Business, rewritten by software™
Delivering Innovation and Differentiation in the Application Economy

Continuous Integration and Delivery with CA Gen

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What 'digital disrupters' have in common[1]

2x

Higher revenue growth

2.5x

Higher profit growth

1.5x

More new-business based revenue

2.5x more likely...
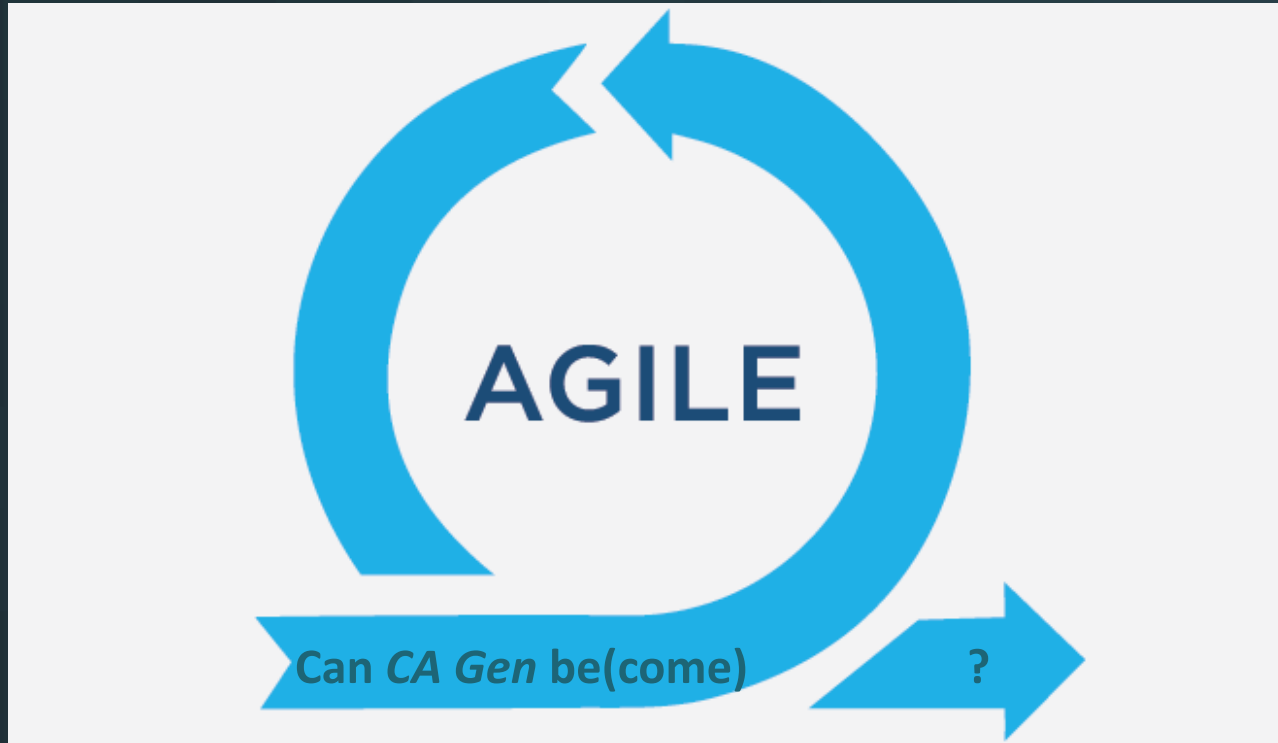to have advanced agile practices in place

2.5x more likely...
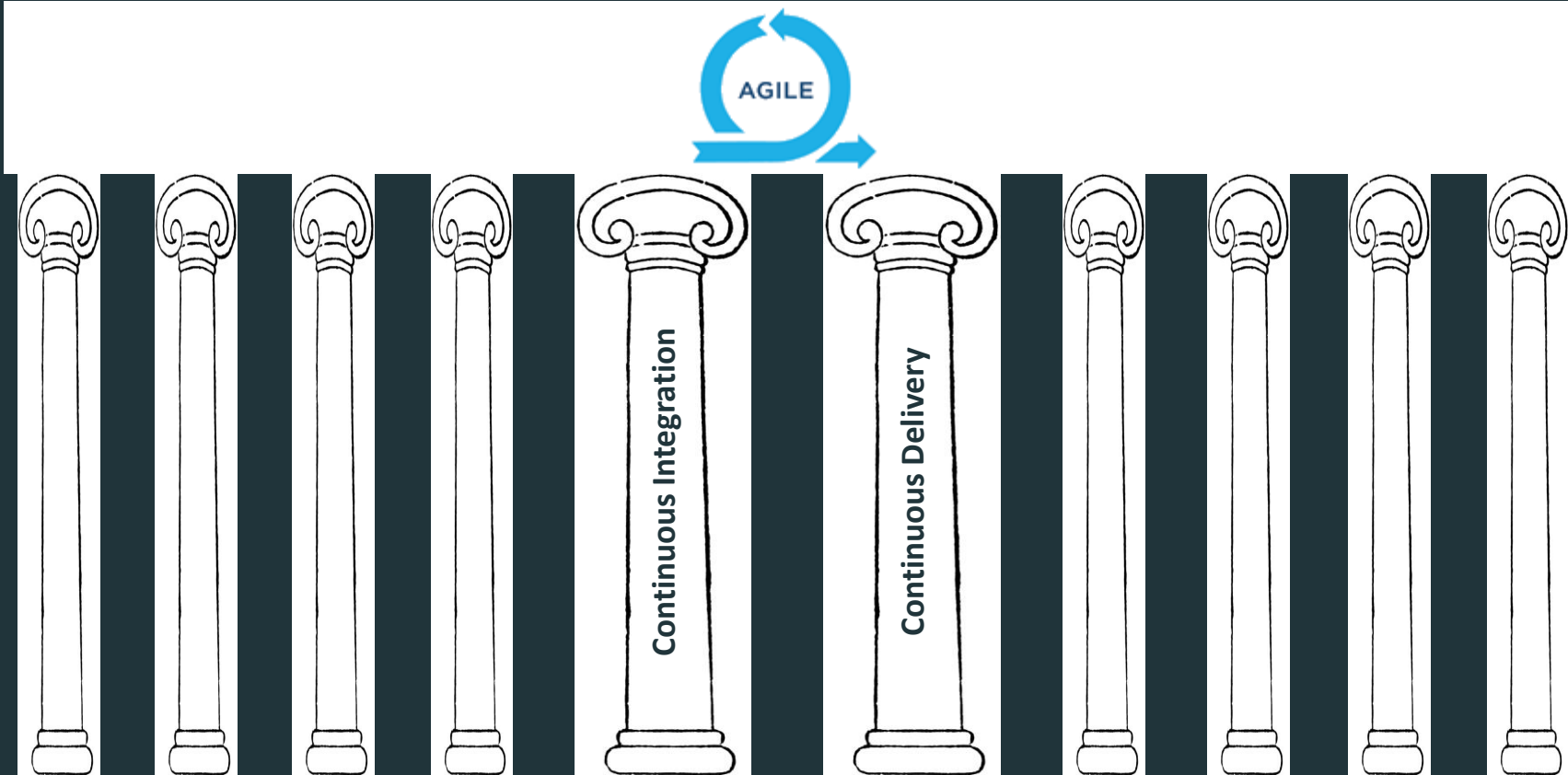to have broadly implemented DevOps

2x more likely...
to leverage APIs for mobile app development

[1]The most-advanced digital businesses are the 14% who scored highest on the Digital Effectiveness Index, based on a global survey by Freeform Dynamics sponsored by CA Technologies, July 2015.

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CA Gen and Agile

Can *CA Gen* be(come) ?

Pillars of Agility

Continuous Integration

Continuous Delivery

CA Gen Continuous Integration & Delivery

- CA Gen Continuous Integration

- CA Gen Continuous Delivery

- Demonstration (part I)

- CA Gen Continuous Integration & Delivery in a DevOps world

- Demonstration (part II)

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CA Gen Continuous Integration

- What is Continuous Integration (CI)?

- CI Practices

- CA Gen challenges for CI

- Requirements for CA Gen CI

What is Continuous Integration?

Continuous integration (CI) is the practice of merging all developer working copies to a shared mainline several times a day (*Wikipedia*)

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CI Practices

– Maintain a single source repository

– Automate the build

– Make your build self-testing

– Every commit should build on an integration machine

– Keep the build fast

– Test in a clone of the production environment

– Make it easy for anyone to get the latest executable

– Everyone can see what's happening

– Automate deployment

CA Gen Challenges for CI

— CA Gen models are not modular

— Intelligent Regeneration is limited

- Not automated

- Only applies to the HE

- *Includes false changes*

— CA Gen tools cannot be integrated into a DevOps workflow

— Encyclopedia Construction

- Does not support all targets

— Heterogeneous developments integration

As a consequence

— Not all CA Gen customers are ready for CI

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Requirements for CA Gen CI

— Focus on CA Gen specifics

— Encyclopedia Construction

  ▪ For all targets

— Automated Build Impact Analyses

  ▪ *Model updates*

  ▪ *Migrations*

— Open API

— Flexibility to integrate into existing processes

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CA Gen Continuous Delivery

- What is Continuous Delivery (CD)?

- CD Principles

- CA Gen challenges for CD

- Requirements for CA Gen CD

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What is Continuous Delivery?

Continuous delivery (CD) is a software engineering approach in which teams produce software in short cycles, ensuring that the software can be reliably released at any time (*Wikipedia*)

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CD Principles

— The process for releasing/deploying software MUST be repeatable and reliable

— Automate everything!

— If something is difficult or painful, do it more often

— Keep everything in source control

— Done means "released"

— Build quality in!

— Everybody has responsibility for the release process

— Improve continuously

James Betteley

CA Gen Challenges for CD

- CA Gen models contain snapshots of applications
- Generated code is not usable as reference
- Migration process is complex and risky
- Migration only supports creation and update
- Development Coordinator must have a view of the developments
- What is migrated must have been Integrated
- CA Gen tools cannot be integrated into a DevOps workflow
- Heterogeneous developments delivery

As a consequence

- Not all CA Gen customers are ready for CD

Requirements for CA Gen CD

— Focus on CA Gen specifics

— Use of staging models

— Automated Change Impact Analyses

  ▪ *Model updates*

  ▪ *Migrations*

  ▪ *Objects delete*

— Automated support for CI of staging models

— Open API

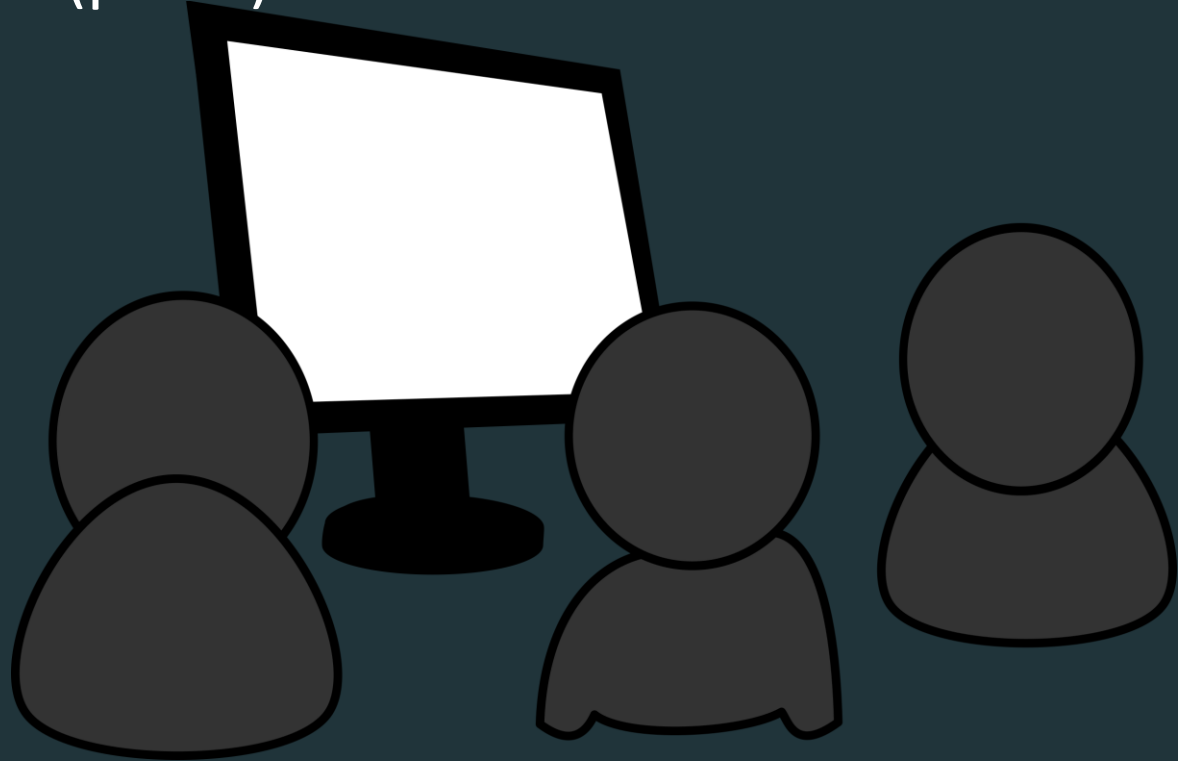— Flexibility to integrate into existing processes

Demonstration (part I)

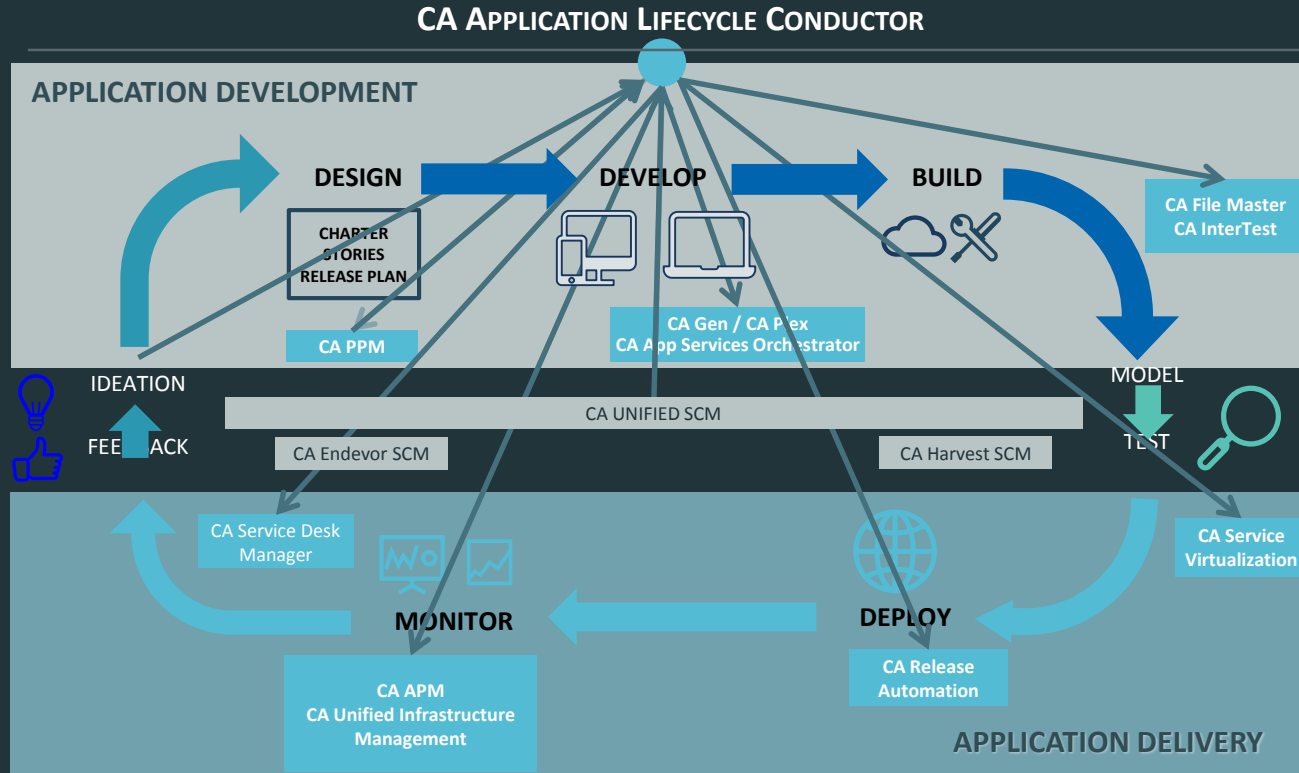Demo 1 - Initiation

Demo 2 – Change Request

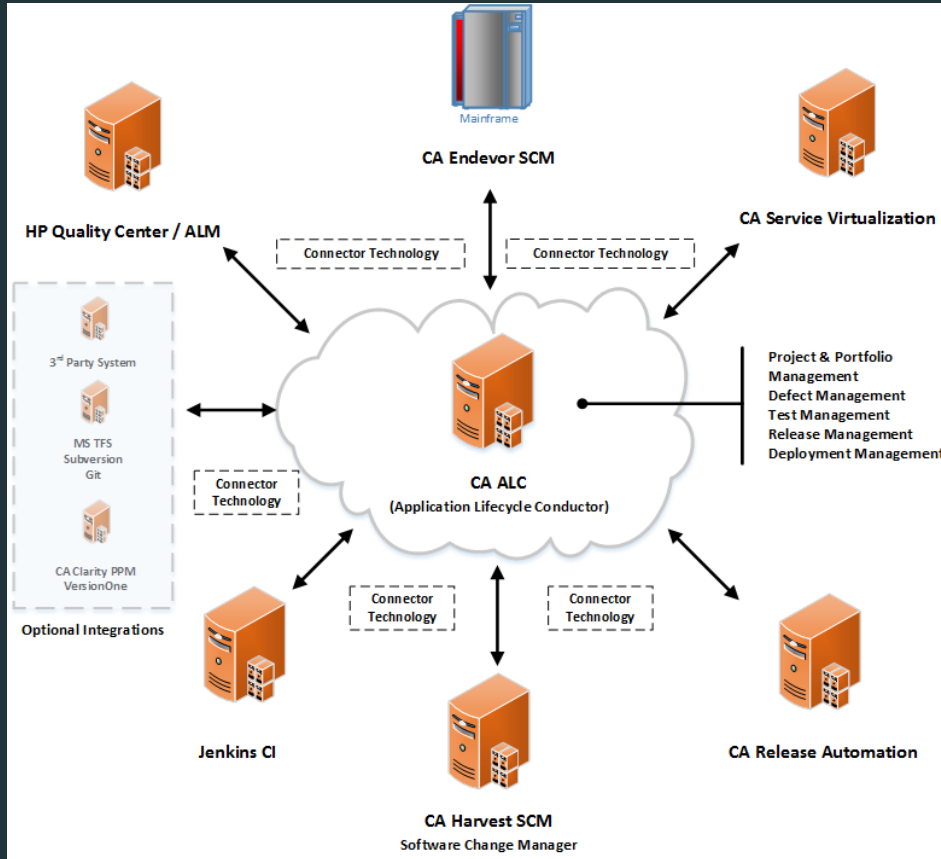# CA Gen Continuous Integration and Delivery in a Devops World

- Based on an Open API

- Requirements
  - Controlled access to all CA Gen Integration and Delivery artifacts
  - Read / update access
  - Easy to integrate
  - At the core of the solution

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CA Application Lifecycle Conductor

DevOps integration targets feature development, product delivery, quality testing, and maintenance releases in order to improve reliability and security and faster development and deployment cycles.

CA APPLICATION LIFECYCLE CONDUCTOR

APPLICATION DEVELOPMENT

DESIGN → DEVELOP → BUILD

CHAPTER
STORIES
RELEASE PLAN

CA File Master
CA InterTest

CA PPM

CA Gen / CA Plex
CA App Services Orchestrator

MODEL

IDEATION

FEEDBACK

CA UNIFIED SCM

CA Endevor SCM

CA Harvest SCM

TEST

CA Service Desk Manager

CA Service Virtualization

MONITOR ← DEPLOY

CA Release Automation

CA APM
CA Unified Infrastructure
Management

APPLICATION DELIVERY

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CA Application Lifecycle Conductor Architecture

Demonstration (part II)

Demo 3-0 Web API

Demo 3-1 – Web API