

GOTO **CHICAGO 2023**

#GOTOchgo

**Journey from 100's
of pipelines to a
single pipeline
ecosystem**

About me

I am **Bhavik Gudka**

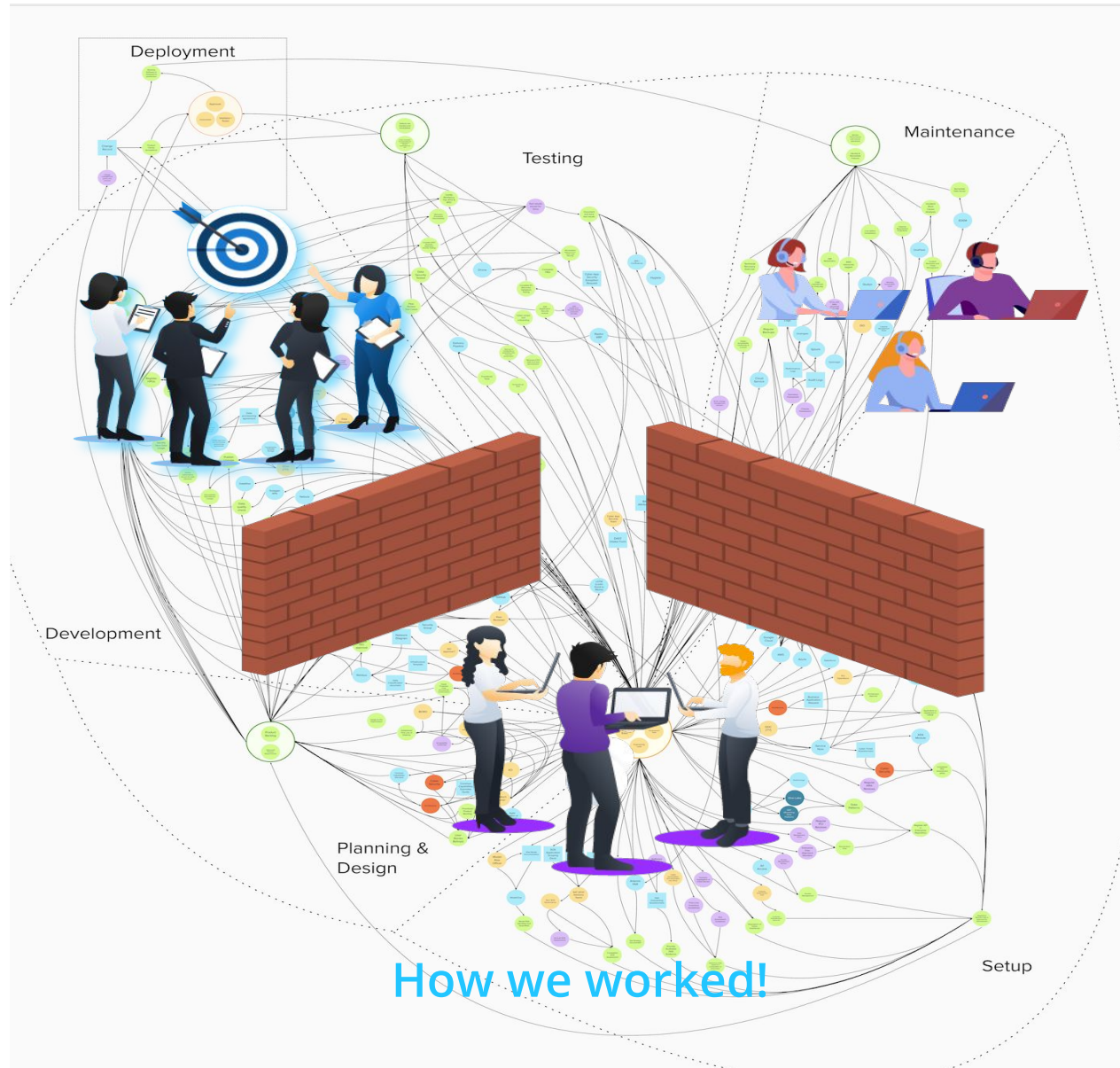
- Sr. Director, Software Engineering
- working for Capital One since 2006
- Live in Chicago (Schaumburg)
- Passionate about
 - solving enterprise problems
 - automating processes
 - hiring top talent

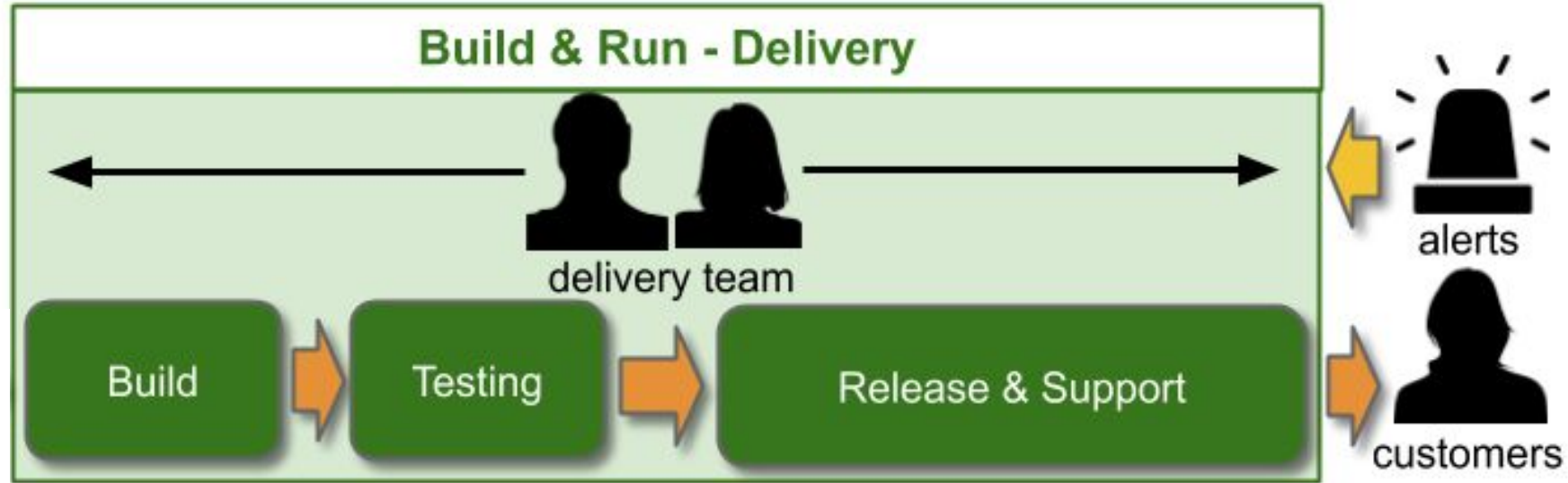


Who we are ?

- 25 year old, Fortune 500 company
- 50K+ Associates
- 7th largest Bank in customer deposits in US
- Innovation driven culture
- Great at building products
- Technology company that does banking
- First Bank to declare move 100% on Cloud
- Contributor to open source community

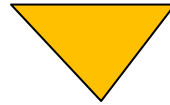




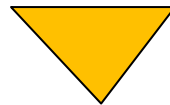


You Build it You Own it.

YBYO empowered developers



With great power came greater responsibilities



More responsibility led to innovation



Seems straightforward. What could go wrong?

Teams developed hundreds of custom pipeline



.... and Divisions began to rationalize pipeline ecosystem



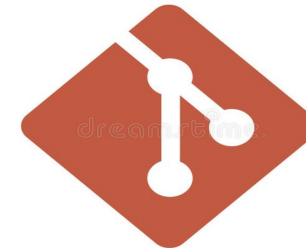
Division pipeline ecosystem 1



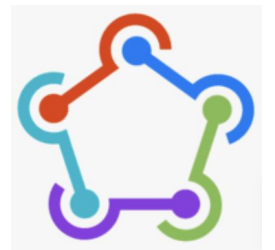
Division pipeline ecosystem 2



Division pipeline ecosystem 3

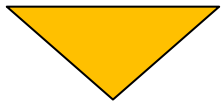


Division pipeline ecosystem 4



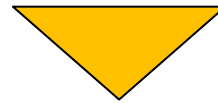
Division pipeline ecosystem 5

**Arbitrary Unique
Pipelines**



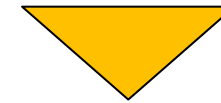
*Output of software and
infrastructure is unique*

**Inconsistent
Standards**



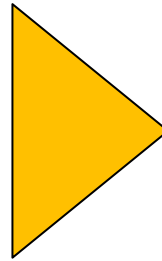
*Inconsistent SDLC
across divisions*

**Challenge
in Scaling**

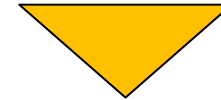


*Duplicative solutions with
little business necessity*

**Arbitrary Unique
Pipelines**

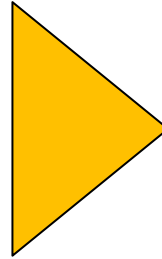


**Converge on
a central tool**

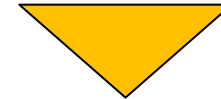


*Standard software delivery
framework and tooling to
deploy code consistently*

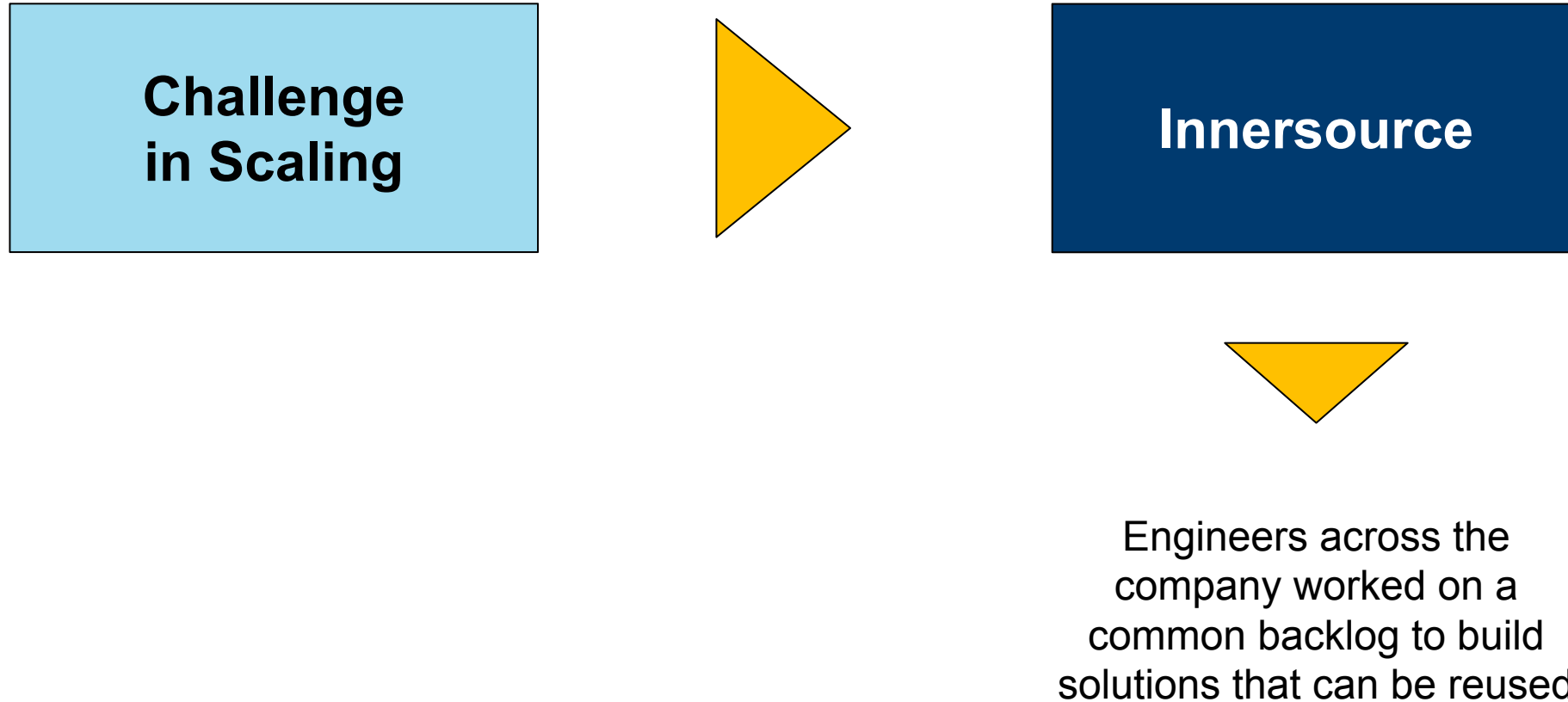
**Inconsistent
Standards**



**Standardize our
SDLC**



Standard and uniform
software governance &
policy execution across the
SDLC to *deliver quality code
securely*





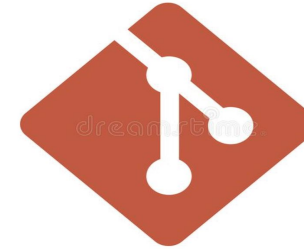
Division pipeline ecosystem 1



Division pipeline ecosystem 2



Division pipeline ecosystem 3



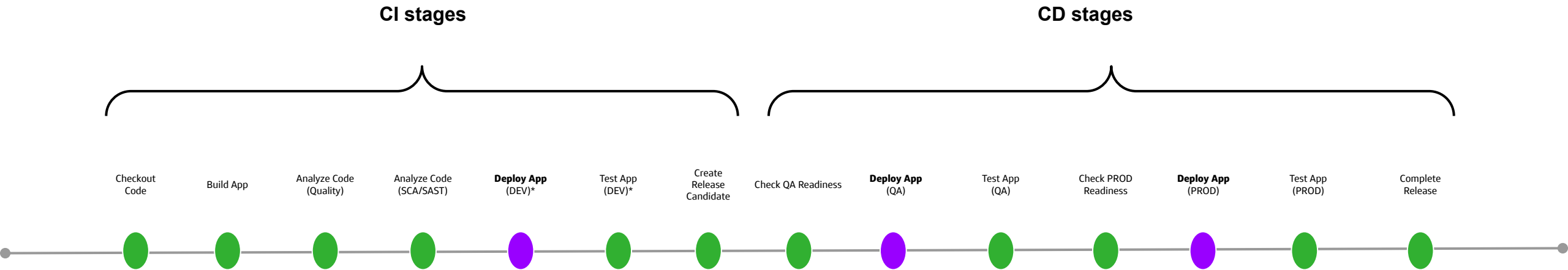
Division pipeline ecosystem 4



Division pipeline ecosystem 5



Central Pipeline ecosystem



- Preconfigured set of core stages
- Core stages cannot be modified and skip
- Align on architecture standards / patterns for infrastructure
- Supported and governed by a central organization

We achieved application compliance for various policies through the central pipeline ecosystem



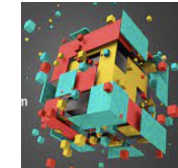
**Peer Review
Checks**



**Static Application
Security Testing**



**OSS Vulnerability
Checks**



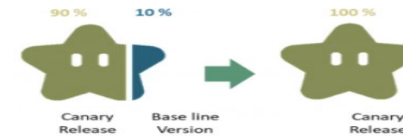
**Container
Vulnerability
Checks**



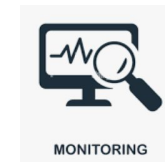
**Standard Unit test
coverage**



**Standard branching
strategy**



**Standard
Deployment
practices**



**Standard
Monitoring &
Alerting**

**Millions of
deployments a year**

**Increased velocity of
changes through a
standard SDLC
process**

**Developers across
divisions working on a
common problem
through innersourcing**

**BETTER
Compliance
Posture**

**BETTER
Developer
Capacity**

**BETTER
Speed to
Market**

**BETTER
Developer
Experience**



Central Pipeline ecosystem