

Designing the Solution

■■ The estimated time to complete this lab is 2 hours.

Scenario

In this lab, you will be working to design the automation of a Construction Loan Funding process that is currently manually tracked by Relecloud staff.

High-level lab objectives

Discover the current process

Evaluate automation options

Design the automation of the process

Import and review the starter solution

Exercise 1: Discover Current Process

In this exercise you are going to get to know the current manual process.

Task 1: Review the process scenario

The following companies or people are involved in the process you will be automating.

Company or people	Description
Borrower	Borrows money from bank to build a house.
Builder	Has an agreement to build a house for the Borrower and gets paid as the house is built by Loan Draws from the borrower's loan.
Woodgrove Bank	Loans borrower money to build house, hires Relecloud to manage the construction loan draw funding as the house is built by the builder.
Relecloud	Escrow company that manages the process for the bank. They do all the manual work today and this is who you are automating the process for.
Fabrikam Inspections	An inspection company that goes on site to verify and provide proof of work completed.

A Datum	A risk management company that helps banks reduce losses from bad loans. They provide a risk score used in the process.
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The following describes the current manual process:

- Woodgrove Bank does construction loans to builders to build homes. Woodgrove does not give all the loan money to the builders on initial approval; they only give it as construction progresses. Each month, builders can request loan funds (a draw) for the progress made and funds spent during the last month.
- Woodgrove is too busy to manage the process, so they hired Relecloud to manage it. Each month builders email forms requesting funds to Relecloud. After review, Relecloud requests Fabrikam Inspections via their website to do an onsite inspection to verify the work stated was actually done.
- Once the inspection is completed, Relecloud does a risk check using a website A Datum has that confirms that the builder hasn't become high risk. After these checks, Relecloud uses a Windows form app provided by Woodgrove to request funding. Someone from Relecloud checks the app each day for any completed requests and then they notify of funding completed.

Today Relecloud does each process step manually. You have been asked if you can improve the process by automating some of the steps.

Task 2: Review the draw request form

Go to the lab resources folder and open the **Draw1-MC3747.pdf** file.

Review the form.

This form is completed for each draw by the builder and emailed to Relecloud.

Task 3: Review the loan tracking file

Go to the lab resources folder and open the **LoanTracking-MC3747.png** file.

Review the loan tracking file.

Relecloud staff creates one of these worksheet files for each loan and uses it to track the draws on the loan.

Exercise 2: Evaluate Automation Options

When you automate a process, you want to use the most efficient and reliable means of automation possible. In this exercise you will re-review what you know about the process, to determine what we require an application for and what we could use an API for to build out our automation.

Task 1: Review and make notes of what should use an app and what should be a connector

A discovery process has been completed by the project team. The following is the original scenario with our notes from the discovery added *in italics*.

Woodgrove Bank does construction loans to builders to build homes. Woodgrove does not give all the loan money to the builders on initial approval; they only give it as construction progresses. Each month, builders can request loan funds (a draw) for the progress made and funds spent during the last month.

Woodgrove is too busy to manage the process, so they hired Relecloud to manage it. Each month builders email forms requesting funds to Relecloud. After review, Relecloud requests Fabrikam Inspections via their website to do an onsite inspection to verify the work stated was actually done. *During discovery we learned that Fabrikam has no plans to offer an API.*

Once the inspection is completed, Relecloud does a risk check using a website A Datum has that confirm that the builder hasn't become high risk. *During discovery we learned A Datum has a RESTful API for the risk check.*

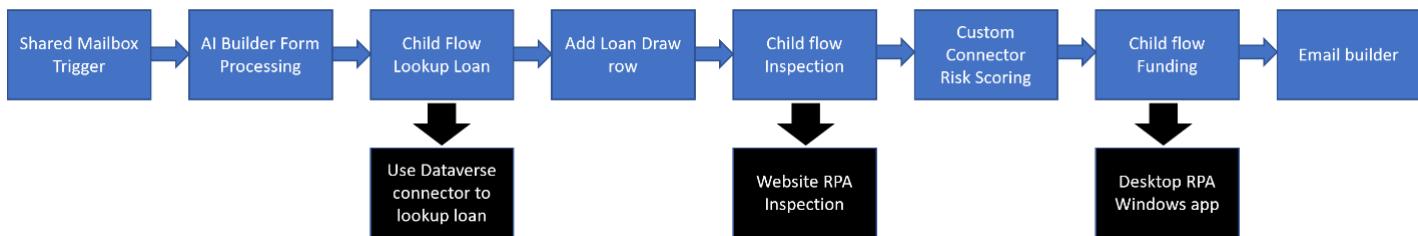
After these checks, Relecloud uses a Windows form app provided by Woodgrove to request funding. Someone from Relecloud checks the app each day for any completed requests and then they notify of funding completed. *During discovery we learned that Woodgrove plans to modernize the app in the future.*

Today Relecloud does each process step manually. You have been asked if you can improve the process by automating some of the process.

Exercise 3: Design the automation

In this exercise, you will review the design the team came up with. In the rest of this course, you will be building out this automation.

Task 1: Review the process diagram



Task 2: Review design notes

A shared mailbox will be used to not be dependent on individual users.

Dataverse tables will be used instead of Excel worksheets to track the process. There will be a Loan, Loan Draw and Inspection Photo tables.

Child flows will be used for Lookup, Inspection and Funding to keep the main cloud flow maintainable.

The process involving the Inspection website will be automated with an unattended desktop flow, which will include a JSON array of work site photos.

The inspection child flow will run the inspection desktop flow and then download and persist the work site photos to the Dataverse table.

A custom connector will be built for A Datum's Risk API.

The Woodgrove Funding Manager Windows app will be automated with a desktop flow.

Exercise 4: Import starting solution

In this exercise, you will import a solution into your Dev environment, review the components in the solution, run a cloud flow that will add test data to your environment, and run the loan manager app included in the solution.

Task 1: Import solution

Navigate to <https://make.powerapps.com> and make sure you are in the **Dev** environment.

Select **Solutions** and select **Import solution**.

The screenshot shows the 'Solutions' page in the Power Apps Dev environment. At the top, there's a navigation bar with options: 'New solution', 'Import solution' (which is highlighted with a red box), 'Open AppSource', 'Publish all customizations', and three dots. Below the navigation bar, the title 'Solutions' is displayed. Underneath it, there are three tabs: 'Solutions' (which is underlined in purple), 'Publishers', and 'History'. The main area shows a table with one row, representing the imported solution.

Name	Date modified	Type	Size
ConstructionFunding_1_0_0_1.zip	6/10/2022 3:10 PM	Compressed (zipp...)	19 KB

Select **Browse**.

Select the **ConstructionFunding** solution file located in the lab resources folder and click **Open**.

The screenshot shows a 'Select File' dialog box. It has a list of files with one item selected: 'ConstructionFunding_1_0_0_1.zip'. Below the list, there are input fields for 'Name' (containing 'ConstructionFunding_1_0_0_1.zip') and 'Type' (set to 'Custom Files (*.zip;*.cab)'). At the bottom right, there are 'Open' and 'Cancel' buttons, with 'Open' being highlighted.

Select **Next**.

Select **Next** again.

Wait for the listed connection to sign in automatically and show a green check.

Select **Import** and wait for the import to complete.

You will get a notification when the import completes.

The screenshot shows the 'Solutions' page again. A green banner at the top displays a checkmark icon and the message 'Solution "Construction Funding" imported successfully.' Below the banner, the 'Solutions' tab is selected, and the imported solution is listed in the table.

Name	Date modified	Type	Size
ConstructionFunding_1_0_0_1.zip	6/10/2022 3:10 PM	Compressed (zipp...)	19 KB

Select **Publish all customizations** and wait for the publishing to complete.

```
![publish customizations from imported solution](media/c6a0dee6b49f3983e899397433d679ad.png)
```

Do not navigate away from this page.

Task 2: Review components

Open the recently imported **Construction Funding** solution.

Solutions

Solutions Publishers History

Display name	Name	Created
Construction Funding	ConstructionFunding	1 minute ago

The solution should have several components including 1 application, 1 cloud flow, 1 connection reference, 1 sitemap, and 3 tables.

Expand **Tables**, expand the **Loan** table and select **Columns**.

Review the columns for this **Loan** table.

The screenshot shows the Microsoft Dynamics 365 Data view interface. On the left, there's a navigation pane with 'Objects' selected. Under 'Tables', 'Loan' is expanded, and 'Columns' is selected. A search bar is at the top. The main area shows the 'Columns' view for the 'Loan' table, with a breadcrumb trail: Construction Funding > Tables > Loan > Columns. The columns are listed in a table:

Display name	Name
Address	rc_Address
Builder	rc_Builder
Created By	CreatedBy
Created By (Delegate)	CreatedOnBehalfBy
Created On	CreatedOn
Credit Available	rc_CreditAvailable
Credit Available (Base)	rc_creditavailable_Base

Expand the **Loan Draw** table and select **Columns**.

Review the columns for this **Loan Draw** table.

Select **Cloud flows** and open the **Create Test Data** cloud flow.

The screenshot shows the 'Objects' page in the Microsoft Dynamics 365 interface. The left sidebar lists categories: All (6), Apps (1), Chatbots (0), Cloud flows (1), and Connection references (1). The 'Cloud flows' category is selected and highlighted in grey. The main area displays a list of 'Cloud flows'. The first item in the list is 'Create Test Data', which is also highlighted with a red box. The list includes columns for 'Display name' (sorted by ascending order) and 'Name'. The 'Create Test Data' entry has a three-dot menu icon to its right.

Select **Edit**.

The screenshot shows the details page for the 'Create Test Data' cloud flow. The top navigation bar includes options: Edit (highlighted with a red box), Save As, Delete, Run, Send a copy, Submit as template, Export, Turn off, and Repair tips off. The page title is 'Dev - labadmin4 > Cloud flows > Create Test Data'. The main content area is titled 'Details' and contains the following information:

Flow	Create Test Data	Status	On
Owner	First Last	Created	Jun 10, 03:18 PM
		Modified	Jun 10, 03:18 PM
Type	Instant	Plan	The user who runs the flow

Expand the **Parse JSON** step and review the data that will be added to your environment.

The screenshot shows a Microsoft Power Automate flow. At the top, there is a blue button labeled "Manually trigger a flow" with a hand icon. Below it is a purple "Parse JSON" step. The "Content" field contains the following JSON array:

```
[  
  {  
    "LoanNumber": "JG7165",  
    "Name": "Jim Glynn",  
    "LoanAmount": 645000,  
    "CreditAvailable": 500000,  
    "Address": "7165 Brock Lane Renton, WA 61795 U.S.",  
    "Builder": "Contoso"  
  },  
  {  
    "LoanNumber": "MC3747",  
    "Name": "Maria Campbell",  
    "LoanAmount": 750000,  
    "CreditAvailable": 750000,  
    "Address": "3747 Likins Avenue Monroe, WA 37925 U.S.",  
    "Builder": "Contoso"  
  },  
  {  
  }
```

Select the back button.

Do not navigate away from this page.

Task 3: Run flow

Select **Cloud flows** and select **Details** to open the **Create Test Data** cloud flow.

The screenshot shows the Dynamics 365 Objects list. On the left, there is a sidebar with categories: All (6), Apps (1), Chatbots (0), Cloud flows (1), and Connection references (1). The "Cloud flows" category is selected and highlighted with a red border. On the right, the main area shows a list of cloud flows under the "Construction Funding > Cloud flows" section. One flow, "Create Test Data", is also highlighted with a red border. The list includes columns for Display name, Name, and more.

Select **Run**.

Dev - labadmin4 > Cloud flows > Create Test Data

Details

Flow Status

Select **Run flow**.

Select **Done**.

Wait for the flow run to complete. You can select the refresh button until you see the success message.

Start	Duration	Status
Jun 10, 03:31 PM (23 sec ago)	00:00:03	Succeeded

Task 4: Run loan manager app

Navigate to <https://make.powerapps.com> and make sure you are in the **Dev** environment.

Select **Apps** and launch the **Loan Manager** application by clicking on the **Play** button when you hover over the app name:

The screenshot shows the Microsoft Power Apps portal. On the left, a sidebar menu includes 'Home', 'Create', 'Learn', 'Apps' (which has a red arrow pointing to it), 'Tables', 'Flows', 'Solutions', 'More', and 'Power Platform'. The main area is titled 'Apps' and contains two cards: 'Start with Copilot' and 'Start with data'. Below these are three tabs: 'My apps' (selected and highlighted in purple), 'Shared with me', and 'All'. A list of apps is shown, with 'Expense Tracker app' and 'Loan Manager' listed. The 'Loan Manager' card is highlighted with a red box and has a red arrow pointing to its edit icon. A red number '1' is on the 'Apps' sidebar, and a red number '2' is on the 'Loan Manager' card.

You should see the data added by the cloud flow. Open one of the loan records.

The screenshot shows the 'Active Loans' view in Power BI desktop. The left sidebar has 'Recent', 'Pinned', 'Manage Loans', and 'Loans' selected. The main area displays a table with columns: Loan Number, Name, Address, Builder, Loan Amount, Credit Available, Loan Date, and Modified. A specific row for 'JG7165' is highlighted with a red box. The table has standard Power BI controls at the top.

Loan Number	Name	Address	Builder	Loan Amount	Credit Available	Loan Date	Modified
JG7165	Jim Glynn	7165 Brock Lane Renton, WA 61795 U.S.	Contoso	\$645,000.00	\$500,000.00	2/20/202...	First Last
MC3747	Maria Campbell	3747 Likins Avenue Monroe, WA 37925...	Contoso	\$750,000.00	\$750,000.00	2/18/202...	First Last
NA5086	Nancy Anderson	5086 Nottingham Place Duvall, WA 169...	Contoso	\$1,258,000.00	\$1,258,000.00	5/29/202...	First Last
PS7765	Patrick Sands	7765 Sunshine Drive Seattle, WA 11910 ...	Contoso	\$1,487,500.00	\$1,487,500.00	3/21/202...	First Last

Review the loan.

Home Recent Pinned Manage Loans Loans

Jim Glynn - Saved
Loan

Active Status Reason

General Related

Loan Number	JG7165
Name	* Jim Glynn
Builder	Contoso
Address	7165 Brock Lane Renton, WA 61795 U.S.
Loan Amount	\$645,000.00
Credit Available	\$500,000.00
Loan Date	2/19/2023
Modified By	MOD Administrator
Modified On	6/26/2023
Owner	* MOD Administrator
Draws	+ New Loan Draw