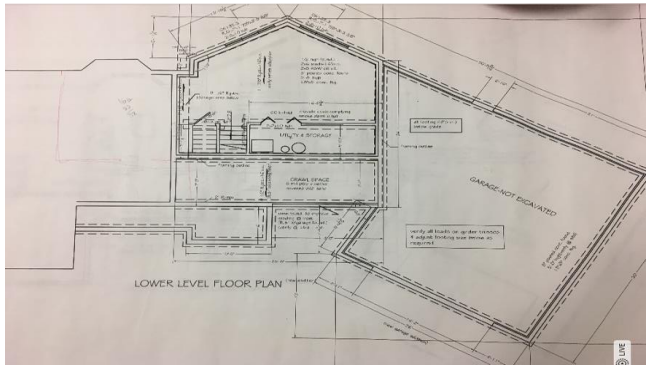
- Fixed to Free
- Refactoring

Browser Centric VsCode Based IDE



- Outline View
- Tokenization
- Content Assist
- Code formatting
- Understand Languages
  - RPG
  - SQL
  - Embedded SQL
  - CL
  - Cobol
  - DDS

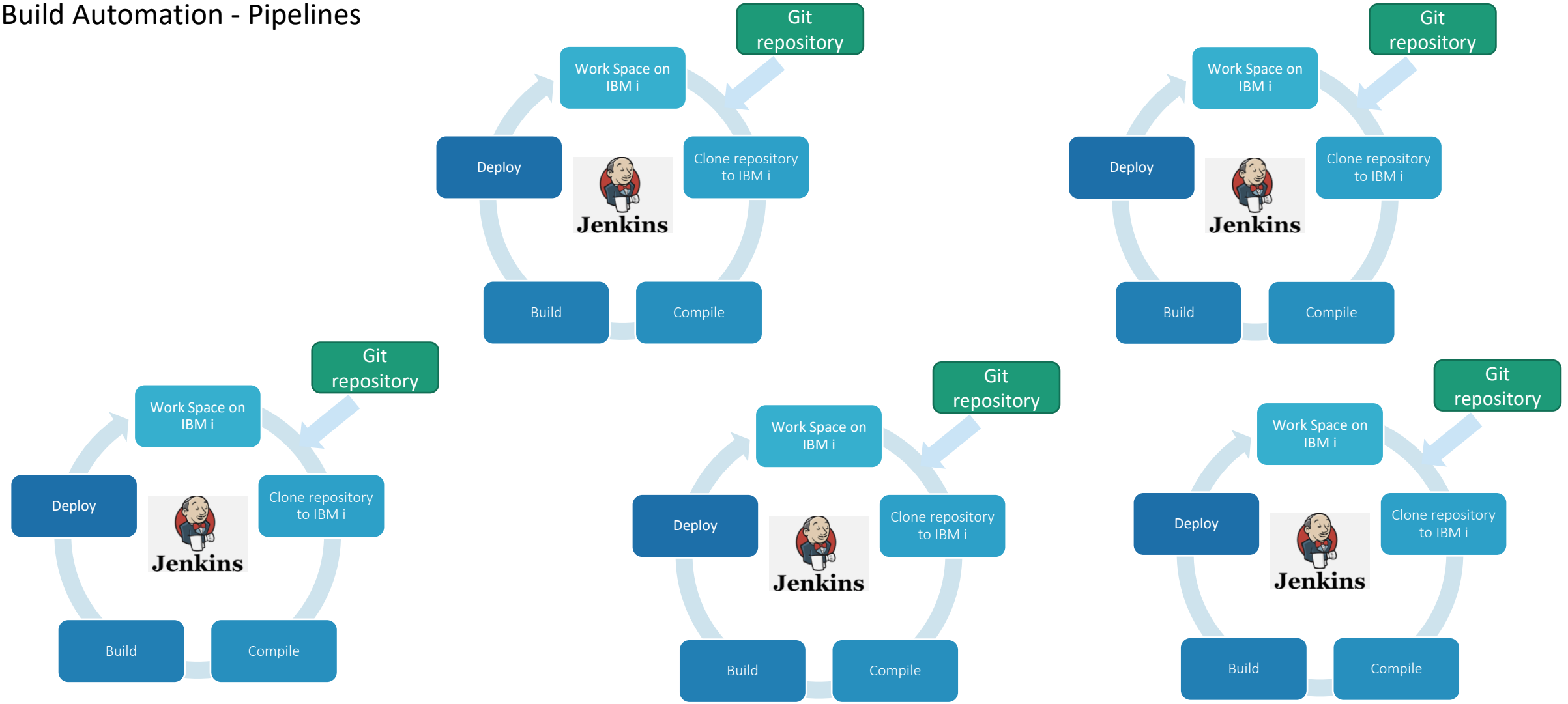
Application Blueprint



- Impact Analysis
- Program Understanding
- Data Usage
- Pgm Flow

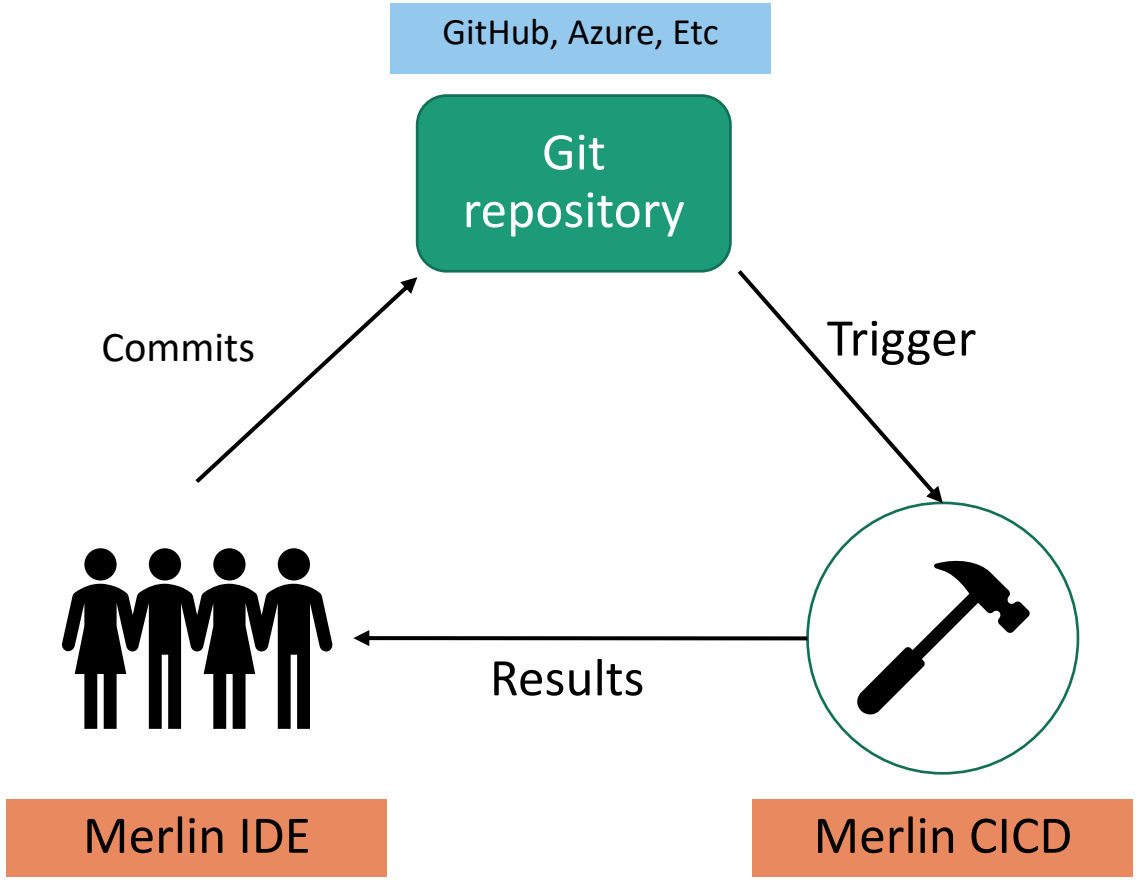
What Issues does Merlin Help Solve

Build Automation - Pipelines



What is continuous integration?

- Developers commit code to a shared repository regularly
- Repository pushes cause a build to trigger automatically
- Immediate feedback based on build result



Why do I need CI?

Detect problems or bugs,

as early as possible,

in the development life cycle

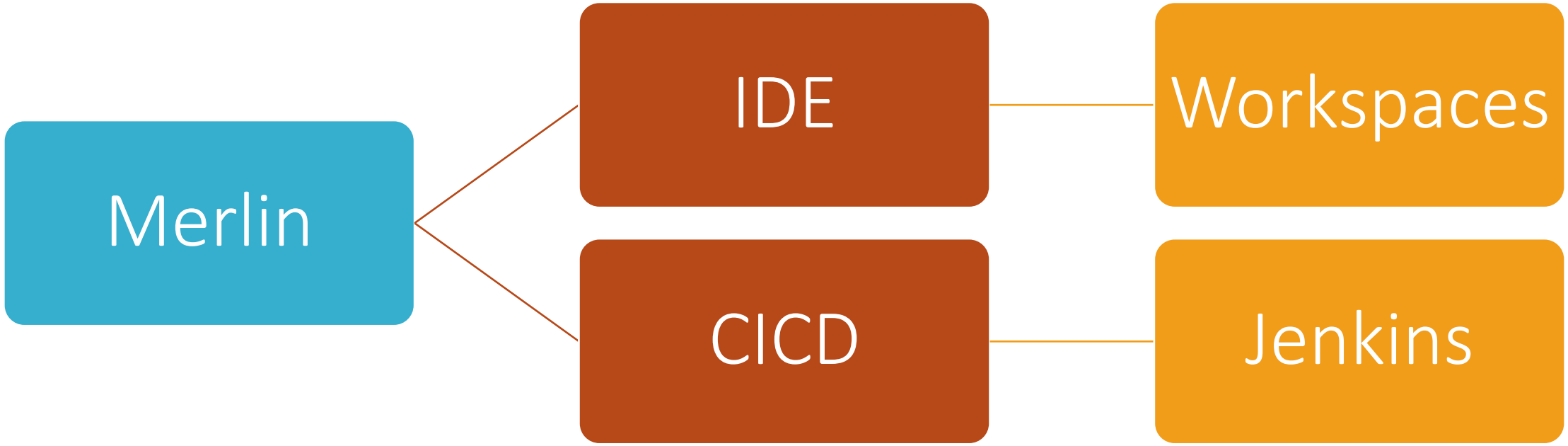
Potential bugs and errors are caught earlier in the life cycle which results in better quality software

CI is a mindset

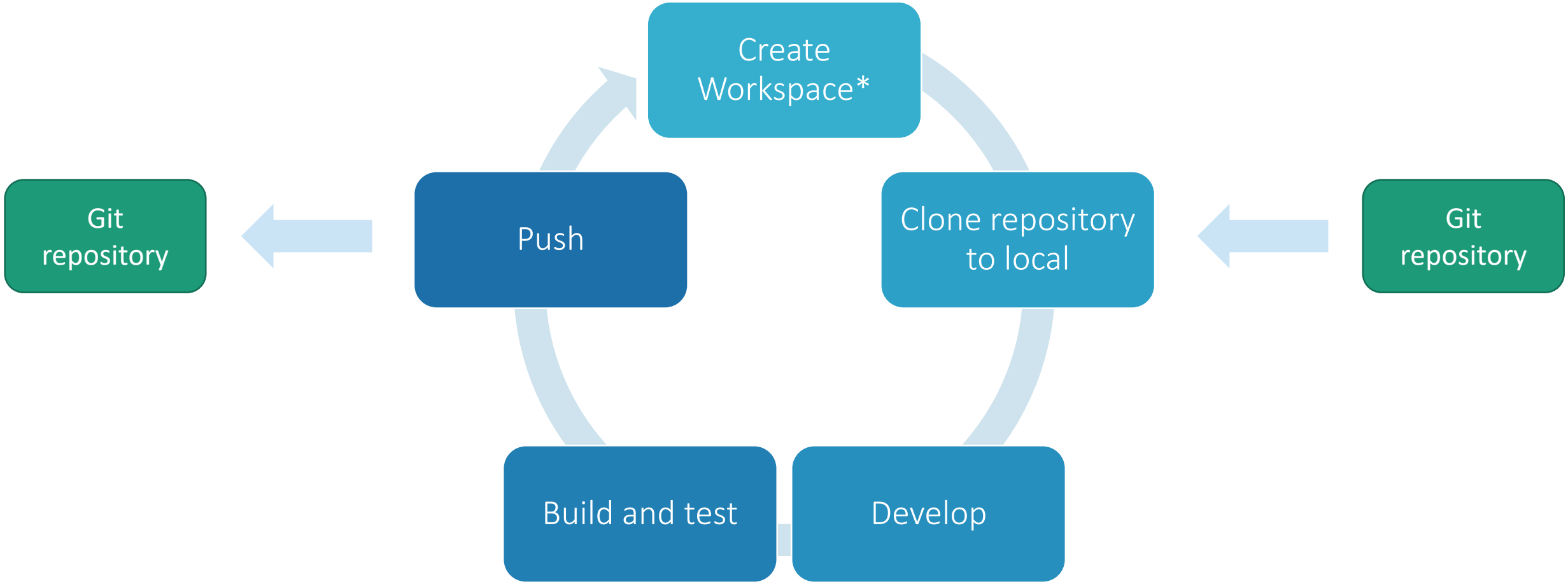
Fixing broken builds should be treated as a high priority issue for all team members

The deployment process should be automated, with no manual steps involved

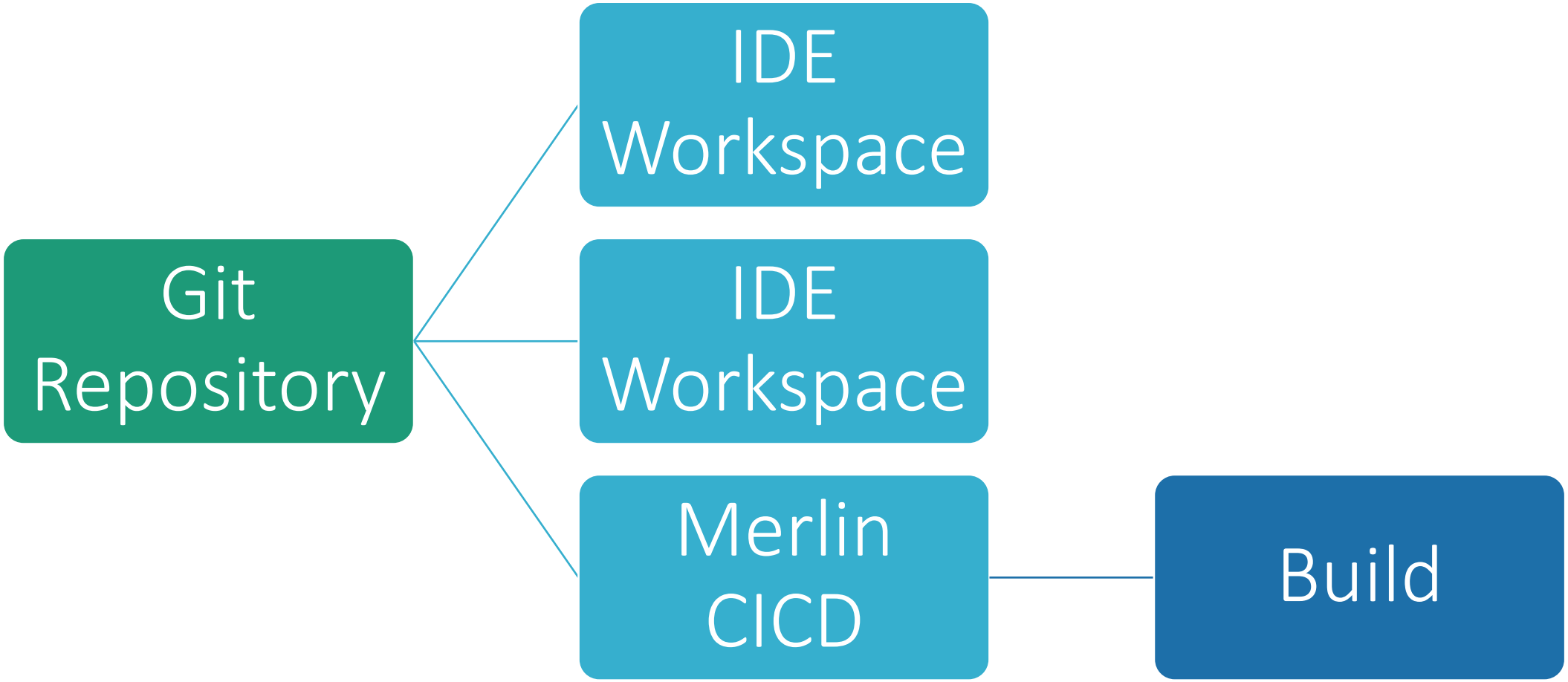
Merlin Hierarchy



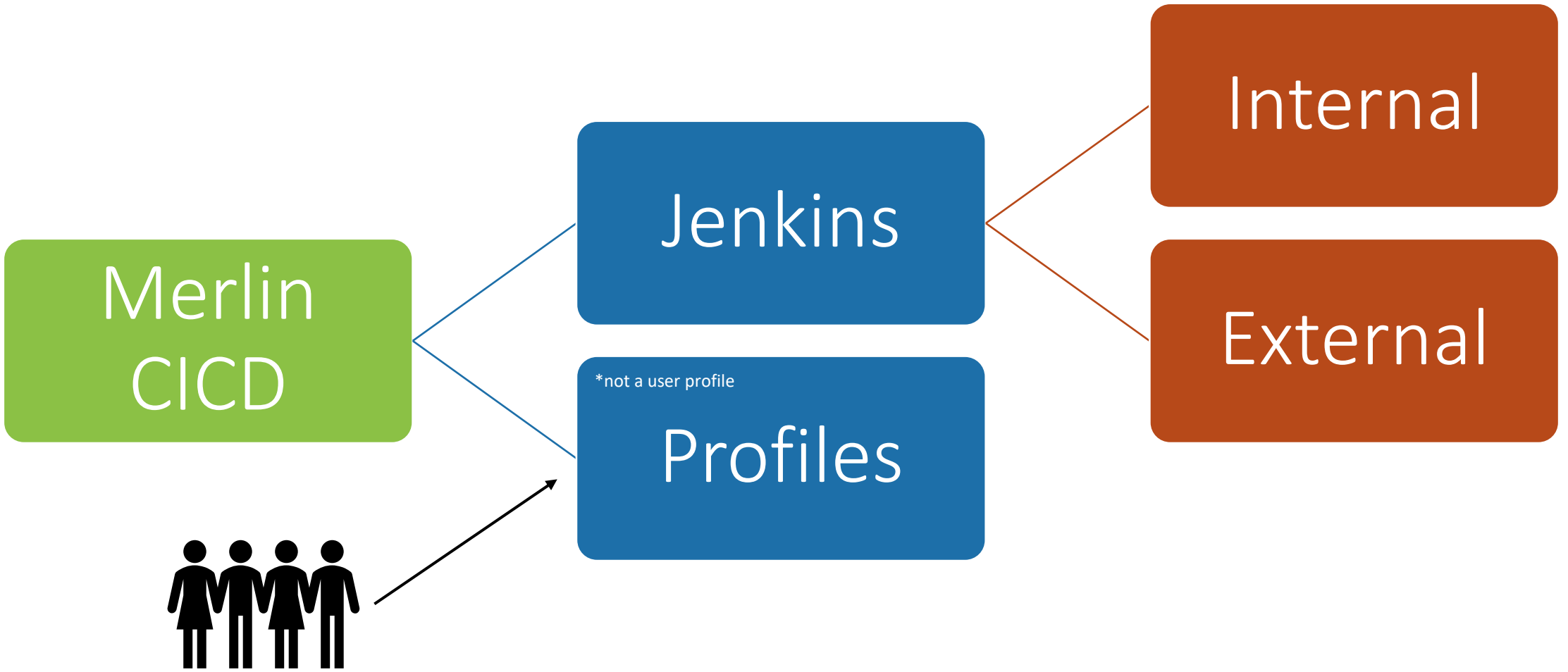
Development flow



Git repo usage



Merlin CICD hierarchy



Types of 'builds'

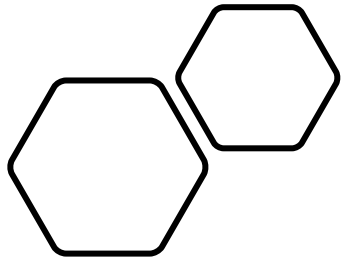
Build

- Build of entire application, or
- Build of specific portion of application (e.g. a display file and any dependent programs)

Compile

- Compilation of a specific sources without the need of launching larger build

Any build tool



- **ARCAD Builder**
- Custom build tools
- GNU Make
- ibmi-bob

Integrated into Merlin

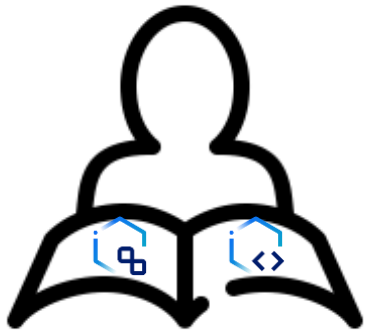
- ARCAD Builder
- ARCAD Transformer RPG (fixed->fully free)
- ARCAD Observer (Xref visualization/metadata)

ARCAD Builder

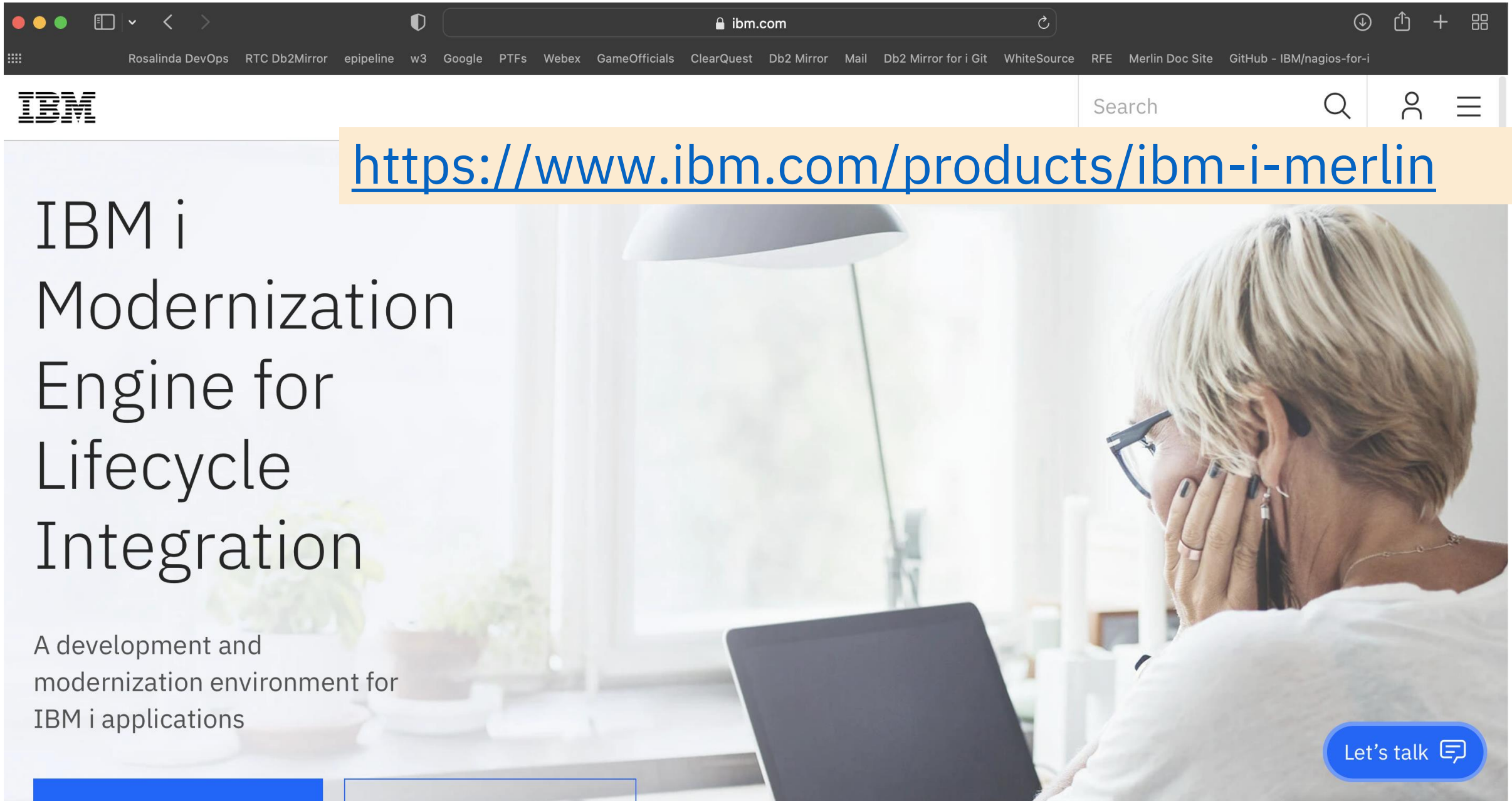
- Automatically detects projects dependency tree
- Highly optimized smart builds and minimal clones
- Integrated into Jenkins, Merlin IDE and Merlin CICD

Lets go Build Something

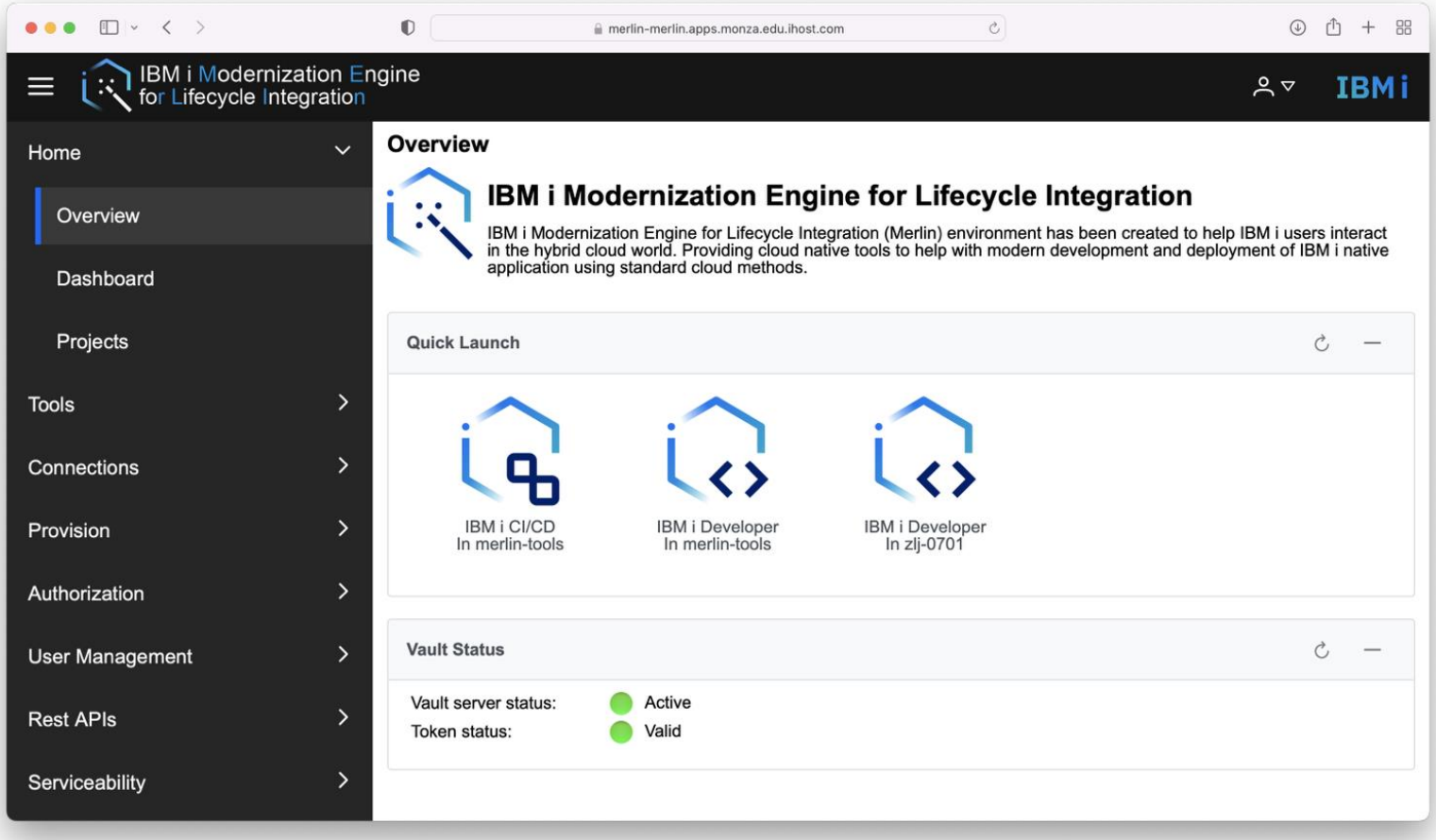
Where can I Learn More about Merlin ?



Merlin Product Page



- Overview
  - Merlin
  - Platform
  - FAQs
- Source control
  - Moving into git
- OpenShift
  - Requirements (todo)
  - IBM Entitlement
  - Installing Merlin
- Merlin
  - App Installation
  - Configuration
  - Basic Flows
- Merlin IDE
  - Usage
  - ARCAD
- Merlin CICD
  - Usage & Jenkins
  - ARCAD Builder
  - ibmi-bob



IBM i Modernization Engine for Lifecycle Integration (Merlin) is a set of tools run in OpenShift containers which guide and assist software developers in the modernization of IBM i applications, allowing them to realize the value of a hybrid cloud, multi-platform DevOps implementation.

https://ibm.github.io/merlin-docs/#/

Getting started videos

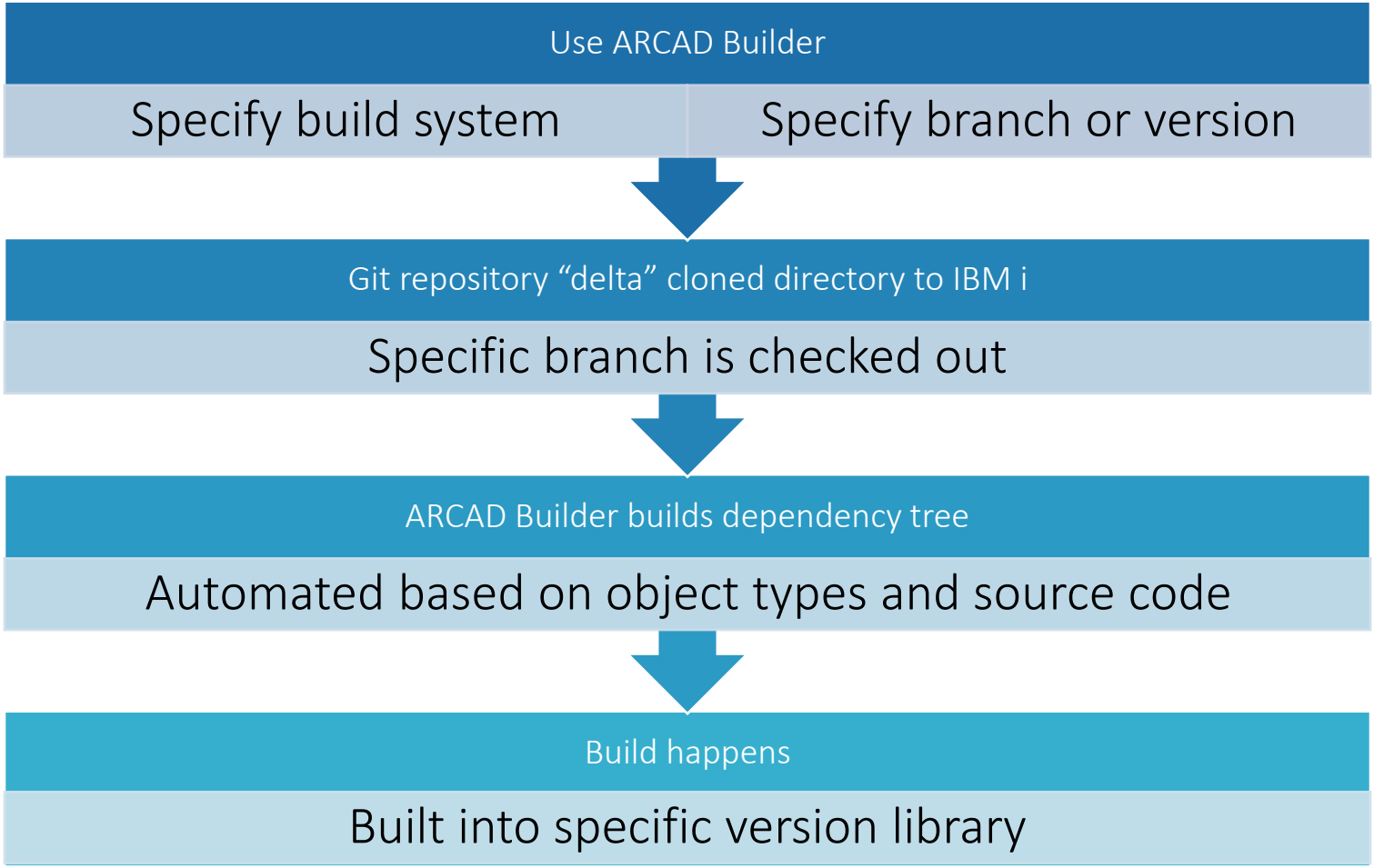
Merlin Testdrive

- Public Access
- Pre-Set up
- Place to touch Merlin and get a feel for it
- Pre-Defined RPG App for Edit and Build Purpose
- Not intended for POC
- Requires an Opportunity number

Merlin

https://ibm.github.io/merlin-docs/#/./guides/overview/sandbox

Profile (example B)



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