

Low Code/App Factory Foundation Bootcamp

Scenario

Welcome to UPlus! Today we are low code developers tasked with modernizing UPlus' feedback management application using the latest features in Pega's Infinity '24 release. See how Pega's low code App Studio, Constellation Design System, Workflow Automation, and Generative AI can transform an application and provide significant increases in efficiency and productivity while delivering outstanding customer experiences.

Assignment tasks

Task 1: Design outstanding user experiences with Constellation Design System

Incorporate existing components from our enterprise reuse layer and design a user interface to wow customers and bring our application to life.

Task 2: Streamline journeys with workflow automation

Configure the optimal path for our users to get from start to finish. Incorporate automated decisions, correspondence, work routing, and service level agreements.

Task 3: Turbocharge efficiency with generative AI

Use generative AI to eliminate manual work and guide our end users from start to finish.

Task 4: Extend your application

Connect to external systems of record to source data for the case. Customize the end-user portal, reach more users with your application by building a native IOS or Android app, and gain insights into how work gets done in your application with Gen AI Analyze.

Task 1: Design User Experience with Constellation

1. Log in to the exercise environment using the following credentials:

Username: jordan@uplus.com

Password: pega1234

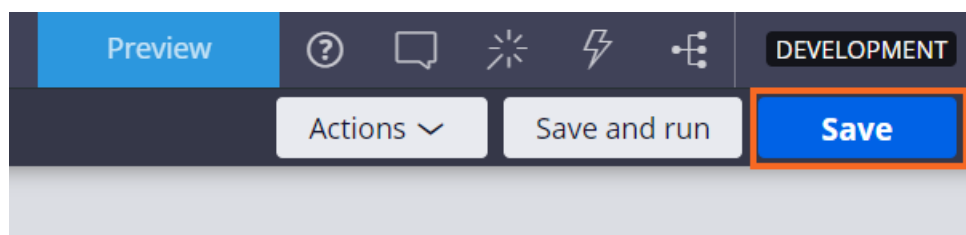
2. From the overview screen, click **General feedback** in the **Case Types** section.

Case Types [Manage \(2\)](#)

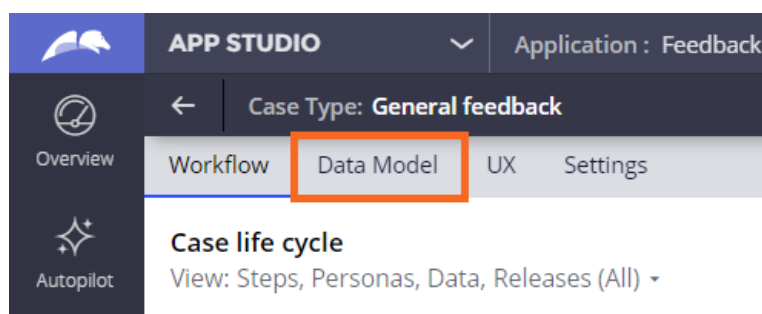
General feedback

Submission

In the case lifecycle, save your work often by clicking the blue save button in the top right corner.



3. From the case lifecycle, click **Data Model** in the tabs at the top left-hand side of the screen.



4. Pega GenAI Blueprint has created most of the fields we need for our case data model. However, we need to add several fields to reference data objects we're reusing from an existing application in the UPlus ecosystem.

5. Click **Add field** in the top right-hand corner of the screen.
 - a. Type **Customer** in the field name text box.
 - b. Select **Query** from the field type drop down list.
 - c. Leave **Options** set to **Single Record**
 - d. Select **Customer** then **List customer details** from the data page drop down.
 - e. Select **Field** in the CustomerID parameter drop down.
 - f. Select **Create Operator** from the field selection drop down.

Add field to General feedback

×

Field name *

Customer

Type

Query

▼

Options

☒ Single record

☐ List of records

Data page *

List customer details

▼

Parameters

CustomerID

Field

▼

Create Operator

▼

Advanced

▶

Cancel

Submit & add another

Submit

This field will automatically match the active user to a customer record in the UPlus Customer data system we added to the application during the Blueprint import.

6. Click **Submit & add another** on the field creation pop out to add another field.
 - a. Type **Product type** in the field name text box.
 - b. Select **Picklist** from the field type drop down list.
 - c. Select **Data page** from the picklist options list.
 - d. Select **Product Category** then **List product category** in the data page drop down.
 - e. Select **Product Category** in the identifier field drop down.
 - f. Select **Product type** in the display field drop down.

Add field to General feedback ✕

Customer was successfully added.

Field name ★

Product type

Type

Picklist

Display as

Drop-down list

Picklist options

Data page

List Product category

Identifier field

Product Category

Display field

Product type

> Advanced

Cancel

Submit & add another

Submit

7. Click **Submit & add another** on the field creation pop out to add another field.
 - a. Type **Product name** in the field name text box.
 - b. Select **Picklist** from the field type drop down list.
 - c. Select **Data page** from the picklist options list.
 - d. Select the **Fetch product by category** data page in the data page drop down.
 - e. Type **.ProductCategory** in the box directly to the right of the **constant** dropdown. **Do not forget to include the period before the property tag.**
 - f. Select **Product name** in the identifier field drop down.
 - g. Select **Product name** in the display field drop down. Click **Submit**.

Field name ★

Product name

Type

Picklist [Change](#)

Display as

Drop-down list

Picklist options

Data page

FetchProductbyCategory

▼ Data view parameters

Category

Constant

.ProductType

Identifier field

Product Name

Display field

Product Name

Applying the product category parameter enables a cascading dropdown effect, showing only relevant products in the selected category.

8. To begin configuring our forms and adding these new fields to our user experience, Click the **Workflow tab** to navigate back to the case lifecycle.
 - a. Click the **Feedback details** form step in the Submission stage.
 - b. From the configuration panel on the right-hand side of the screen, click **Configure view**.

Case Type: General feedback

Workflow | Data Model | UX | Settings

Case life cycle
View: Steps, Personas, Data, Releases (All) ▼

Life cycle | Optional actions

Submission | Review | Resolution | + STAGE

Submission

- Feedback details
- Decision
- Change to a specific stage
- CONFIGURE PROCESS

Review

- Follow up action
- Approve resolution
- + STEP

Resolution

- Email composition screen
- Create PDF
- Notify employee
- + STEP

Step

General | Goal & deadline

Route to

Current user

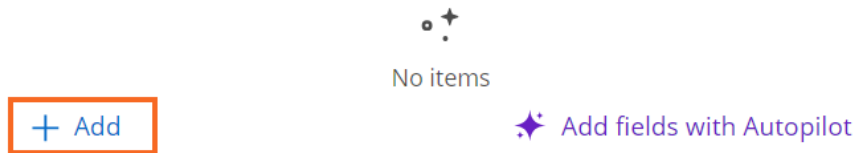
Configure view

Set case status

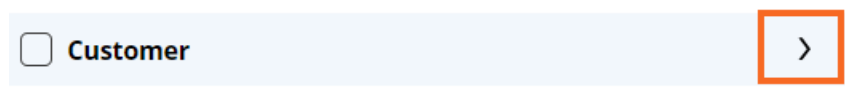
Instructions for user

9. From the Constellation preview panel, on the right side under the **Fields** section, *click + Add*

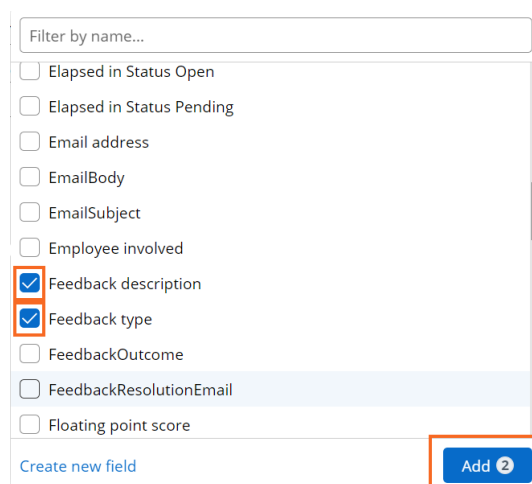
Fields



- a. Click **Fields** then *Scroll* to find the bolded **Customer** query field.
- Click the **arrow to the right of the label** to expand the group.



- Click **Views**
 - Select **Customer identification**.
 - Click **Add**.
- b. Click **+Add** then *click Fields* then *search* or *scroll* until you find the following fields.
- Click **Feedback type**.
 - Click **Feedback description**.
 - Click **add** on the pop out window.



- c. Click **+Add** and click **Views**. From the views list, click **Create new View**.
 - i. Type **Product details** in the **Name** text box and click **Submit**.
- d. Click **Add** to add fields to your new view and add the following fields:
 - i. **Product Type**
 - ii. **Product Name**
- e. Click the **back arrow** in the top left corner of the view configuration window to return to the primary **Customer feedback** view.
- f. Update **Layout** selection to **2 column**.
- g. Click and drag the **Product details view** between feedback type and feedback description.

The screenshot displays the Pega view configuration interface. On the left, a 'Preview as' dropdown is set to 'Constellation'. The main preview area shows a form with the following fields: 'First name' and 'Last name' (text boxes), 'Customer email address' (text box), 'Customer phone number' (text box with a '+1' dropdown), 'Feedback type' (dropdown menu), 'Product category' (dropdown menu), 'Product name' (dropdown menu), and 'Feedback description' (text area). On the right, the 'Edit View: Customer Feedback' configuration panel is visible. It includes a 'Template' dropdown set to 'Default form', an 'Edit' button, and a 'Name' field containing 'Customer Feedback'. The 'Layout' is set to '2 column'. Below this, the 'Fields' section lists four fields: 'Customer details' (View), 'Feedback type' (Picklist), 'Product details' (View), and 'Feedback description' (Text (paragraph)). Each field has a gear icon for configuration and a trash icon for removal. At the bottom of the panel, there is an '+ Add' button and an '> Advanced' link.

- h. To apply a visibility condition to the **Product details view**:
 - i. Click the **gear icon** to the right of the product details view label to configure view options.
 - ii. Under **Conditions**, expand the **Visibility drop down**.
 - iii. Select **Custom Condition** and click the **gear icon** to the right of the label to expand the condition builder.
 - iv. From the field drop down, select **Feedback type**, then type **Product** in the **Value text box**. Conditional operator should default to **is equal to**.
 - v. Click **Submit**, then click **Submit** on the full view configuration window.

Condition Builder ×

Field	Conditional operator	Value
Feedback type ▼	is equal to ▼	⚙️ Product + 🗑️

[Advanced mode](#)

Cancel Submit

10. Click **Save and run** to test your case and view the forms you have configured.

- Click **Fill form with AI** button to leverage generative AI sample data creation for application testing.

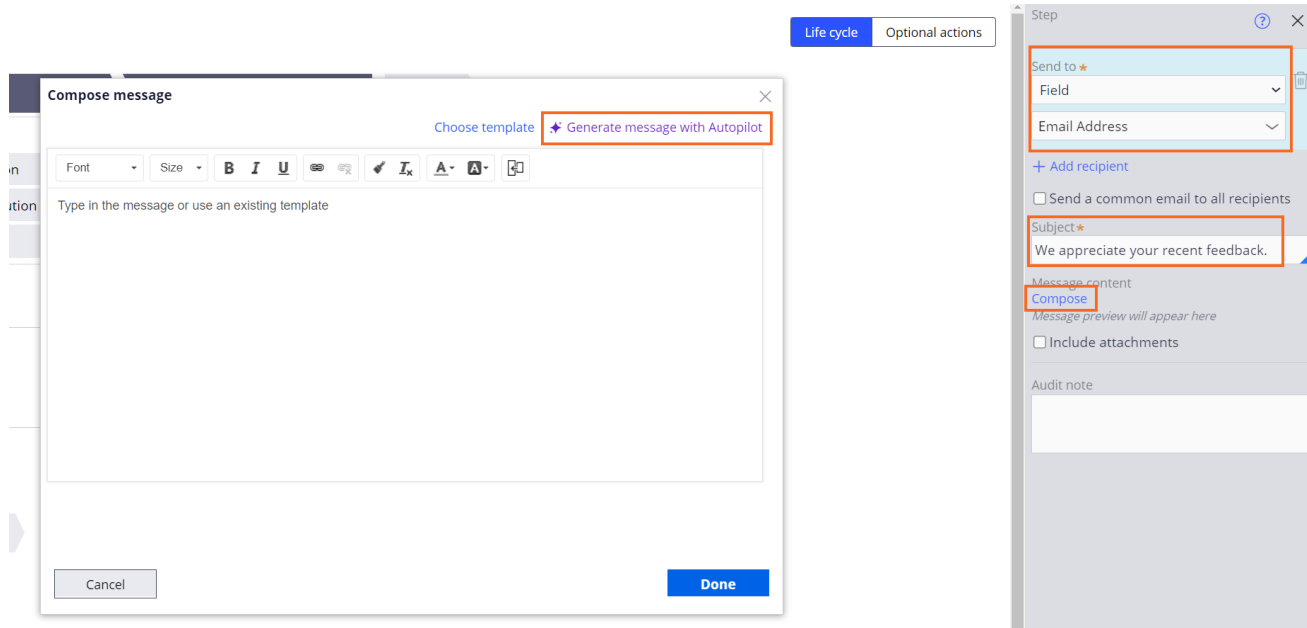


- Test the **visibility condition** by selecting product as the feedback type.

Task 2: Streamline journeys with workflow automation

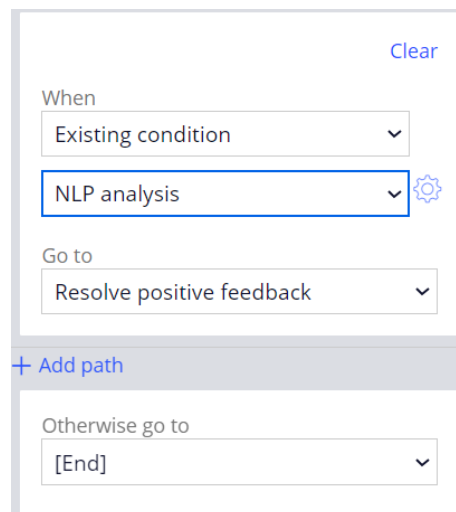
1. Return to the General feedback case lifecycle by *clicking* **case types** from the vertical navigation menu on the left-hand side of the screen then *clicking* **General feedback**.
2. In the case lifecycle, we need to create an alternate stage to automatically resolve positive feedback.
 - a. Underneath **Submission stage**, *click* **+Alternate stage**.
 - i. Type **Resolve positive feedback** in the stage name text box.
 - ii. On the configuration panel, *click* **Resolve the case** when all processes in this stage are complete.
 - b. Hover your cursor over **+Process** text under the new stage, then *click* **+Step**.
 - i. Click **Automations**
 - ii. Click **Send email** and **Select**.
 - c. To configure automated correspondence, in the configuration panel:
 - i. Click the **send to** drop down and *select* **field**
 - ii. In the field drop down, *select* **Customer > Email Address**.
 - iii. Type **We appreciate your recent feedback** in the **subject** text box.
 - iv. Click **compose**.
 - v. From the rich text editor, *click* **Generate message with Autopilot** in the top right corner of the pop out window.
 - vi. Optionally, edit the message, then *click* **done**.

To add additional context to the Autopilot prompt, after generation, click the configure button in the top right corner of the email composition screen, then generate with more context.



3. Apply an existing when condition using natural language processing to determine whether feedback is positive and route the case accordingly.

- a. Click **Is feedback positive?** Decision shape in the submission stage
 - i. From the configuration panel, in the condition drop down, *select NLP analysis.*
 - ii. Ensure **Resolve positive feedback** is selected in the **Go to** dropdown.
 - iii. Ensure **Otherwise go to** selection is **[End]**.



4. Update **Resolve positive feedback** change stage automation takes our case to the alternate stage.
 - a. Click **Resolve positive feedback**.
 - i. From the configuration panel, select **Resolve positive feedback** from the stage drop down list.
5. Next, we need to update the review stage with a new case status, service level agreements, and conditional routing.
 - a. Set a new case status by clicking the **Review stage**.
 - i. In the configuration panel, type **Pending-review** in the **Set case status on stage entry** text box.
6. Route the follow up action form step to the Customer service work.
 - a. Click **follow up action** form step in the Review stage.
 - i. Click the **Route to** drop down in the configuration panel
 1. Select **Work queue**.
 2. Select **Create Work Queue** and type **Customer service**.
7. Route the Approve resolution step using business logic.
 - a. Click **Approve resolution** approval step.
 - b. In the general tab of the configuration panel, expand the **Route to** drop down list and select **Use business logic**.
 - c. Click the **gear icon** next to **Use business logic** to configure the condition and apply the following conditions:
 - i. Select Route to **Work Queue**, then select **Product Management**
 - ii. From the condition builder, in the first box, select **Fields** then Feedback Type is equal to **Product**.
 - iii. In the otherwise box, select route to **Work Queue**, then **Service Management**.
 - d. Click **Submit**.

Business logic

Route work based on these conditions ?

1

Route to

Work Queue

ProductManagement

Feedback type

is equal to

"Product"

[+ Add condition](#)

otherwise

Route to

Work Queue

ServiceManagement

Cancel

Submit

Work can be routed in Pega using case data, as we see here, but organizations can also route work based on other factors, like user skills or availability.

8. Apply a service level agreement to the approve resolution step.

a. Click the **Goal & deadline** tab at the top of the configuration panel.

- i. Select **Custom SLA** from the Use Service-level agreement (SLA) drop down list.
- ii. Set the **Goal SLA** to 0 Days 2 hours (02:00:00).
- iii. Check the **Assignee** box under the action section to notify assignee when the goal is breached.
- iv. Expand the **Deadline** section.
- v. Set the **Deadline SLA** to 0 Days 4 hours (04:00:00).
- vi. Check the **Manager** box under the action section to notify the manager when the deadline is breached.

The screenshot shows the 'Goal & deadline' configuration panel. The 'Goal' section is expanded, showing 'Days' set to 0 and 'HH:MM:SS' set to 02:00:00. The 'Action' section has 'Notify' selected, and the 'Assignee' checkbox is checked. The 'Deadline' section is collapsed.

9. Add the investigate feedback child case and trigger automatically when review determines investigation is required.

a. From the review stage header, click the **configure** button, represented by a vertical ellipsis to the left of the stage name.

- i. Hover your cursor over **add process**.
- ii. Select **new process** and type **Investigation** to name your process.



- b. In the configuration panel, *expand* the **start process (otherwise skip)** drop down list and select custom condition.
 - i. Enter condition: **FollowupActions is equal to Investigation**
 - ii. Click **Submit**.

FollowupActions is equal to Investigation

- c. To add the child case, first *delete* the **default form step** in the new process.
 - i. Click **+Step, More, Automations, Create case**.
 - ii. Type **Create investigation** to name the step.
 - iii. In the configuration panel, from the case type drop down, *select* **investigate feedback**.
 - iv. Check **transfer information to the new case** box and *check* the **top left box** to select all fields. Click **OK**.

Step

Create

☒ Child case
☐ Remote case

Case type *

Investigate feedback

☐ Create multiple cases using a list
☒ Transfer information to new case

Transfer information

Map fields

Transfer the following information to 'Investigate feedback' case

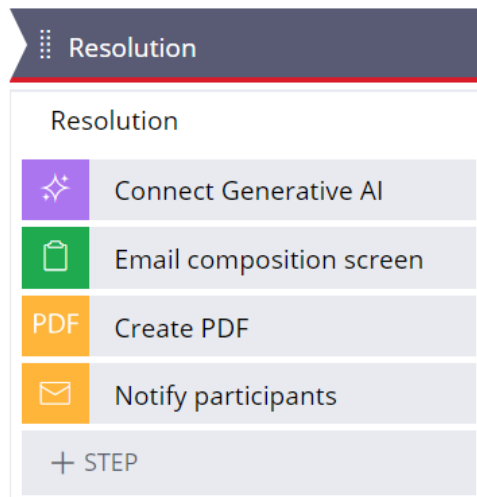
'From' field	'To' field
☒ Contact email	Contact email

10. Click save and run to test your case.

- a. Provide a positive feedback description, ie. I love this product!!! To see the alternate stage auto resolution.
- b. View the routing conditions and SLA in the review stage.
- c. Expand the utilities panel to see all case attachments (PDFs, emails).

Task 3: Turbocharge efficiency with Generative AI.

1. Return to the General feedback case lifecycle by *clicking* **case types** from the vertical navigation menu on the left-hand side of the screen then *clicking* **General feedback**.
2. Add a **Connect Generative AI** step to the **Resolution stage** of the case.
 - a. *clicking* the **chat icon** in the top right corner of App Studio.
 - b. *Copy* the prompt posted to use as a template.
 - c. *Close* the developer collaboration tool.
 - d. *Paste* the prompt copied from the developer collaboration tool in the **Prompt** text field.
 - e. *Expand* the **Response** section and *select* **Unstructured** radio button under **Expected response mode**.
 - f. *Select* **EmailBody** in the **To field(s)** drop down list.
3. *Click and drag* the **Connect Generative AI** step to the top of the stage, above Email composition screen.



4. Add GenAI Coach to the case page.
 - a. *Click* the **UX Tab** at the top of the screen.
 - b. In the Utilities section *click* **+Add**
 - i. *select* **GenAI Coach**.
 - ii. *click* **Add**.

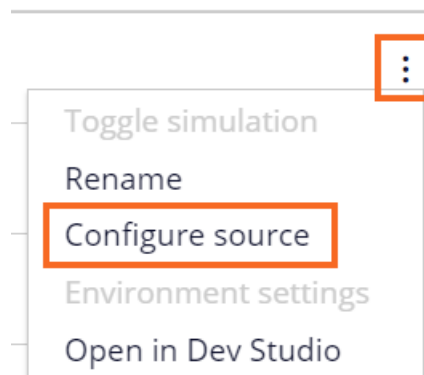
Utilities

 Attachments	Widget  
 Followers	Widget  
 GenAI Coach	
 Add	

5. Click Save and run to test your new Generative AI powered capabilities.
 - a. Test GenAI Coach on the review screen, after case data has been entered.
 - b. View the email body generated by the Connect Generative AI rule.

Task 4: Extend your application

1. Integrate the product catalog with an external system of record.
 - a. Click **Data** from the vertical navigation menu on the left side of the screen.
 - b. Click **Product** from the list of data objects.
 - i. Click the **Data Pages** tab in the Product data object.
 - ii. Open **Developer collaboration** by clicking the **chat icon** in the top right corner of the screen.
 - iii. Copy the endpoint URL to be used for the API integration.
 - iv. Close developer collaboration tool.
 - c. Click the **configure** button (vertical ellipsis) on the right-hand side of the screen in the FetchProductbyCategory row.
 - i. Click **configure source**.



- d. Click **replace** in the pop out data integration wizard.
 - i. Type **Product SOR** in the name text box
 - ii. Paste the **endpoint URL** in from the developer collaboration tool in the Endpoint URL text box.
 - iii. Click **initialize**.
- e. Map the fields from the source database to the target fields in the Pega data model.
 - i. Click **Map with autopilot**.
 - ii. Drag and drop a **connector** between any fields that were not mapped by Autopilot.
 - iii. Click **next**.

iv. *Click submit.*

2. Test your API integration.

a. *Click **preview** in the top right corner of App Studio*

i. *Click the **+** icon in the top left corner of the web portal then *click create.**

ii. *Select **General feedback.***

iii. *Select **product** in the feedback type drop down list.*

iv. *Expand **Product name** picklist to view options pulled from the external system of record via API call.*

Create General feedback (G-8008)

EmailAddress: tomjohnson@example.com

FirstName: Tom

Select...

- Trek Fetch Plus 2 e-bike
- Oura ring 3
- Apple Watch Series 9
- Garmin Lily 2
- HP Spectre x360 14
- Oro Dog Companion Robot**
- Apple AirPods Pro
- Apple iPhone 15 Pro
- Samsung Galaxy S24 Ultra
- Macbook Pro M3
- Dell Inspiron 15
- Lenovo Ideapad 15.6
- Xbox Series X
- PlayStation 5
- Nintendo Switch
- Seagate 1TB Storage Expansion Card
- Nikon D850 DSLR
- Canon EOS Rebel T7
- GoPro Hero 11

Select...

Cancel Fill form with AI Submit

3. Get insights into how work is completed in your application with **Explore Data**

a. *Click **Explore data** on the vertical navigation menu on the left side of the screen.*

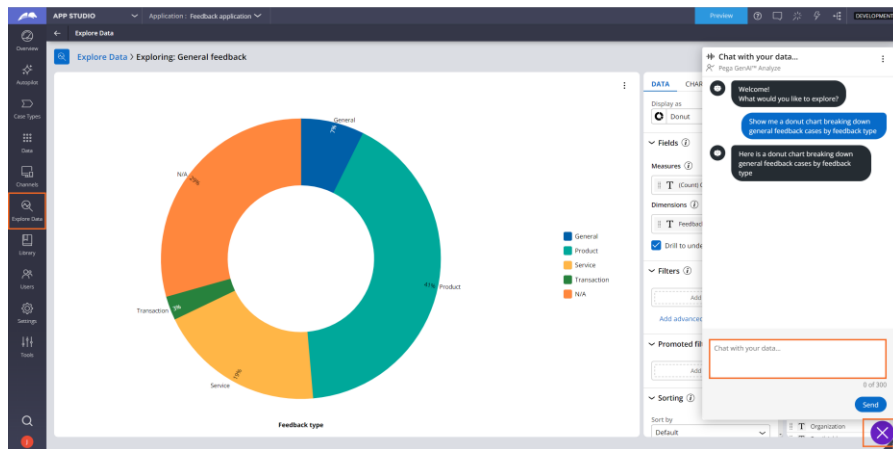
b. *Click the **purple diamond icon** in the bottom right corner to launch GenAI Analyze, Pega's 'chat with your data' functionality.*

c. *Type a **report request** ensuring you mention the general feedback case type. Examples below:*

i. "Show me a donut chart breaking down general feedback cases by feedback type."

ii. "Show a line graph measuring general feedback cases by create date time."

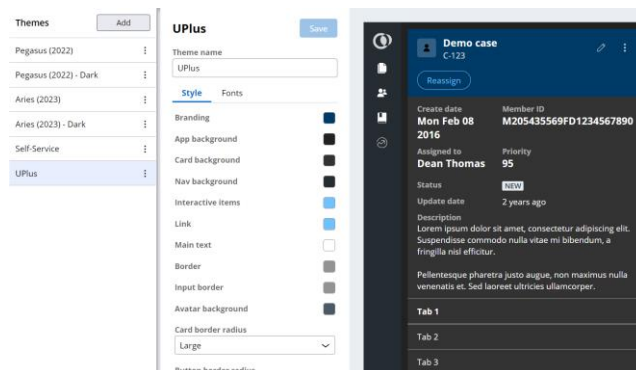
- iii. "How many general feedback cases are pending review?"
- iv. "Show all general feedback cases grouped by work status."



- d. Minimize the chat window and click save insight.
 - i. Click **Save as insight**.
 - ii. Name your insight and set visibility to public. Click submit.

4. Create a new theme/skin for your end user portal.

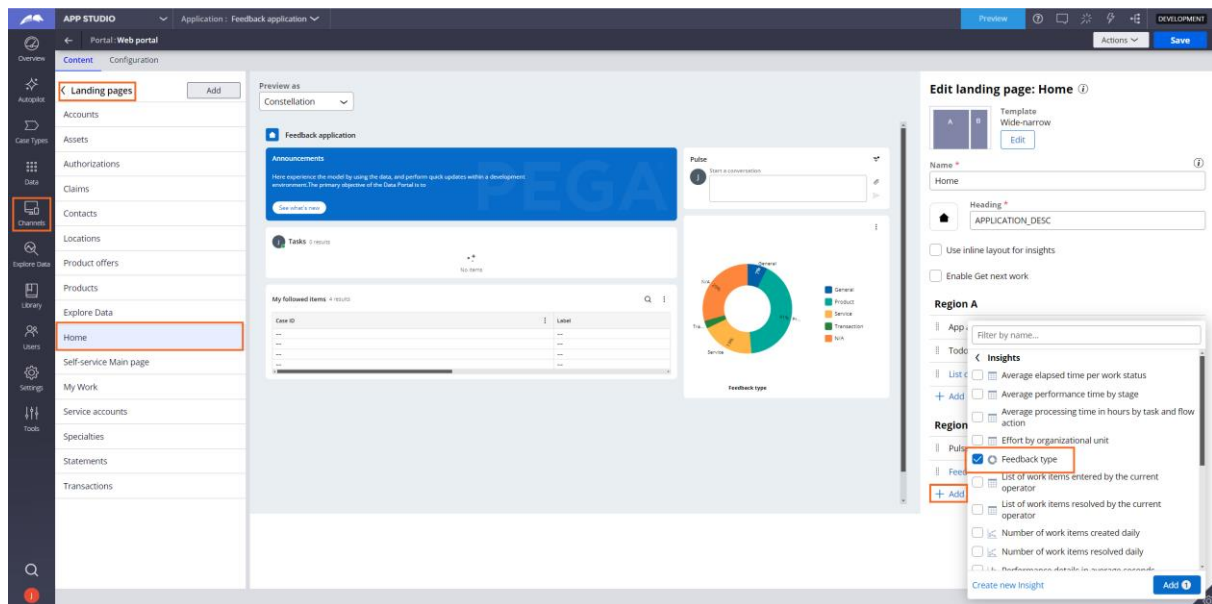
- a. Click **settings** on the vertical navigation menu then click Themes from the pop out menu.
 - i. Click **Add** and name your new theme UPlus.
 - ii. Take a few minutes to customize your theme.



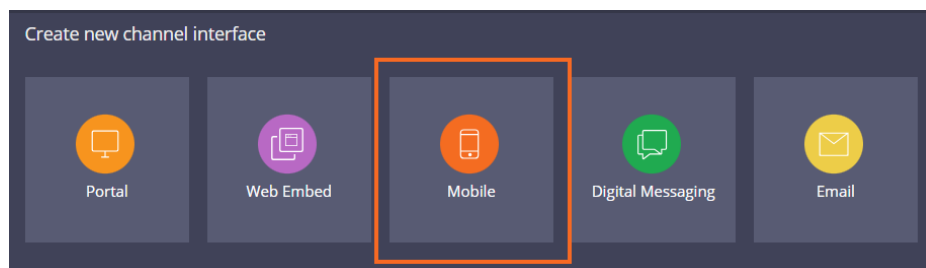
5. Update your end user portal with the new theme and report.

- a. Click **Channels** from the vertical navigation menu.
- b. Click **web portal**.
 - i. Click **landing pages**.
 - ii. Select the **home** landing page.

- iii. *click **+Add, Insights***, then add your insight in region B of the landing page configuration window, on the right side of the screen,



- c. *Click the **configuration tab** at the top of the portal configuration page.*
 - i. *Select your new **UPlus** theme in the theme drop down list at the bottom of the page.*
 - ii. *Click **save**, then click **preview** to view your new dashboard with personalized theme and report.*
6. Return to the channel configuration page to build a mobile application.
 - a. *Click **channels** on the vertical navigation menu.*
 - b. *Click **mobile** under create new channel interface*
 - i. *Name your mobile application **UPlus Feedback**.*
 - ii. *Click **submit**.*



- c. Personalize the launch screen and app icon.
 - i. *Click the **layout tab** in the mobile configuration window.*

- ii. Click **change** on the launch screen and app icon and make your preferred selections.
- d. When ready to build, click the icon for the mobile platform you use on the right side of the screen.
 - i. Select a **certificate set** from the drop-down list, any certificate will work.
 - ii. Click **build app**.
- 7. When the mobile app is fully built, after approximately five minutes, *scan* the QR code to download the application.
 - a. Login to the application using the existing credentials.
 - i. Username: Jordan@uplus.com | password: pega1234

iOS users will need to accept the device management profile located under Settings > general > VPN & Device management to access the application.