Continuous Delivery, What is it?

Why should it be deployed?
Continuous Delivery

Global Product Data Interoperability Summit | 2015

Deliver
Quality

Build
Complete

Develop
Reliability

Request
Availability

Requirements
Capability
Continuous Delivery

Global Product Data Interoperability Summit | 2015

Continuous Deployment

- Deliver
  - Quality

- Request
  - Availability

Continuous Integration

- Build
  - Complete

- Develop
  - Reliability

- Requirements
  - Capability

Continuous Delivery

- Quality
- Availability
- Complete
- Reliability
- Capability
Continuous Delivery

Global Product Data Interoperability Summit | 2015

- Conceive
  - Availability
  - Requirements
    - Capability
- Deliver
  - Quality
  - Complete
- Build
  - Complete
- Develop
  - Reliability

Conceive -> Deliver -> Build -> Develop

Conceive
- Availability
- Requirements

Deliver
- Quality
- Complete

Build
- Complete

Develop
- Reliability
### Continuous Delivery – Path to Production

**High-level Process Overview from Value Stream Mapping workshop**

<table>
<thead>
<tr>
<th><strong>Plan</strong></th>
<th><strong>Build</strong></th>
<th><strong>Run</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity Initiated</td>
<td>Requirements Defined</td>
<td>Solution Identified</td>
</tr>
<tr>
<td>Strategy Meeting &amp; Release Planning</td>
<td>Sprint Planning</td>
<td>Daily Standup</td>
</tr>
<tr>
<td>Sprint Planning</td>
<td>Daily Standup</td>
<td>Sprint Review</td>
</tr>
<tr>
<td>Retrospective</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Key Deliverables

- Plan Scrum
- Validate Scrum
- Definition of Work & Package Backlog
- Change Requests
- Business Strategies
- Technical Insertions
- Need Date

#### Integrated Agile Development and Test

1. Plan Scrum
2. Validate Scrum
3. Developed Packages
4. Test Strategy
   - Funding
   - Requirements

#### Integrated Formal Validation

- Design
- Testing
- Testing & Release

#### Standby / Prod

- Zero Outage
- Production Package

---

**Customer Cares, Physical Change, Right the First Time = Value Added**

- Lean + 10x
- Entry/Exit Criteria
  - Opportunity Initiated
  - Requirements Defined

#### Environments

- Integrated Agile Development and Test
- Integrated Formal Validation
- Standby / Prod

---

**Capturing the Value of Quality** drives the progress between environments.
Continuous Delivery
Continuous Delivery

Global Product Data Interoperability Summit | 2015

Continuous Delivery Process Concept of Operations
Small Work Packages, Frequent Deliveries, High Quality delivered through accountability and usage of Explicit Checklists.

0.0 Program Management

Change Request
- AD&D Milestone 1

Business Requirements
- P1.1 Validated Entry Criteria CR Authorized
- P1.2 Perform OA Determine Solution Concept WRs Initiated

B2.1 Non Functional Design (Tech Insertion, Compliance, CR in Work WR Worked)
- B2.2 Integrated Functional Design CR in Work WR Worked
- B2.3 Development, Unit & Functional Test

B2.3 Customer Test

B2.4 Package

B2.5 Integrated Development Test

B2.6 Demo Product Production Ready

B2.3 Performance & Scalability Test

V3.1 User Training

Production Ready
- AD&D Milestone 4

V3.1 Validation Test V3.1, V3.2, V3.3, V3.4, V3.5


V3.1 Ops Process & Tools Test

Non Integrated Data Migration

Non Functional Design (Tech Integration, Compliance, CR in W R Worked)

Non Integrated

Quality and stability

Solution Implemented

5 Solution Implemented

Production Ready

AD&D Milestone 5

Change Request
- AD&D Milestone 2

Business Architecture Development CR in Work WR Analyzed

IT Architecture Development CR in Work WR Analyzed

Business Architecture Development CR in Work WR Worked

Integrated Functional Design CR in Work WR Worked

Integrated Functional Design CR in Work WR Worked

Non Functional Design (Tech Insertion, Compliance, CR in Work WR Worked)

Non Functional Design (Tech Insertion, Compliance, CR in Work WR Worked)

Building the right thing

Testing the right thing

Must always deliver content to

May Occur Required

Plan Build Validate Release Process Steps

Non Integrated

Owner: Kim Wennes
Prepared by: Kim Wennes

7/18/14
Revision: 3

BOEING is a trademark of Boeing Management Company Copyright © 2015 Boeing. All rights reserved.
Copyright © 2014 Northrop Grumman Corporation. All rights reserved.
Continuous Delivery

Global Product Data Interoperability Summit | 2015

Integrated Development Environment (IDE)
- Integrated
- Scalable
- Rapid deployment
- Frequent data refresh

Activities for Work Package
- Integrated Testing
- Customer Testing
- Functional Testing

Development
Unit Testing

Package
Continuous Delivery

Global Product Data Interoperability Summit | 2015

Integrated Development Environment

Application 1
Application 2
Application 3
Application 4

Release Queue
WP1
WP2
WP3
WP4
WP5
WP6

Production
WP1
WP2
WP3
WP4
WP5
WP6

Integrated Validation
Continuous Delivery

Integrated Validation Environment

- Integrated
- Scalable
- Stable
- Frequent Data Refresh
- Production-like

Activities

- Continuous Business Process
- System Testing
- Training
- OPS and Process Testing
- Failover Testing
- Disaster Recovery testing
Continuous Delivery

Integrated Development Environment

Integrated Validation Environment

Application 1

Value Stream 1

Value Stream 2

Application 2

Application 3

Application 4

Release Queue

WP2
WP4

Production

WP1
WP2
WP3
WP4
WP5
WP6
Continuous Delivery

Benefits

• Clear, unambiguous Requirements
• Early Customer Involvement
• Accountability
• Quality
• Delivery scheduled based on customer need
• Focus to Finish
• Knowledge Transfer
Continuous Delivery

Global Product Data Interoperability Summit | 2015

Questions ?