



# Business Agility in 1:1 Customer Engagement

STUDENT GUIDE

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# Business agility in 1:1 customer engagement overview

## Description

Learn the processes involved in creating a new action in a business operations environment and propagate the changes to the production environment.

## Learning Objectives

After completing this module, you should be able to:

- Describe business agility and its importance in one-to-one customer engagement
- Distinguish between business-as-usual and enterprise changes
- Describe the steps involved in managing business changes in one-to-one customer engagement

# Agility in a customer engagement project

## What is agility?

Agility means that your organization is able to react quickly to changes in the marketplace, an important capability in marketing. In the digital age, things change constantly, and taking weeks or even months to translate a good idea into an actionable plan is bad for business.

Pega 1:1 Operations Manager increases your agility in the digital channels, giving business users everything they need to quickly transition to new content or messaging as needs change or trends emerge.

## Business value of agility

Generally, changes in an enterprise application require IT involvement and a full IT development cycle. But business users often want to change things like the description of a product or its expiration date. In most enterprise applications, even these kinds of changes can be costly.

Pega 1:1 Operations Manager empowers business users to make these sorts of 'business-as-usual' changes themselves. This not only preserves resources, it enables business teams to be more responsive to changing business needs and trends in the marketplace.

## Business changes vs enterprise level changes

Business-as-usual changes are small, day-to-day updates that result from normal business operations in digital touchpoints. It typically falls to the business operations team to satisfy ad-hoc requests from business teams to make these types of incremental changes to optimize existing artifacts. These are usually smaller pieces of work that need fast turnaround, such as:

- Adding a new Action (such as offer or message) with treatments to production
- Removing or disabling an Action in production
- Modifying a group-level Engagement Policy
- Enabling an integrated channel
- Fixing a typo in a call center message provided by Pega Customer Decision Hub™

Enterprise changes tend to require larger pieces of strategic development work and usually disrupt normal operations. These tasks may introduce something new or implement a change in the way something existing is presented or works.

- Adding new data attributes to the customer profile
- Integrating a new channel
- Implementing an approval flow for change requests

## **Pega 1:1 Operations Manager delivers business agility**

Pega 1:1 Operations Manager provides a guided process for managing changes to decisioning artifacts. Business users determine what must change in a collaborative and unified way, and the system helps the user implement the changes by:

- Simplifying change processes and reducing administrative tasks
- Providing an intuitive, task-driven interface that guides the user from task to task
- Facilitating collaboration between operations, business, and technical teams

# Change management process

## Introduction

When business requirements change rapidly, the software development process needs to be more agile, while still producing high quality, reliable software. This topic covers the importance of the change management process, and how it works in a one-to-one customer engagement project for Pega Cloud® customers.

## Transcript

This video describes the change management process in a one-to-one customer engagement project, and the cloud environments provided by Pega to support that process.

Let's start by understanding some background on change management in enterprise software development projects.

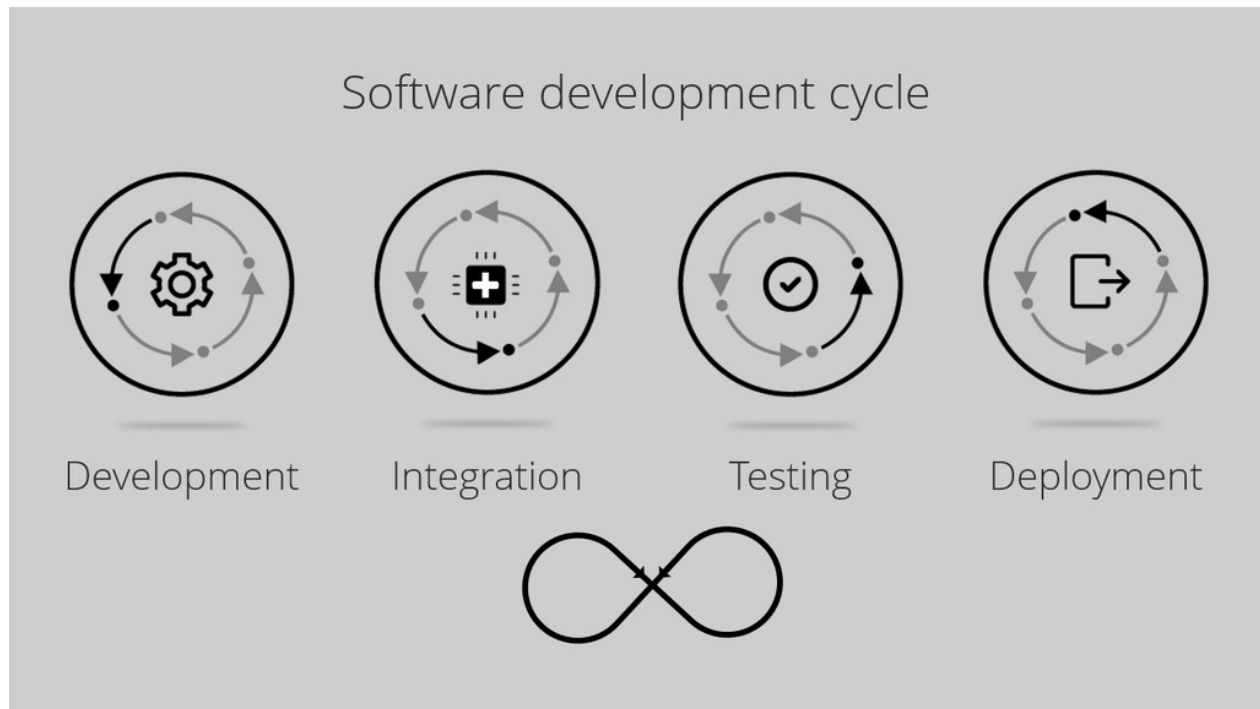
In recent decades, organizations have been using computer software to automate many traditionally manual tasks.





Business processes need to constantly evolve as customer behavior and market conditions change. Naturally, the software that supports business practices needs to evolve as well. As the pace of change of business requirements increases, the software development process needs to be more agile, while still producing high-quality and reliable software.

Here's a simplified view of an enterprise software development cycle. It consists of four high-level stages.



Developers develop new software or update existing software.

The work from several developers is merged into a single system in the integration phase.

The new software version goes through testing, and the final, approved software (or a software change) is deployed into production, which is the system that supports mission-critical business processes.

This cycle repeats for new as well as incremental updates to existing software.

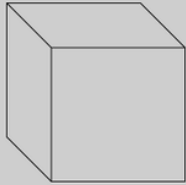
A software development process is supported by different environments.

Let's study the environments available to Pega Cloud® customers in support of a one-to-one customer engagement project using Pega Customer Decision Hub™.



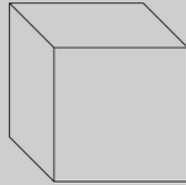
## Software development environments

1:1 customer engagement projects on Pega Cloud®

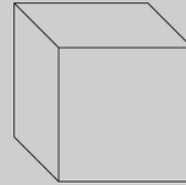


Development

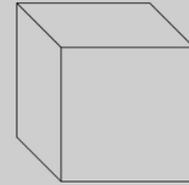
System of records (SOR)



Sandbox



Business  
operations



Production

A development environment is one in which developers create new versions of the application by adding enhancements or fixing issues. This system also doubles as a system of record for Pega applications.

A sandbox environment is used for various testing such as functional testing, unit testing and user acceptance testing.

The business operations environment is a replica of the production environment. However, it contains only a sample of the production data. This is where the business operations team creates and tests new business artifacts and conducts simulations.

The production environment is the main system that propagates next best actions to external channels, collects customer responses, and where the AI learning happens. It is also used for live monitoring of key performance indicators.

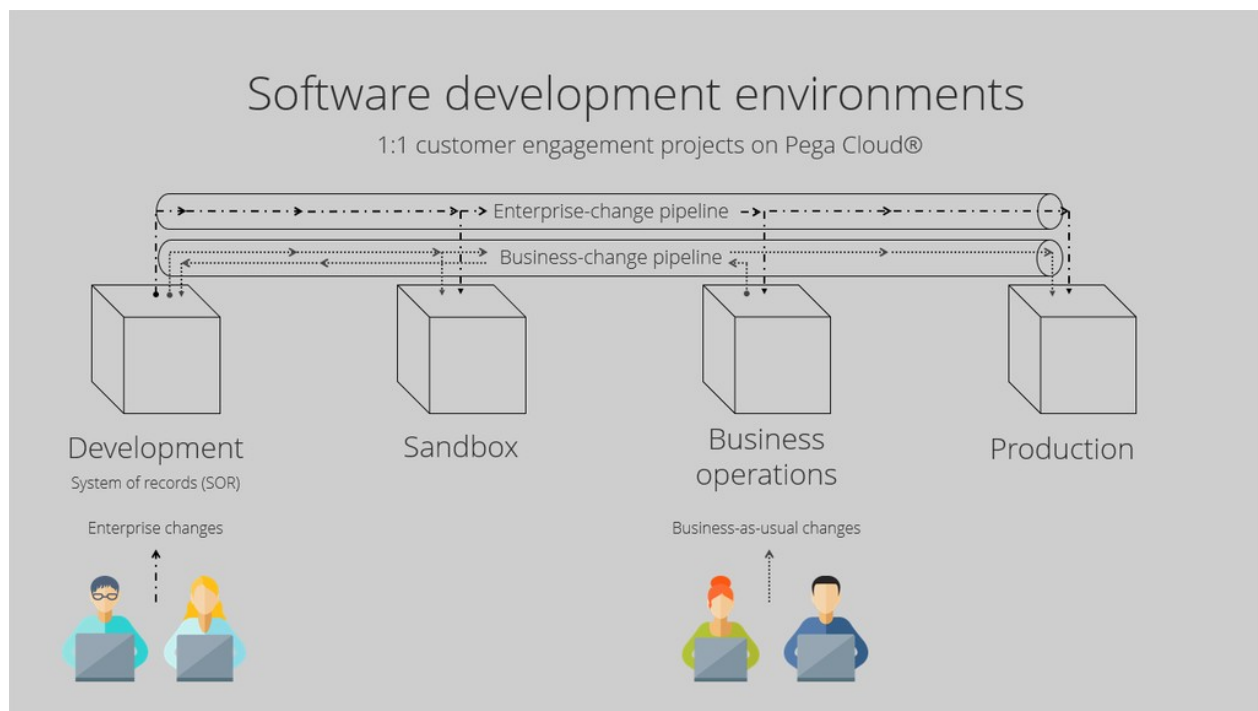
In a one-to-one customer engagement project, changes to the application can be classified into two categories: enterprise changes and business-as-usual changes.

Enterprise changes are the changes that developers make to the Pega application. An example of enterprise changes are extensions to the core Pega application and its integration points with external systems.

Developers make these changes in the development environment. Changes to the application are pushed to other environments through the enterprise-change pipeline managed by the Pega Deployment Manager™.

Business-as-usual changes are made by the business operations team in the business operations environment. Examples of business-as-usual tasks are: creating a new action or updating an existing action with new treatments or engagement policies. Also, this environment is used to carry out various simulations and analyses, for example, to test if there is an ethical bias in the decisions made by the next-best-action strategy framework.

Changes from the business operations environment are pushed to the development environment and from there to other environments through the business-change pipeline.



You have reached the end of this video which showed you:

- The importance of the change management process in an enterprise software development project.
- The high-level software development cycle.
- The cloud environments provided by Pega for a one-to-one customer engagement project using Pega Customer Decision Hub.

- The flow of enterprise and business changes through the enterprise- and business-change pipelines.

# Essentials of Pega 1:1 Operations Manager

## Description

Learn how Pega 1:1 Operations Manager helps streamline the change management processes that affect one-to-one customer engagement orchestrated by Pega Customer Decision Hub™.

## Learning Objectives

After completing this module, you should be able to:

- Explain the lifecycle of a change request
- List of the types of change requests
- Describe the various personas involved in the change management process

# Building your business operations team

## Business operations team

The goal of the business operations team is to bring agility to your change management so your organization can achieve excellence in one-to-one customer engagement.

It is best practice to have a single team for managing business changes at the organization level, typically known as the business operations team. This team includes three types of users.

## Business users

Business users create or submit a new business change requirement, known as a change request in the Pega 1:1 Operations Manager application.

### Responsible for:

- Planning new offers and messages as next best actions for customers.
- Leveraging next best action to drive performance and meet company goals.

### Top activities:

- Planning customer engagement activities.
- Reviewing and approving content and offer distribution.

### Examples:

- At a bank, the following job profiles represent business users:





## Ben Stokes

Digital marketing manager  
(Personal loan division)

U+ Bank

[www.uplusbank.com](http://www.uplusbank.com)



## Robert Hill

Digital marketing manager  
(Owned media-web/mobile)

U+ Bank

[www.uplusbank.com](http://www.uplusbank.com)

## Team lead

The team lead reviews and manages priorities for business change requests.

### Responsible for:

- Conducting the agile ceremonies, unblocking issues, and managing the day-to-day activities required to support the scrum team. The team lead works with IT to deploy revisions.

### Top activities:

- Run daily stand up, show and tell, and sprint retrospective meetings
- Remove blockers impeding team progress
- Ensure compliance with change management best practices and policies
- Work with IT on deployments

### Example:

- Team leads are often scrum masters on a business operations team.



It is a best practice to include one team lead for managing your business operations team.

## Next-best-action specialists

Next-best-action specialists work on tasks to implement the business changes requested by business users.

### **Responsible for:**

- Implementing and testing offers or messages in the business operations environment.

### **Top activities:**

- Supporting the definition and assessment of business requirements.
- Translating business needs into next-best-action artifacts and strategies.
- Building and testing artifacts to understand their impact.

### **Examples:**

- Next-best-action specialists are often known as the marketing operations team. They have hands-on experience with marketing automation and related software. Next-best-action specialists understand the functions of various marketing artifacts such as actions, treatments, engagement policy, and decision strategies. Next-best-action specialists also have good working knowledge of how next-best-action decisioning works in Pega Customer Decision Hub™.





**Davide Achebe**

Operations team member

U+ Bank

[www.uplusbank.com](http://www.uplusbank.com)



**Maggie Square**

Operations team member

U+ Bank

[www.uplusbank.com](http://www.uplusbank.com)



**Betsy Smith**

Operations team member

U+ Bank

[www.uplusbank.com](http://www.uplusbank.com)

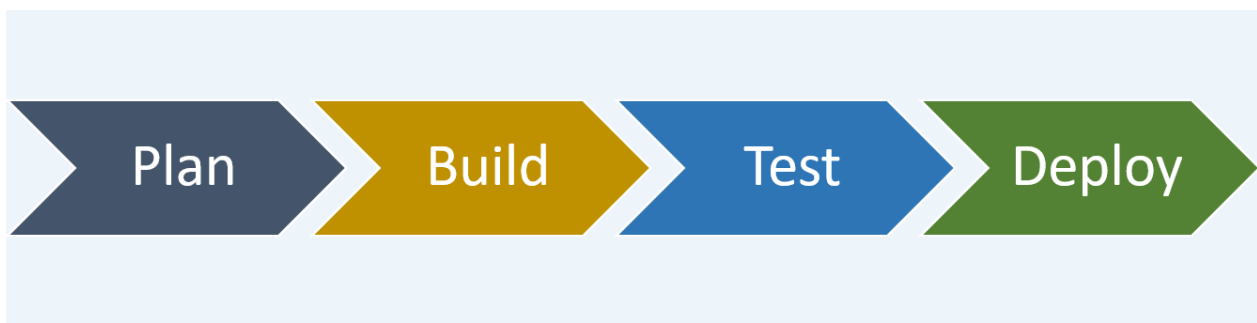
You can scale up operations by adding more team members to this group.

# Lifecycle of a change request

## Change request stages

In Pega 1:1 Operations Manager, a change request represents a change to one or more next-best-action artifacts in Pega Customer Decision Hub™. Together, business users determine and agree upon what needs to change, and the system guides the next-best-action specialist to make those changes.

A change request goes through four stages in its lifecycle. Each stage encapsulates the various tasks required to carry out the change effectively. In each stage, a designated user or set of users carries out the required tasks. Once the necessary tasks are complete, the system automatically manages the movement of the change request from one stage to another.



The lifecycle of a change request contains the following four stages:

- Plan
  - A business user creates the change request.
  - **Key** information about the change is captured from the business user directly into Pega 1:1 Operations Manager.
  - The team lead quickly **plans** and prioritizes the request so that the operational team can focus on more high-value work.
- Build
  - The operations team **builds** the next-best-action artifacts using a simple, guided process.
  - Next-best-action specialists translate the change request details into corresponding next-best-action artifacts in Pega Customer Decision Hub.
  - The system automatically creates or updates the corresponding artifacts.

- Test
  - The system recommends that the next-best-action specialists verify and test the generated or modified artifacts to ensure that the change meets the business' expectations.
  - Changes can be tested in-context to reduce QA cycles.
- Deploy
  - The team lead approves the change request and transfers it to the team responsible for deploying the changes to the production environment.
  - Pega Deployment Manager enables the deployment team to safely **deploy** the changes to a production pipeline.

# Introducing change request types

## Introduction

As a business user, you create a change request to initiate the change management process to make business-as-usual changes to the Pega Customer Decision Hub.

There are three types of change requests currently supported. Selecting the right change request category initiates the appropriate change management process flow.

## Create new action

Use the **Create new action** category when submitting a request to create a new action.

### Change Request

Name \*

Select category

Create new action

Update existing action

Not sure

Completion date \*

Business issue ?

Group ?

Notes

## Update existing action

Use the **Update existing action** category when submitting a request to update an existing action.

### Change Request

Name \*

Select category

Create new action

Update existing action

Not sure

Completion date \*

Business issue ?

Group ?

Notes

As part of updating an existing action, you can request one or more changes at the action level. The available tasks enable you to add a new treatment, modify the action-level engagement policy and modify the action details.

Select task for this action

- Add new treatment
- Edit engagement policy
- Edit action details

## Request type not sure

If you are not sure which change request category to choose, or you cannot find the right business issue and group value and need help creating the request, you can select the **Not sure** category.


A change request with **Not sure** as its category is assigned to a team lead, who then works with the business user to help them select the appropriate change request category.


**Change Request** — ×


Name \*  
Promote usage of mobile app - \$25 off on first purchase

Select category

- Create new action
- Update existing action
- Not sure

Completion date \*  
5/30/2020 

Business issue ?  
Select business issue 

Group ?  
Select Group 

Notes  
We would like to increase number of mobile app downloads by 30 %

## Change Request



Name \*

Promote new card on web - Cash back 5%

Select category



Create new action



Update existing action



Not sure

Completion date \*

5/31/2020



Business issue ?

Sales



Group ?

Creditcards



Notes

Create new leads from web channel for new Cash back 5% credit card.

Cancel

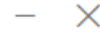
Create

## Update existing action

Use the **Update existing action** category when submitting a request to update an existing action.



## Change Request



Name \*

Extend sign-up bonus period - Cash back 5%

Select category

- Create new action
- Update existing action
- Not sure

Completion date \*

5/31/2020



Business issue ?

Sales



Group ?

Creditcards



Notes

Extend sign up bonus period by 4 weeks on the Cash back 5% card

Cancel

Create

As part of updating an existing action, you can request one or more changes at the action level. The available tasks enable you to add a new treatment, modify the action-level engagement policy and modify the action details.

Select task for this action

- Add new treatment
- Edit engagement policy
- Edit action details

## Request type not sure

If you are not sure which change request category to choose, or you cannot find the right business issue and group value and need help creating the request, you can select the **Not sure** category.

A change request with **Not sure** as its category is assigned to a team lead, who then works with the business user to help them select the appropriate change request category.

### Change Request



Name \*

Promote usage of mobile app - \$25 off on first purchase

Select category

- Create new action
- Update existing action
- Not sure

Completion date \*

5/30/2020



Business issue ?

Select business issue



Group ?

Select Group



Notes

We would like to increase number of mobile app downloads by 30 %

Cancel

Create



# Launching a new offer on web

## Description

Learn the processes involved in creating a new action in a business operations environment and propagate the changes to the production environment.

## Learning Objectives

After completing this module, you should be able to:

- Submit a request for a new action
- Manage change request priorities
- Build the action with the appropriate details
- Move the changes to the production environment

# Submitting a request for a new action

## Introduction

Pega 1:1 Operations Manager streamlines the business change management process. With the Pega 1:1 Operations Manager, users introduce changes to Pega Customer Decision Hub™ by using a safe and guided process, test the changes, and conduct simulations before pushing the changes to the production environment.

## Transcript

This video explains how to submit a change request in 1:1 Operations Manager.

The marketing team at U+ Bank, a retail bank, uses the web self-service portal as a marketing channel. The bank wants to promote using credit cards for utility bill payments to all customers who log in to the self-service portal.

The bank wants to introduce a new cashback offer of 5% to the customers who make bill payments with the credit card.

Business users and next-best-action specialists use Pega 1:1 Operations Manager to work collaboratively in a business operations environment.

A business user first creates a change request in Pega 1:1 Operations Manager to initiate adding a new action. A change request represents a change to one or more next-best-action artifacts.

As a business user, you create a change request to capture the business context of the required change.

In the change request form, enter a name that describes the purpose of the request.

The change request category indicates the type of change. In this case, you want to introduce a new offer, so click **Create new action**.

As a business user, you provide the completion date as the expected timeframe in which the next-best-action specialists complete the request.

Select the appropriate **Business issue** and **Group** if you know it. In this case, Sales and Credit cards. You can also provide this later.

You can use the **Description** section to provide any additional business details that are useful for the next-best-action specialists.

Create the new change request. The new change request has a unique ID.

The change request is currently in the **Plan** stage.

Observe that the first task to be completed is **Define attributes**. The purpose of this task is to capture additional details from the business user about the new action to help the next-best-action specialists who work on it later.

In the **Define attributes** section, enter a name for the new action. In this case, the `Cashback 5 card`.

The **Business Issue** and **Group** are already populated if the details are given when creating the request. These details can be changed later in collaboration with the next-best-action specialist.

Continue to define the availability.

In the **Define availability** section, you can provide details on action availability. The **Completion date** that you entered while creating the change request is mapped to the Action start date.

Continue to define the engagement policy.

In the **Define engagement policy** section, you have four categories to define the criteria.

**Eligibility rules** are rules that qualify a customer for an action. For example, the Bonus points offer can require that the customer owns a card.

**Applicability rules** are factors that determine if an action is appropriate at this point for this customer. For example, the customer used to pay utilities with a credit card but no longer does.

**Suitability rules** are conditions that determine if an action is deemed appropriate and is in the best interest of the customer. For example, the customer is not in collections.

Contact policy conditions help avoid customer fatigue through over-communication. For example, hide if an offer is already accepted.

In this case, you add an eligibility rule: `Average spent on card less than 3000`. and contact policy condition `Hide if offer already accepted`. Note the business user is defining in business language what the requirements are. The NBA Specialist is responsible for implementing these requirements.

Continue to define the channels.

Finally, in the **Define channels** section, you can select the channel and add its details about the channel in which the action is presented. In this case, the bank wants to display this offer on the web channel.

Once you add the web channel, you can provide details for one or more web treatments (for example, placement type such as hero or tile, and the availability date). In this case, a tile.

Finish the task.

Notice that there is a new task in the **To do** section: **Rank change request**. As a business user, you are unable to work on these tasks as are intended for a team lead.

You have reached the end of this video. What did it show you?

- How to submit a change request in 1:1 Operations Manager as a business user.



# Prioritizing change requests

## Introduction

Prioritizing the available change requests helps the NBA Specialists to plan their day and work on the most important tasks first.

## Transcript

This video explains how to prioritize a change request and submit it to the next-best-action specialist (or, NBA Specialist) in 1:1 Operations Manager.

A business user submits a change request to create a new action intended to promote using credit cards for utility bill payments. The business user has provided details for the action attributes by specifying all the details for the new action.

The next task is to prioritize the change requests and assign a change request that is ready for the team lead to work on.

You can access the outstanding tasks from the list of change requests.

You can also assign peer reviewers to verify the change request. Hence you can see the two pending tasks.

As a team lead, you are responsible for two tasks in the **Plan** stage.

The first task is to prioritize the available change requests so that the NBA Specialists can plan their day and work on the most important tasks first.

The second task is to assign peer reviewers to verify the engagement policy defined in the **Build** stage.

You must first rank the change request.

By default, the rank of a new change request is 0. In the **Rank** field, provide a numerical value that represents the relative priority of the change request compared to others in the work pool.

Proceed to the next task.

Now assign a peer reviewer. A peer reviewer can be any operator who can verify the change request details given by the business user against the configuration made by the NBA Specialist. In this case, the peer reviewer is the business user.

You can assign a peer reviewer in the **Stakeholders** widget.

Complete the task.

Notice that there are new tasks that correspond to the **Build** stage of the change request in the **To do** section.

In this case, because the change request is a **Create new action** type, the following tasks are created: Define action details, Configure engagement policy, and Define web treatment.

The NBA Specialists are responsible for the tasks.

You have reached the end of this video. What did it show you?

- How to prioritize a change request and assign a peer reviewer to the request as a team lead.

# Completing the action build tasks

The build stage is where an NBA Specialist completes the various build tasks generated by the system to create an action. This is the step in which you map the business requirements to specific settings in Pega Customer Decision Hub™ so that the system can auto-generate the relevant artifacts.

## Transcript

This video shows you how to complete the action build tasks in 1:1 Operations Manager as a next-best-action specialist, or, NBA Specialist.

A business user has recently submitted a change request to create a new action to promote credit cards for utility payments. The team lead has assigned a high priority to the change request so that you can work on it as an NBA specialist.

As an NBA Specialist, you can access the change request that is in the queue on the **Change requests** landing page. Open the request.

As an NBA Specialist, you have various build tasks to complete that the system generated to implement the business requirements that the business user defined. In this case, you have three tasks.

You need to assign any task to yourself before beginning work so that the system prevents a second person from picking up the same task.

The **Define action details** task corresponds to defining the basic action attributes. Assign the define the attributes and continue.

The fields are prepopulated with values based on the information that the business user provided when creating the change request. However, you can change the prepopulated values in this **Build** task.

The fields correspond to the action attributes in Pega Customer Decision Hub™. For example, **Name** is the action name, and **Business issue** and **Group** decide the categorization of the action in the business hierarchy.

Ensure that the **Availability** check box is selected and the **Start date** field is complete. The time that you select reflects when you want this offer to become available.

Set the date and time from which the offer should be available. Note that the time date here should be in the past.

Complete the task.

The **To do** list now has just two tasks remaining.

The next task is to define the engagement policy of the action. Assign the task to yourself.

On the **Engagement policy** tab of the task pane, you can view the engagement policy and the contact policy that the business user defined per the business requirement.

In this case, the eligibility rule to define as **Average spent is less than 3000**, and the contact policy is **Hide if offer already clicked 20 times**. Open the task to define the rules.

Start by implementing the first eligibility rule.

In the first list, select Customer. In the next list, select **AverageSpent is less than 3000**.

To implement the second requirement, **Hide if offer already clicked 20 times**, configure the contact policies.

Select a contact policy that is already created. An NBA Specialist created this policy in the Customer Decision Hub portal.

Continue the task.

The next step is to verify if the engagement policy is correct.

In this case, Barbara is supposed to receive the **Cashback 5 card** action, as her average spent is USD2500 which, is less than 3000, the defined eligibility value.

You can preview the Persona by clicking the **Persona name**.

Run the validation and continue.

Add a relevant comment and sent the task for peer review.

The last task is to design a web treatment for the action.

To find the web treatment that you must define, click the **Channels** tab of the task pane.

Enter in the respective details and complete the task.

The change request creation is now completed. Because the team lead assigned a peer reviewer to this change request, you now need to send it to the reviewer. In this case, the reviewer is the business user.

A business user can see the peer-review request in their worklist.

Once the business user reviews and approves the change request, you need to review all the tasks and resolve the change request as an NBA Specialist. When all **Build** tasks are complete, refresh the change request page. Finally, validate and approve all the artifacts.

Alternatively, if you want to change any attributes of the newly created artifacts, you can click **Return to build** to change the values and then regenerate the artifacts.

Now, as the team lead, open the change request to verify it.

Approve the change request to promote it to the **Deployment** stage.

You have reached the end of this video. What did it show you?

- How to complete the action build tasks in 1:1 Operations Manager as an NBA Specialist.
- How to review a task as a business user.
- How to, as a team lead, validate tasks that the NBA Specialists developed.

# Deploying changes to production

In this stage you push the changes made by the business operations team to the pipeline for deployment.

## Transcript

This video shows you how to deploy changes that are made in the business operations environment to the production environment.

To create a new action that promotes credit cards use for utility payments, a next-best-action specialist, or NBA Specialist, has completed all the **Build** tasks and validated the generated artifacts, such as actions and treatments.

Then, the team lead promoted the change request to the revision manager to further push the change request to deployment.

The revision manager sees the change request is promoted to the.

As a revision manager, you need to push the changes made by the business operations team to the pipeline for deployment. Access the change request by clicking **Revision Management** in the navigation pane.

You can see the change request in this revision. Now, push the request to deployment.

Observe that the revision changes are first queued and then get merged to the deployment pipeline. Note that this process might take a while to load.

This pipeline enables a seamless experience to merge changes to the development system of record, version the application, and generate a release artifact.

Deployment Manager then deploys the artifacts to the production environment.

In the production environment, you can select a subset of users to test the modifications in a production environment, and then roll out the changes to all users when the test results are acceptable. In this case, you activate the change request right away.

Complete the revision.

**Summary:**

You have reached the end of this video. What did it show you?

- How to deploy changes made in the business operations environment to the production environment.



# Update existing actions

## Description

Pega 1:1 Operations Manager currently supports three types of change requests. Choosing the right change request category initiates the appropriate change management process flow. In this module, you learn about the change management process to update existing actions.

## Learning objectives

After completing this module, you should be able to:

- Update existing actions using 1:1 Operations Manager.

# Update existing actions

## Introduction

In 1:1 Operations Manager, there are three types of change requests currently supported. Selecting the right change request category initiates the appropriate change management process flow. In this topic, you will learn the change management process of updating existing actions.

## Transcript

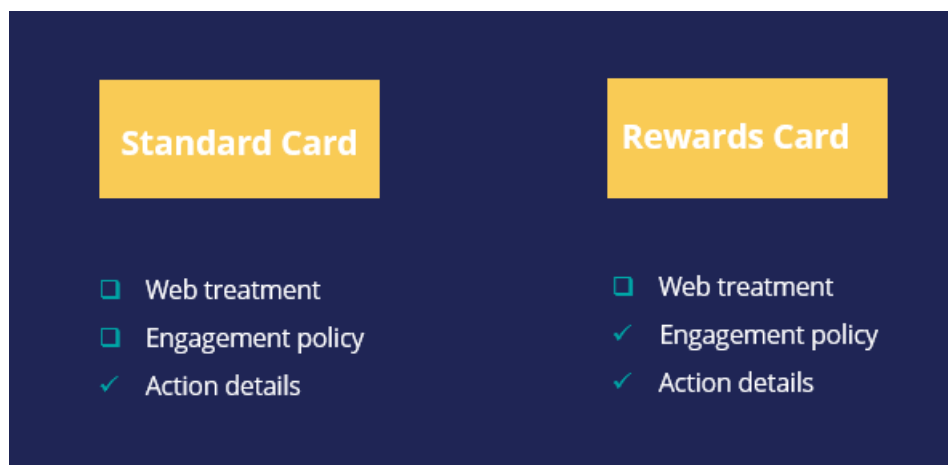
This video explains the concept of updating existing actions by using Pega 1:1 Operations Manager™.

In 1:1 Operation Manager, there are three types of change requests that are currently supported. Selecting the correct change request category initiates the proper change management process flow.

In this topic, you learn how to update existing actions in 1:1 Operations Manager.

You can request one or more changes at the action level when updating an existing action. The available tasks let you add a new or remove or edit an existing treatment, modify the action-level engagement policy, and modify the action details. You can update an action with any of the updated action tasks based on their requirement.

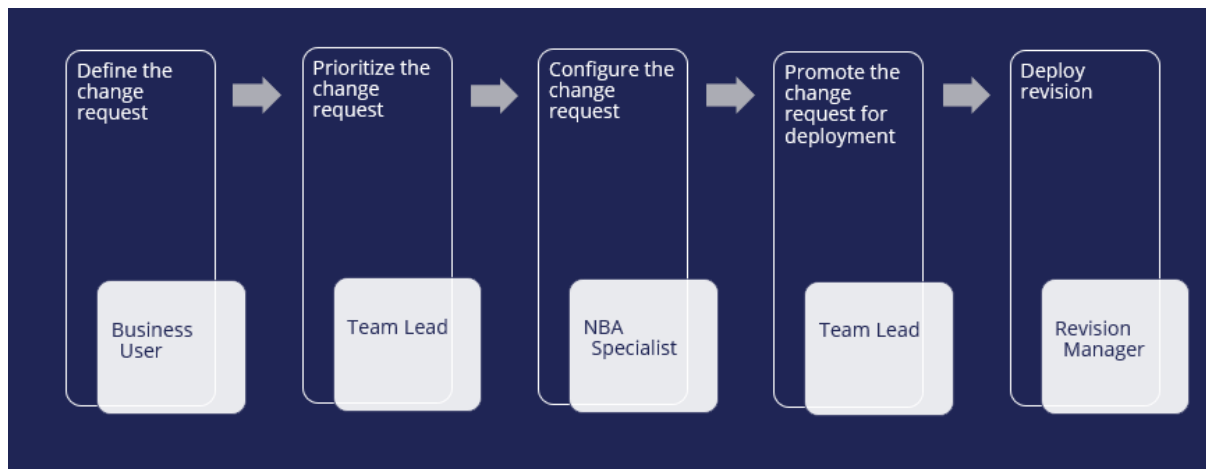
For example, if the two credit card actions you want to update are Standard Card and Rewards Card, you can modify only the action details for the Standard card, and you can modify the engagement policy and action details for the Rewards card action.



Any change that a business user initiates goes through the change management process flow that majorly involves four roles and five different steps.

1. The business user starts the process by defining the change request.

2. Then, the team lead prioritizes the change requests that are received.
3. The NBA Specialist then configures the change request and submits it back to the team lead.
4. The team lead promotes the change request for deployment.
5. And finally, the revision manager deploys the revision.



As a business user, you define the change request for the NBA Specialist to understand the changes to make.

In this step, you can choose the actions that you want to update and select the tasks that you want to modify to those actions.

Notice that multiple actions can be modified as part of one change request, and each action can have its own set of changes. For example, while updating Action 1, you can change only the Engagement policy, while for Action 2 you can change the Web treatment and Engagement policy.

In the change management process flow, the second step is to prioritize the change request created by the business user. In this stage, the team lead can also assign a peer reviewer to review the engagement policies created. However, this task is optional.

Once the change request is assigned a rank, a team of NBA Specialists gets to work on that change request. As an NBA Specialist, you can see all the tasks related to all the actions of the change request once you start working on it. You can start working on them by assigning any of the tasks to yourself.

In 1:1 Operations Manager, while updating a group of actions, modifying the configuration of each action is an independent process. As an NBA Specialist, once you assign a task related to one action to yourself, you can see only the tasks related to that action. You need

to verify the artifacts and then complete configuring all the tasks related to that action before you work on the next action of that change request.

Finally, once you complete all the tasks of that change request, you validate all the artifacts configured and submit the change request back to the team lead.

In the process of change management flow, the next step as a team lead is to verify the change request configured by the NBA Specialist and approve it.

Once approved, the changes are made available or submitted to the revision manager, who can deploy the changes to production.

As a revision manager, you can also activate this revision first to some or all the operators to test it and then finally complete the revision.

This video has concluded. What did it show you?

- How to update existing actions using 1:1 Operations Manager.

# Implementing a change management requirement in the Business Operations Environment

## Description

Business requirements change rapidly and typically have a different release cycle compared to the enterprise release cycle.

To ensure a logical separation facilitates change management, changes that do not fall into the technical domain are done in the Business Operations Environment (BOE) according to the business requirements. Two types of changes are typically done in the BOE. High-volume day-to-day business tasks, such as updating, creating, editing action, treatment details and low-volume tasks changes like taxonomy, arbitration, and Next best action designer configurations.

From the 1:1 Operations Manager, the change requests currently supported create an action and update existing actions.

For any other change that needs to be done in the BOE environment, you can do them from the Revision Manager. Learn how to make changes from the BOE environment.

## Learning objectives

- Describe the change management process
- Initiate a change management request in the BOE
- Implement a change request as an NBA Designer
- Approve and deploy the changes as a revision manager to all environments using the business change pipeline

# Change management process

## Introduction

When business requirements change rapidly, the software development process needs to be more agile, while still producing high quality, reliable software. This topic covers the importance of the change management process, and how it works in a one-to-one customer engagement project for Pega Cloud® customers.

## Transcript

This video describes the change management process in a one-to-one customer engagement project, and the cloud environments provided by Pega to support that process.

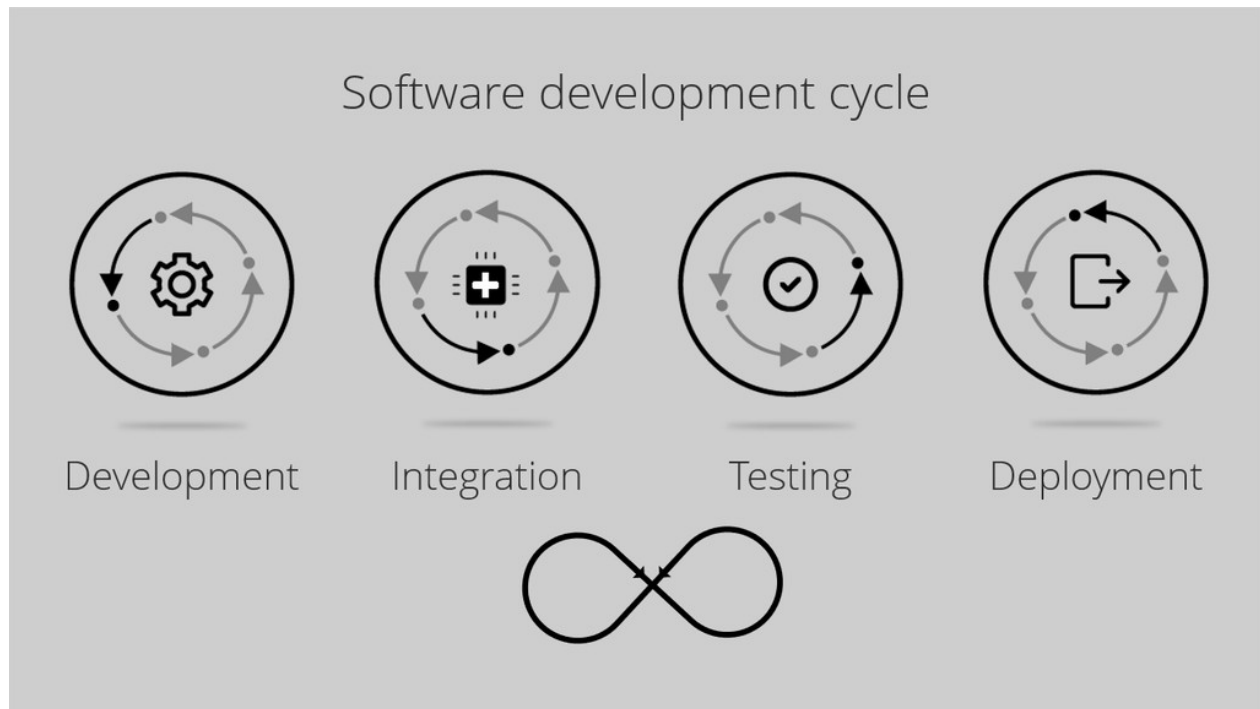
Let's start by understanding some background on change management in enterprise software development projects.

In recent decades, organizations have been using computer software to automate many traditionally manual tasks.



Business processes need to constantly evolve as customer behavior and market conditions change. Naturally, the software that supports business practices needs to evolve as well. As the pace of change of business requirements increases, the software development process needs to be more agile, while still producing high-quality and reliable software.

Here's a simplified view of an enterprise software development cycle. It consists of four high-level stages.



Developers develop new software or update existing software.

The work from several developers is merged into a single system in the integration phase.

The new software version goes through testing, and the final, approved software (or a software change) is deployed into production, which is the system that supports mission-critical business processes.

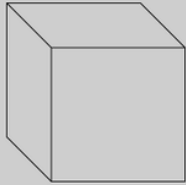
This cycle repeats for new as well as incremental updates to existing software.

A software development process is supported by different environments.

Let's study the environments available to Pega Cloud® customers in support of a one-to-one customer engagement project using Pega Customer Decision Hub™.

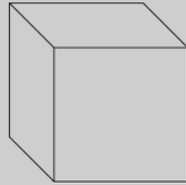
## Software development environments

1:1 customer engagement projects on Pega Cloud®

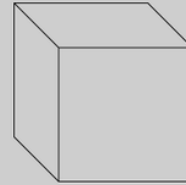


Development

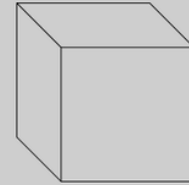
System of records (SOR)



Sandbox



Business  
operations



Production

A development environment is one in which developers create new versions of the application by adding enhancements or fixing issues. This system also doubles as a system of record for Pega applications.

A sandbox environment is used for various testing such as functional testing, unit testing and user acceptance testing.

The business operations environment is a replica of the production environment. However, it contains only a sample of the production data. This is where the business operations team creates and tests new business artifacts and conducts simulations.

The production environment is the main system that propagates next best actions to external channels, collects customer responses, and where the AI learning happens. It is also used for live monitoring of key performance indicators.

In a one-to-one customer engagement project, changes to the application can be classified into two categories: enterprise changes and business-as-usual changes.

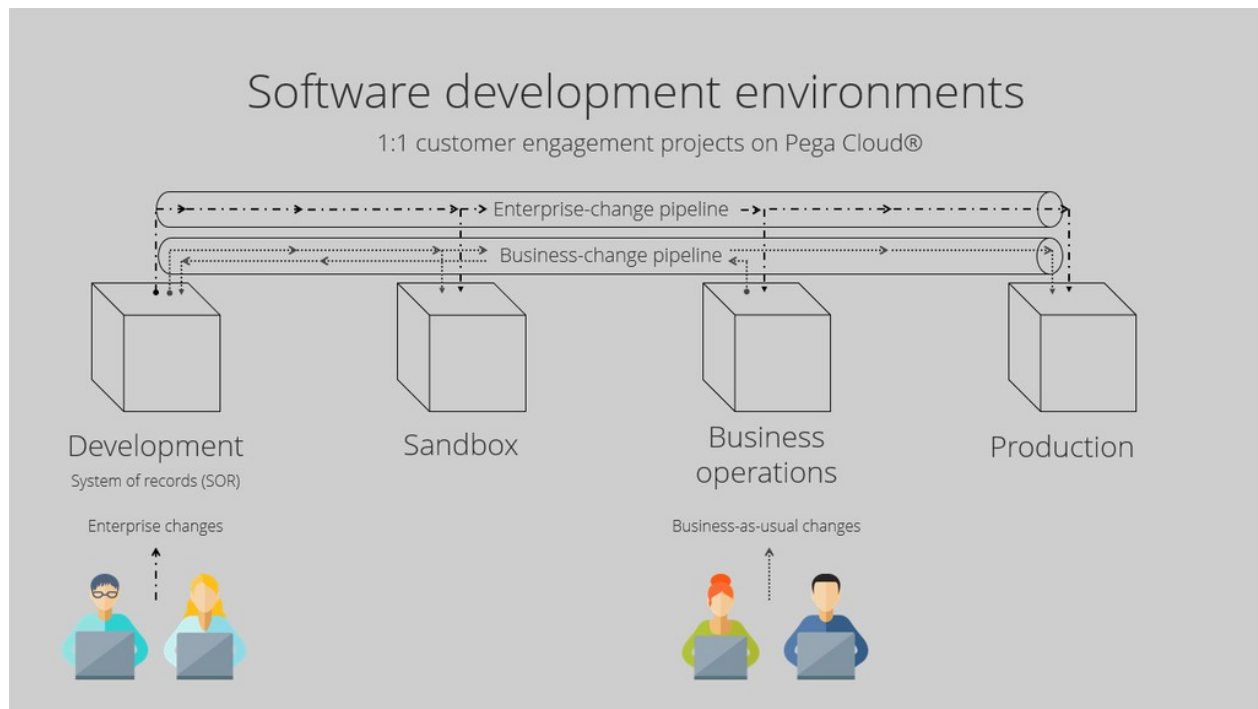
Enterprise changes are the changes that developers make to the Pega application. An example of enterprise changes are extensions to the core Pega application and its integration points with external systems.



Developers make these changes in the development environment. Changes to the application are pushed to other environments through the enterprise-change pipeline managed by the Pega Deployment Manager™.

Business-as-usual changes are made by the business operations team in the business operations environment. Examples of business-as-usual tasks are: creating a new action or updating an existing action with new treatments or engagement policies. Also, this environment is used to carry out various simulations and analyses, for example, to test if there is an ethical bias in the decisions made by the next-best-action strategy framework.

Changes from the business operations environment are pushed to the development environment and from there to other environments through the business-change pipeline.



You have reached the end of this video which showed you:

- The importance of the change management process in an enterprise software development project.
- The high-level software development cycle.
- The cloud environments provided by Pega for a one-to-one customer engagement project using Pega Customer Decision Hub.

- The flow of enterprise and business changes through the enterprise- and business-change pipelines.

# Implementing a change management requirement in the Business Operations Environment

## Introduction

Business requirements change rapidly and typically have a different release cycle compared to the enterprise release cycle.

To ensure a logical separation facilitates change management, changes that do not fall into the technical domain are done in the Business Operations Environment (BOE) according to the business requirements. Two types of changes are typically done in the BOE. High-volume day-to-day business tasks, such as updating, creating, editing action, treatment details which are initiated by the Business User and low-volume tasks changes like taxonomy, arbitration, and Next best action designer configurations that are initiated by the Revision Manager.

From the 1:1 Operations Manager, the change requests currently supported create an action and update existing actions.

For any other change that needs to be done in the BOE environment, you can do them from the Revision Manager. Examples of this includes changes to group level eligibility conditions, changes in the taxonomy, arbitration formula etc.

Revision Management provides business users with means to request, make, audit, and test changes to the enterprise application.

## Transcript

In this video, you will learn how change management works in the BOE environment. You will learn how to initiate a change, implement the change, and deploy the change to production using revision management in the Pega Customer Decision Hub portal.

U+ Bank uses Pega Customer Decision Hub and currently cross-sells on the web by showing various credit cards to its customers. The bank now wants to offer credit cards to only those customers with credit score that is greater than or equal to 300.

The bank wants to consider the credit score value, which the existing Scorecard rule Determine Credit score already computes. This score card computes customer credit scores and then segments the results into "Suitable" and "Not Suitable" categories.

Such a change is categorized as a regular business change, which is executed out in the BOE environment.

Any changes done in the BOE environment have a prerequisite. All rules that should fall into business domain and that can be modified in the BOE need to be part of the application overlay because the Revision Manager needs access to these rules.

A system architect typically does this task with the help of a lead decisioning architect during the BOE set up and the initial migration of the application overlay from Development environment to the BOE.

The System Architect uses Revision Management in Dev Studio and adds the set of rules to the respective application overlay, in this case, the Business change overlay.

After the rules are added to the overlay, they no longer can be changed in the Development environment. They can be changed only in the BOE.

To implement the required change in the BOE, a Revision Manager initiates the change.

To make this change, a Revision Manager accesses the Revision Management landing page to create a new revision.

After a revision is created, a change request is automatically created, and it is part of this revision.

The operator who modifies the business rules is an NBA Designer. Therefore, the Revision Manager needs to include all rules that the NBA Designer might need in order to complete the change request (CR).

The change request includes these rules depending on the scope of changes.

In this case, the NBA Designer needs to create a new strategy that does not currently exist and define an engagement policy for an existing group. At this point, add the **CreditCards** rule of the type **Next-Best-Action Config** in order to enable the NBA Designer to configure group-level customer engagement policy rules.

Next, the Revision Manager assigns the change request to an user. In this case, the NBA Designer. Note that each revision consists of at least change request.

Here, the Revision Manager can describe the change in detail for the NBA Designer to understand the requirement and submit the change request.

Note that the change request is now assigned to the NBA Designer.

Submit the change request to the operator assigned, in this case, the NBA Designer.

As an NBA Designer, you can see all the change requests assigned to you in My Work section.

When you open the change request, you can read the objective and the description to understand the requirement.

You can see all the rules that were assigned to complete the change in the Scope of changes section. In this case, because the credit score for the customer needs to be derived from the score card, you need to create a decision strategy.

It is important to note that, as an NBA Designer you can create new rules, which are automatically added to the change request. For this use case, create a decision strategy.

Create the decision strategy as per the requirement. It is not in the scope of this demo to focus on the strategy building. So, assume you are creating an engagement strategy, which uses a scorecard to determine if a customer is suitable or not for credit cards.

To use the strategy to define the group-level suitability rule in the Next-Best-Action Designer, you need to mark it as a relevant record.

As an NBA Designer, you can access the NBA Designer to add the suitability rule from the Scope of changes section.

Define the suitability rule and save it.

Submit the change request. In a real-life implementation, at this stage, you would typically submit the change request for testing to ensure the business requirement is implemented properly. For now, submit the request directly to the Revision Manager for approval.

Note that you can also send back the CR if you need additional rules.

As a Revision Manager, you can go through the completed changes and approve them to finalize the change request. You can also reassign this change request if you want further configuration.

After the change request is completed, you can access the revision to deploy it. When deploying this change, the business change pipeline is used to ensure this change is propagated properly to all other environments: development, staging, and production.

In the BOE environment, you can select a subset of users to test the modifications in the production environment and then roll out the changes to users when the test results are as expected. In this case, you activate the change request right away.

Complete the revision.

This video has concluded. What did it show you?

- How to initiate a Business as Usual change in the BOE.
- How a revision consists of one or multiple change requests.
- How a change request is implemented by an NBA Designer.
- How a revision manager can approve and deploy the changes to all environments using the business change pipeline.

