



Unlocking the Hidden Potential of your
IBM z Systems Mainframe Applications
through Digital Transformation

What is Application Discovery and Deliver Intelligence (ADDI)

and how it fits into your development modernization and transformation

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The Digital Transformation Challenge

Delivering with minimal time, risk and cost

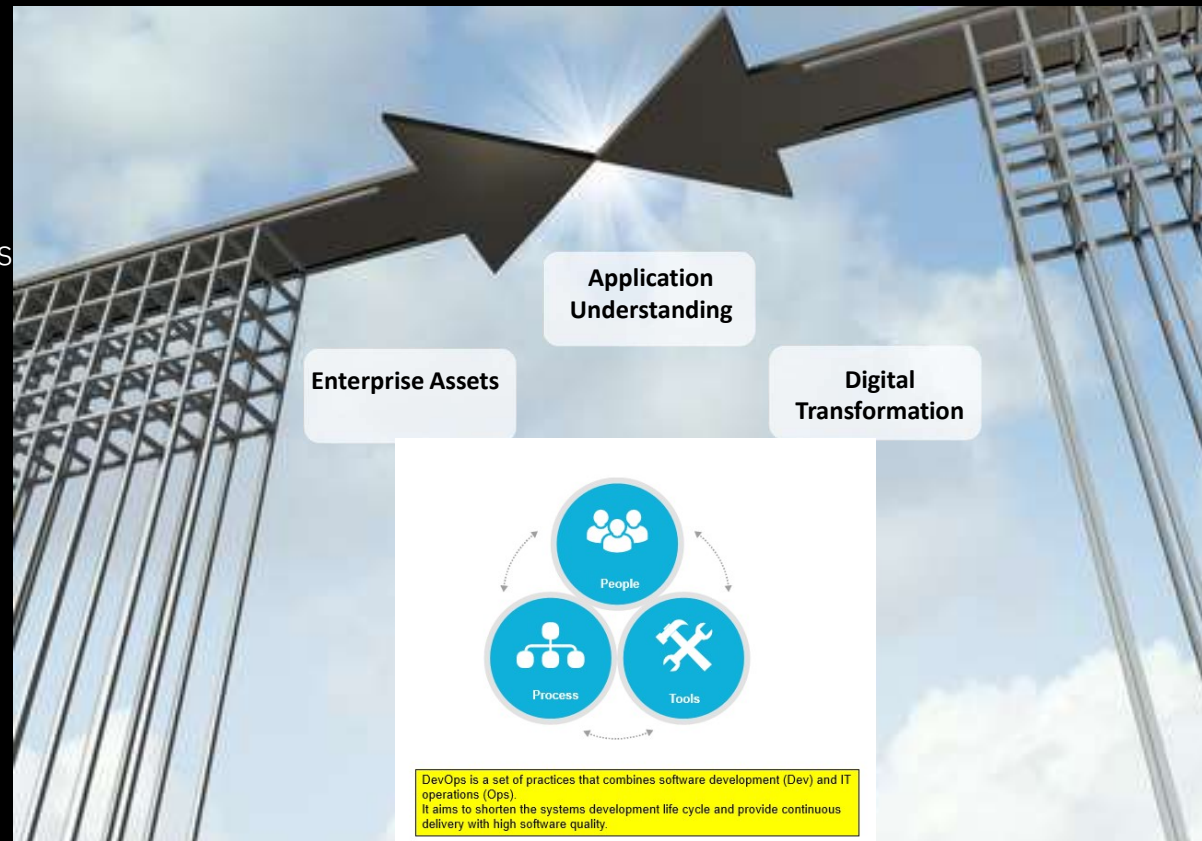
Clients are challenged in modifying their aging business-critical applications

Changes often rely on manual analysis and are therefore error-prone, relying on few employees with domain expertise

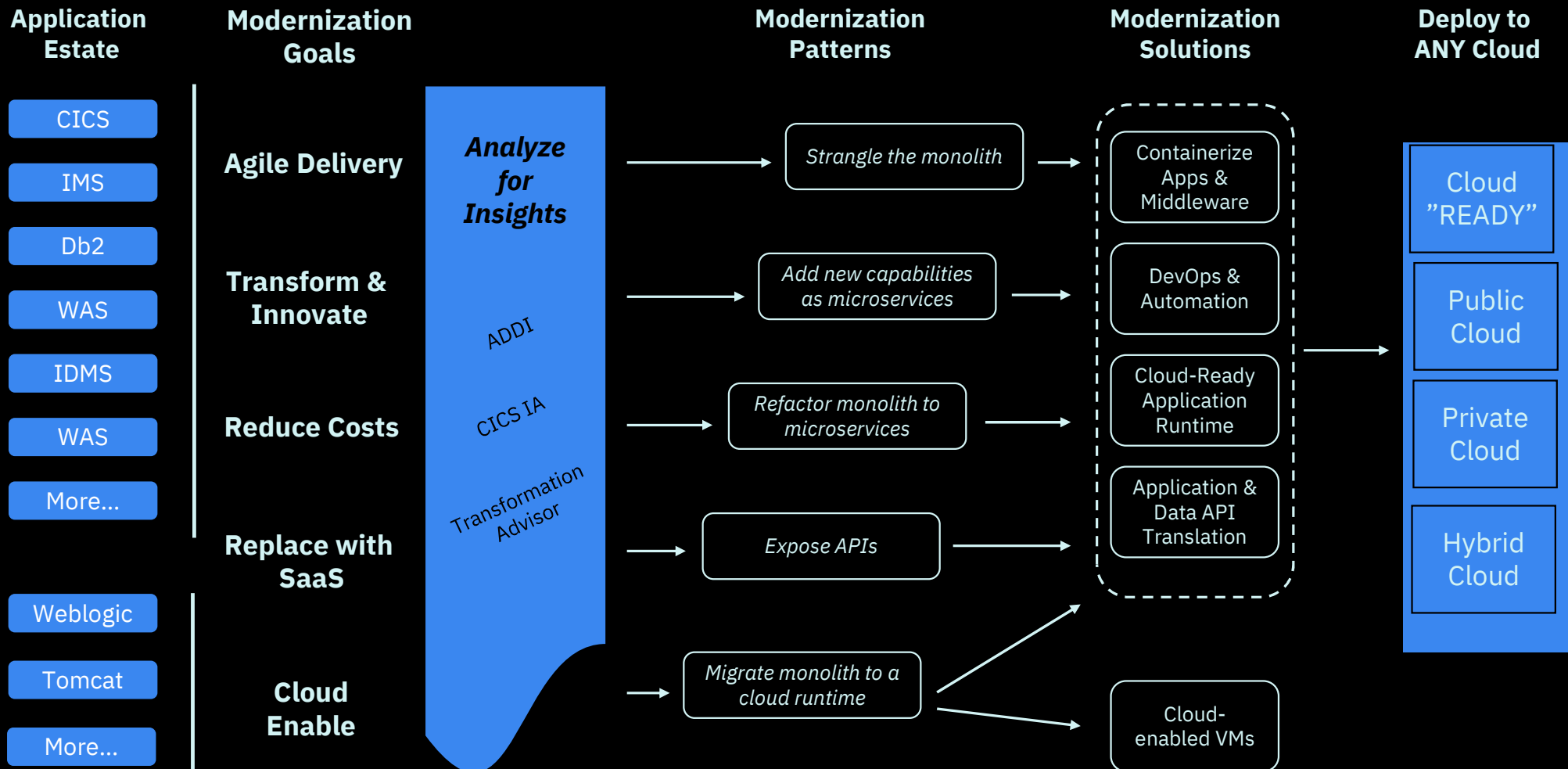
Applications are often poorly documented, resulting in increased risk and effort

Sizing change effort is difficult if the understanding of business-critical applications is limited

Ramping up new hires to work effectively with business-critical applications is often lengthy



Assessing the applications & solutions for modernization



Unlock the value of existing assets



- Rapidly analyze and visualize relationships between application components, data, and jobs to make changes safely and efficiently
- Reduce risk by reusing current assets and understanding impacts of potential changes
- Increase productivity by automating documentation, enabling new workers to be effective in a fraction of the time, and optimizing tests
- Accelerate your digital transformation by rapidly identifying candidates and ensuring integrity of APIs

What is ADDI (today)

Application Discovery and Delivery Intelligence

Production Level



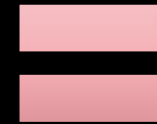
Static Graphical and textual Application Understanding - Visualization of Dependencies, Flows, Usage and Impacts



Developer/test Level



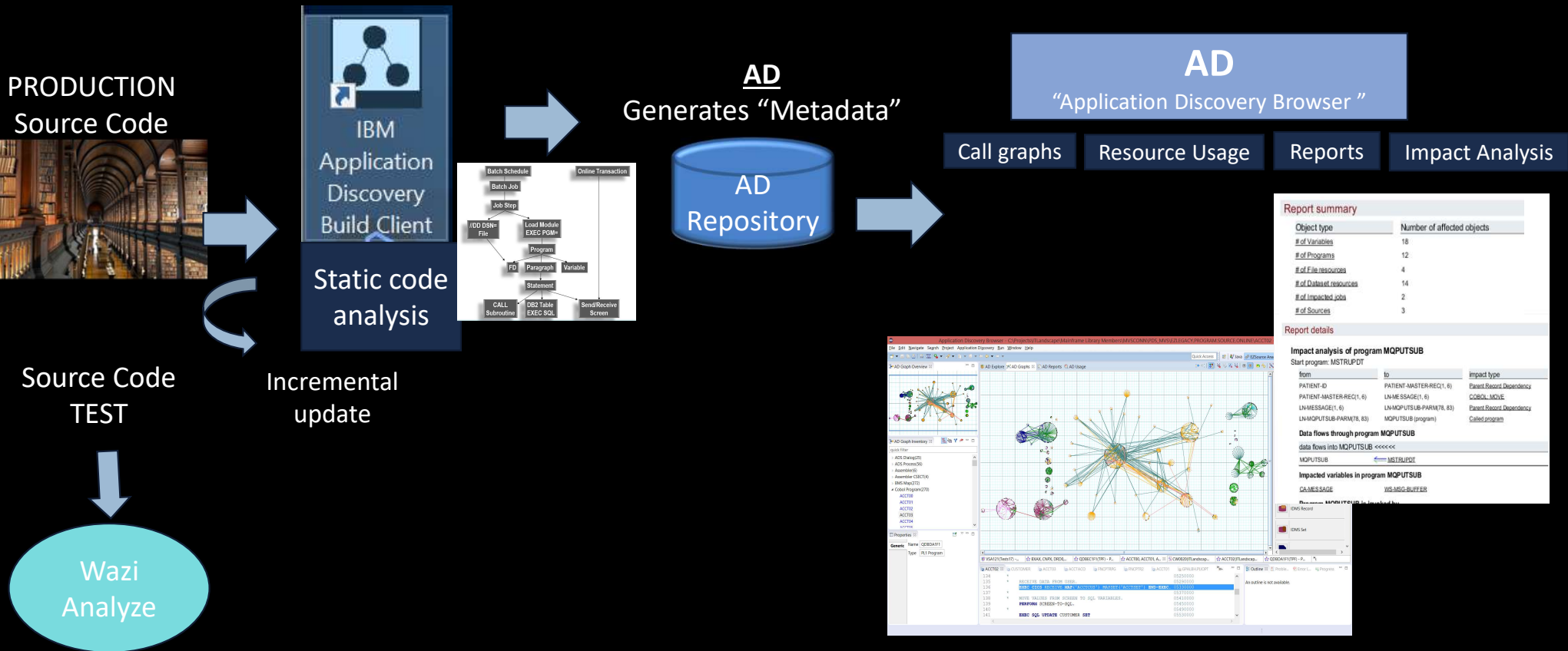
A containerized component that creates rapid, graphical "Developer Repository Level" analysis in an installation-free and configuration-free web UI based on a repository.



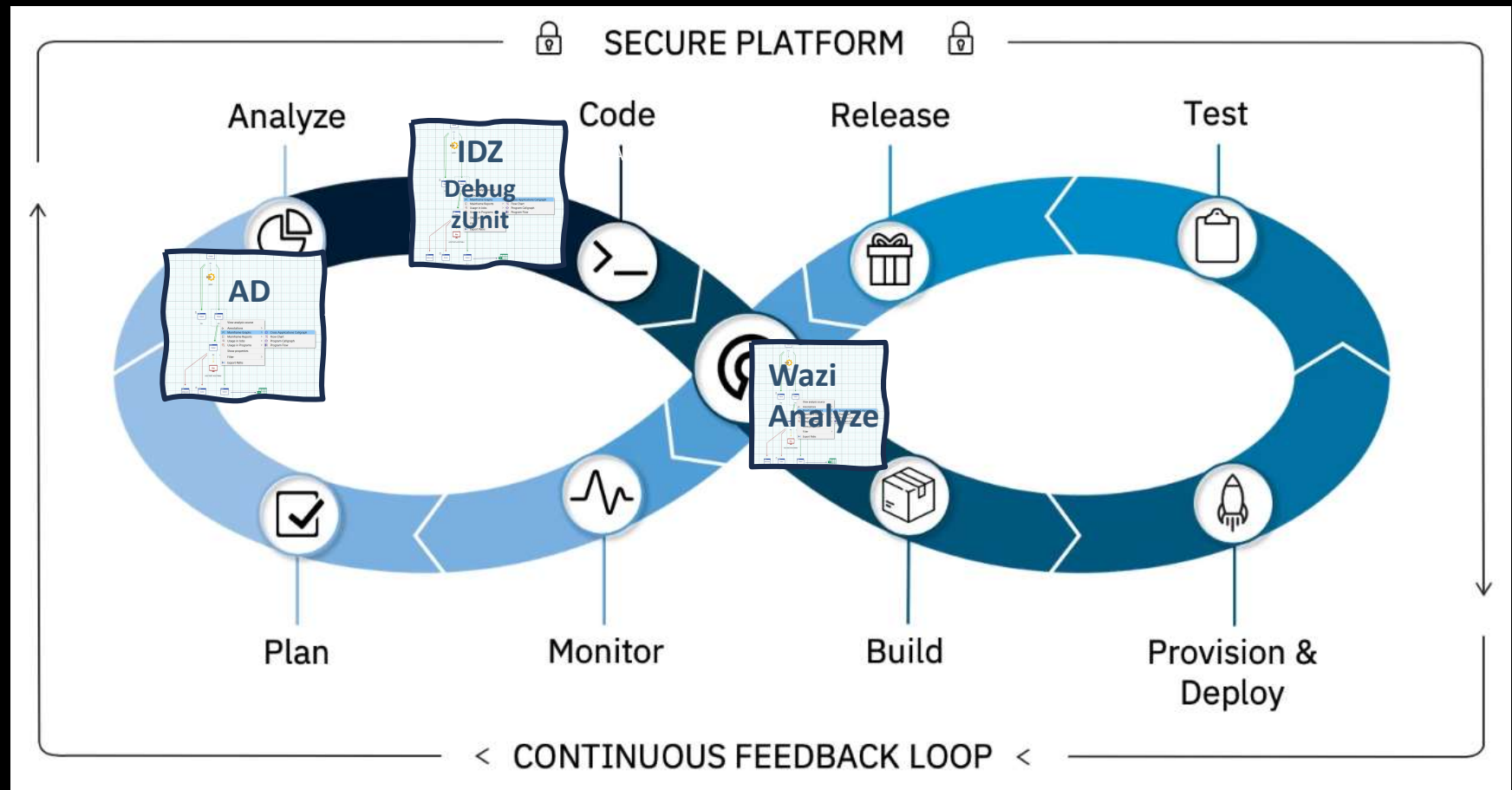
Cognitive DevOps and Continuous Modernization for the Digital Transformation

AD and ADDI Extensions

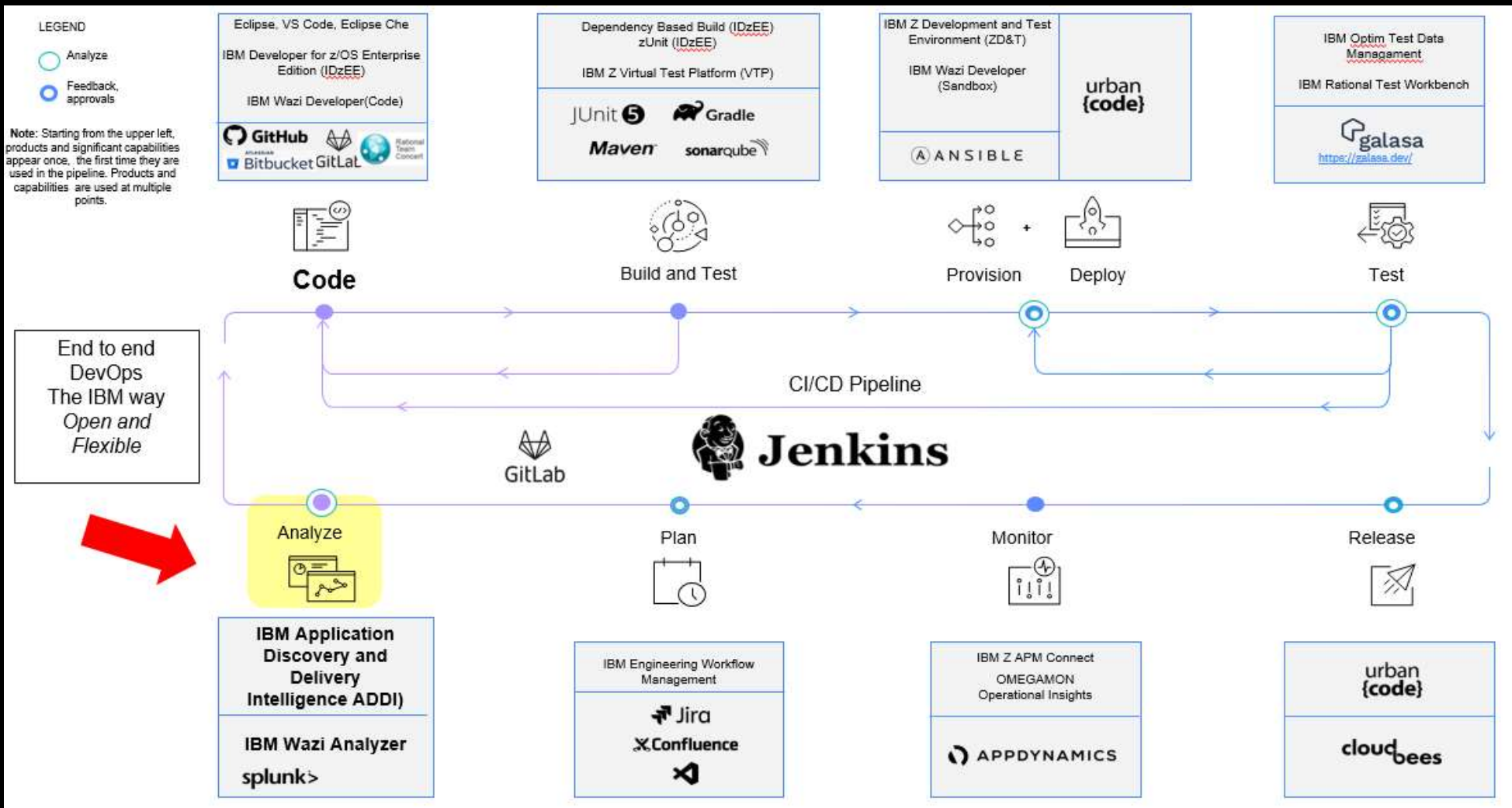
“ADDI helps you focus brain power on the business challenges rather than memorizing code”



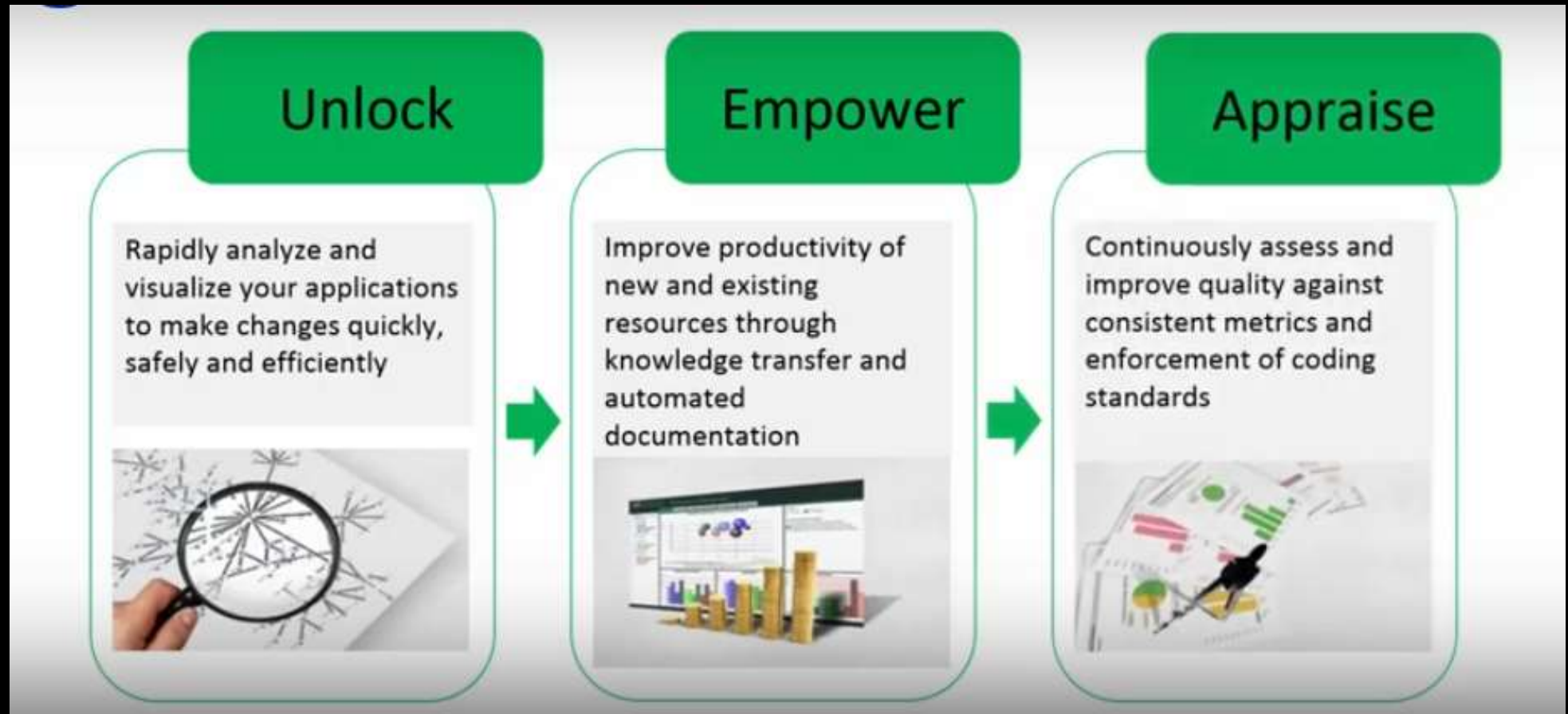
DevOps Loop



Z DevOps Pipeline



Application Discovery Business Value overview



Key features added to ADDI

Analysis features:

- ✓ Java Analysis
- ✓ Cross Project Analysis
- ✓ Control-M Analysis
- ✓ Hogan Analysis
- ✓ New Extensibility Support
- ✓ Git Migration Aid
- ✓ Assembler Macro Support

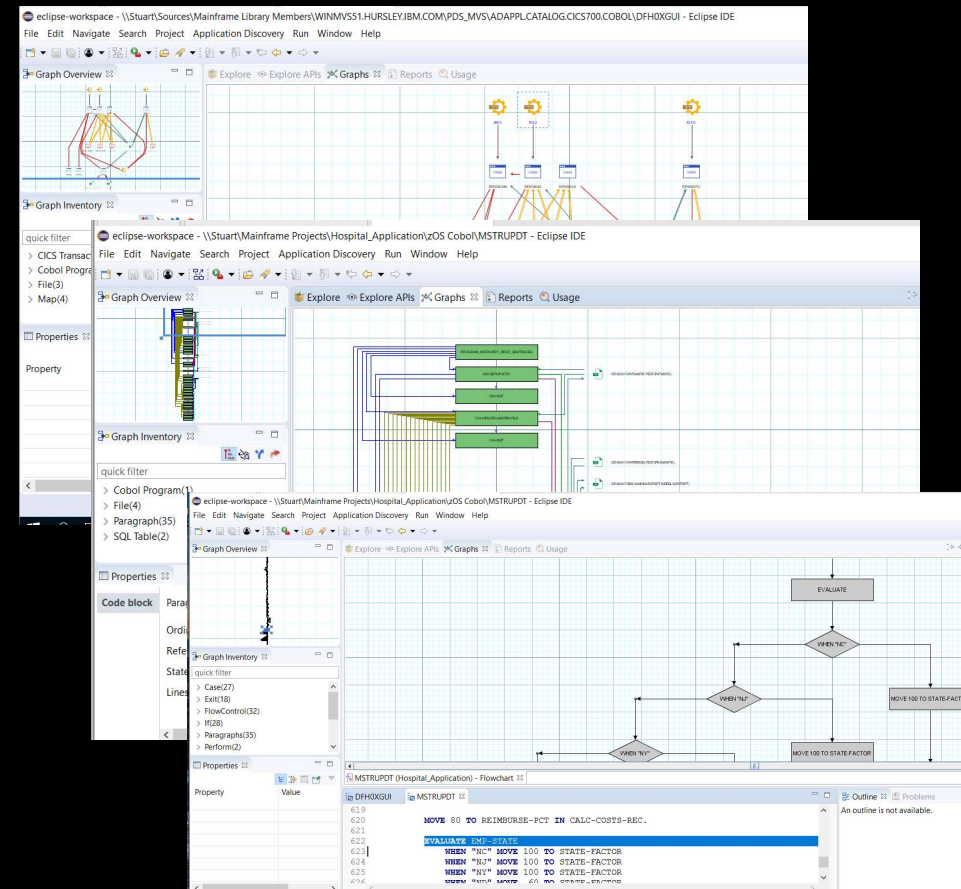
User experience improvements:

- ✓ LDAP login and enhanced security
- ✓ Build/Make performance improvements
- ✓ AD Repository on Db2 LUW
- ✓ Light-weight Web UI
- ✓ Audit
- ✓ Monitor licensing
- ✓ Monitor ADDI components
- ✓ Quick wizard configuration

Unlock value

Analyze and visualize relationships between application components, data and jobs

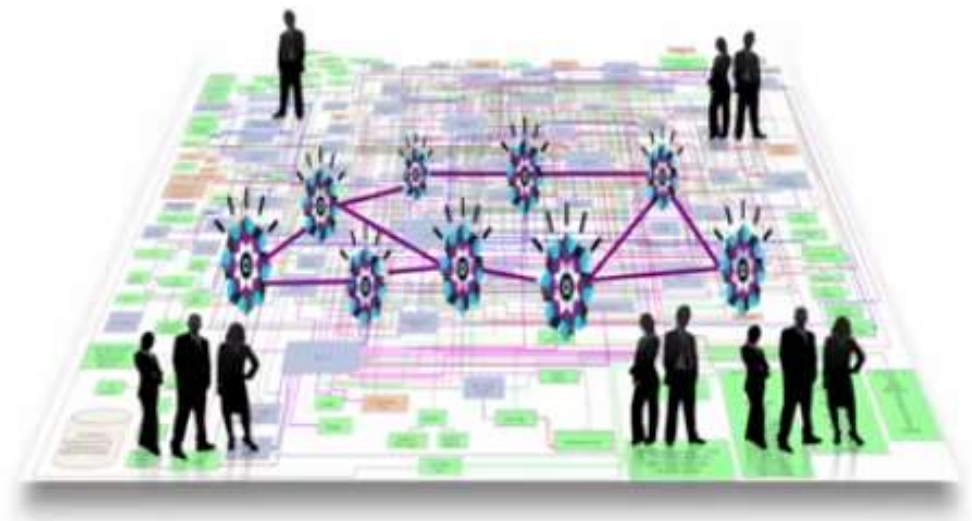
- Understand the structure of your business-critical applications **across languages and environments**
- Reduce risk and time and increase quality of changes through **visual impact analysis** integrated with your IDE
- Synchronize with latest changes in your source code management systems for a **single source of truth**



Empower developers

Automate documentation, enable on-demand understanding, and aid sizing of change efforts

- Accelerate knowledge transfer through **accurate, automated and on-demand documentation**
- Rapidly size change effort through insightful **root cause analysis**
- Aid new team members through comprehensive, accurate and consumable **application analysis** within the IDE



AD analysis: Top clustering view - API candidate discovery

Application Discovery Browser - C:\Projects\ITLandscape\Mainframe Library Members\MVSCONN\PDS_MVS\EZLEGACY.PROGRAM.SOURCE.ONLINE\ACCT02 - Eclipse SDK

File Edit Navigate Search Project Application Discovery Run Window Help

Quick Access Java EZSource Analysis Browser Application Discovery Flow

AD Graph Overview AD Explore AD Graphs AD Reports AD Usage

AD Graph Inventory

quick filter

- > ADS Dialog(25)
- > ADS Process(56)
- > Assembler(6)
- > Assembler CSECT(4)
- > BMS Map(272)
- > Cobol Program(270)
 - ACCT00
 - ACCT01
 - ACCT02
 - ACCT03
 - ACCT04
 - ACCT05

Properties

Generic Name QDBDA1F1

Type PL1 Program

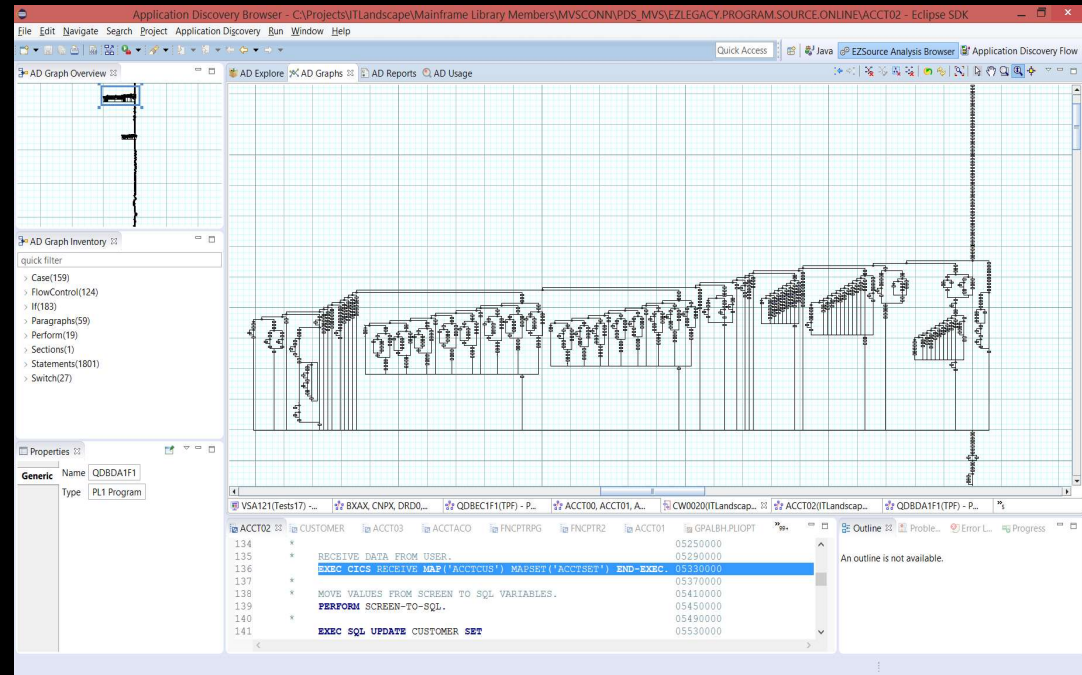
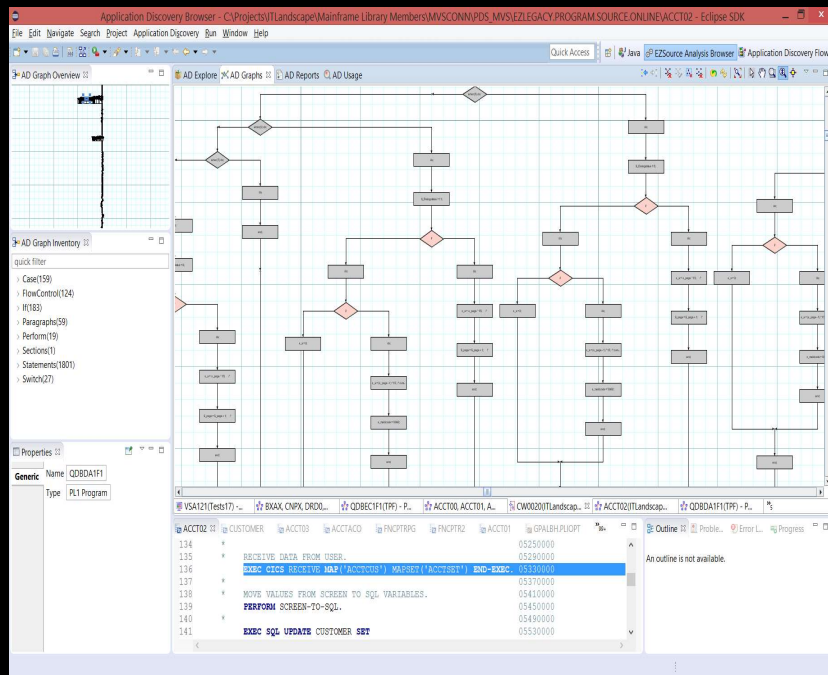
Outline

An outline is not available.

ACCT02 CUSTOMER ACCT03 ACCTACO FNCPTRPG FNCPTR2 ACCT01 GPALBH.PILOT

```
134 * 05250000
135 * RECEIVE DATA FROM USER. 05290000
136 * EXEC CICS RECEIVE MAP('ACCTCUS') MAPSET('ACCTSET') END-EXEC. 05330000
137 * 05370000
138 * MOVE VALUES FROM SCREEN TO SQL VARIABLES. 05410000
139 * PERFORM SCREEN-TO-SQL. 05450000
140 * 05490000
141 * EXEC SQL UPDATE CUSTOMER SET 05530000
```

AD analysis: Down to statement flow chart level analysis



AD analysis: Annotations and application knowledge database

The screenshot displays the Application Discovery Browser (AD Browser) interface, which is used for analyzing application components and their relationships. The main window shows a graph of application components, including COBOL programs (ACCT01, ACCT02, ACCT03, ACCT04) and their associated resources (ACCT01, ACCT02, ACCT03, ACCT04). The graph is organized into a hierarchical structure, with COBOL programs at the top and their associated resources below them. The interface also includes a list of projects, a search bar, and a detailed view of the selected resource (ACCT01) showing its main text, date, and keywords.

Filters:

Text: Keys:

Date filtering:

☐ From: 22/03/2017

☐ To: 22/03/2017

Resource filtering

Resource Name:

Resource Type:

Projects:

- AAutoDemo
- Banker
- CA7Demo
- CS1
- FA
- GBSTest
- ITLandscape
- JKEBank
- MFCConnect1
- PDAMainframe

Results:

Annotations:

Additional information

Description

Refactoring candidate for 2017

Details:

Main text: The program needs to be refactored to protect customer data and as part of extending customer data fields.

Date: 11/22/2016 16:20

Keywords: Customer Data Refactoring 2017

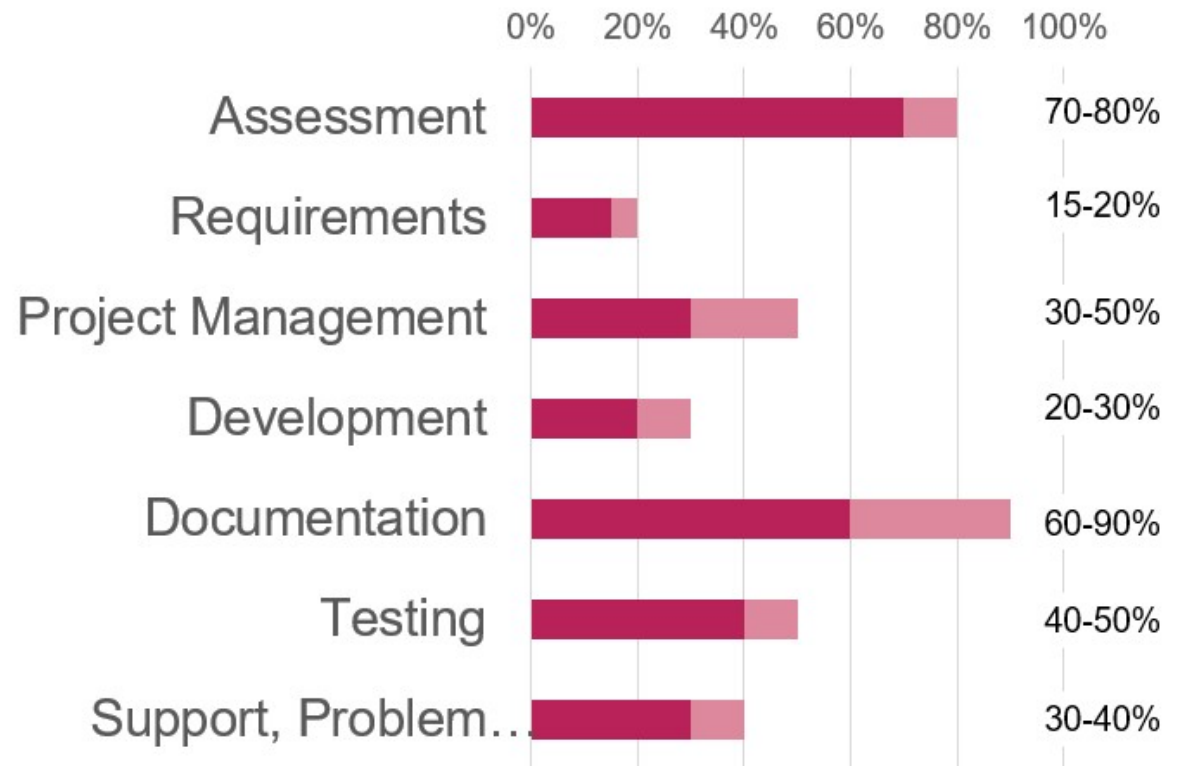
Resources:

- COBOL
- ACCT01

Related projects:

- ITLandscape

Clients have experienced measurable Benefits in Productivity



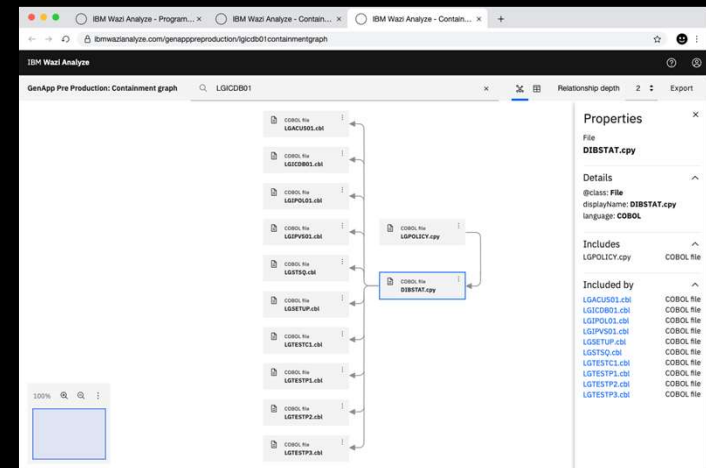
** Based on analyst's validation of client surveys for typical activity improvement*



Wazi Analyze

Containerized rapid analysis tool to discover and understand relationships between z/OS application components

- Fast, local application analysis in a web UI
- Understand relationships between application components to analyze the impact of changes
- Runs in Docker environment on developer's machine
- Graph or table view of the program call structure and of the relationships between programs and copybooks in an application

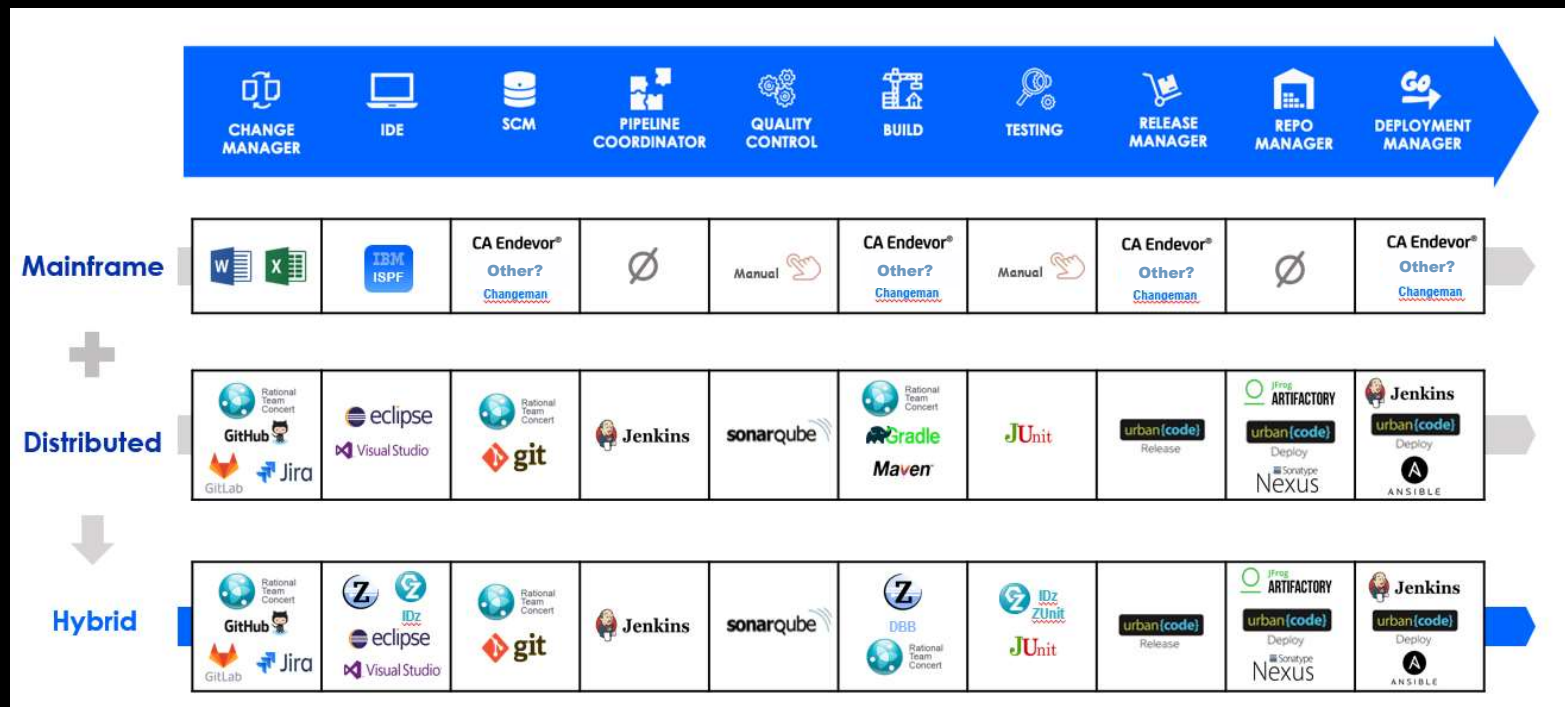


Individual developers can now use Wazi Analyze to quickly assess relationships between the programs in the application in their assigned project

Architecture team can use broader ADDI capabilities to analyze applications and common components across many projects.

DevOps What's next

- The right tools for multi-stream, continuous integration / delivery **do not all exist** in the mainframe world.
- Existing Library Managers do not allow **full parallel development**.
- Access to Open Source tools to reduce **total cost of ownership (TCO)** in z / OS remains difficult.
- Open source tools like GIT, Jenkins and Artifactory are becoming the **de facto standard** for powering Continuous Delivery in the enterprise.
- Traditional “**Library Managers**” in mainframe are expensive : why not take advantage of Open Source solutions which bring both cost saving and increased agility?
- Must take into account certain specifics of the z / OS environment, particularly **build techniques**.



Take the next steps on your digital transformation journey



• IBM Z Trial

ibm.biz/ibmztrial

- Try the latest IBM Application Discovery and Delivery Intelligence and other IBM Z capabilities today at zero cost, and with no installation required.



Explore available trials

• IBM DevOps Value Stream Engagement

- <http://ibm.biz/ValueStreamAssessment>

- Register for a no cost DevOps Value Stream Engagement workshop to help your organization identify, understand, and assess the value streams associated with your software delivery practice.

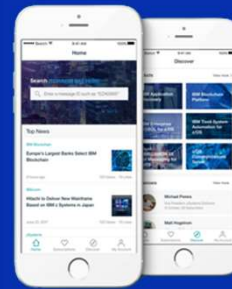


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[https://www.ibm.com/it-
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NO installation required