

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.

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

1. Go to the lab resources folder and open the **Draw1-MC3747.pdf** file.
2. Review the form.
3. This form is completed for each draw by the builder and emailed to Relecloud.

Task 3: Review the loan tracking file

1. Go to the lab resources folder and open the **LoanTracking-MC3747.png** file.
2. Review the loan tracking file.
3. 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 steps.

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.

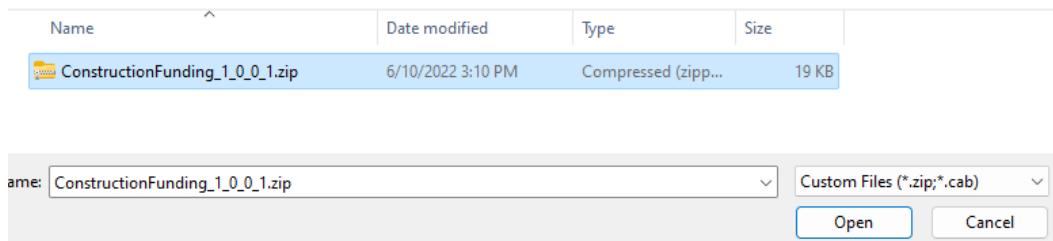
Task 1: Import solution

1. Navigate to <https://make.powerapps.com> and make sure you are in the **Dev** environment.
2. Select **Solutions** and select **Import solution**.

The screenshot shows the 'Solutions' page in the Power Apps maker environment. At the top, there are several navigation options: '+ New solution', 'Import solution' (which is highlighted with a red box), 'Open AppSource', 'Publish all customizations', and '...'. Below this, there is a section titled 'Solutions' with tabs for 'Solutions' (which is underlined in purple), 'Publishers', and 'History'. The 'Solutions' tab is currently active, showing a list of available solutions.

3. Select **Browse**.

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



5. Select **Next**.

6. Select **Next** again.

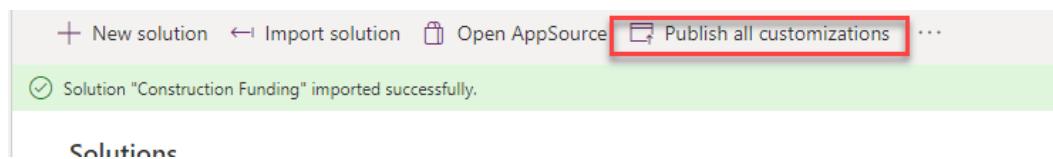
7. Wait for the listed connection to sign in automatically and show a green check.

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

9. You will get a notification when the import completes.



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



11. Do not navigate away from this page.

Task 2: Review components

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

A screenshot of the Dynamics 365 Solutions list. The 'Solutions' tab is selected. The list table has columns: Display name, Name, and Created. The first row shows a solution named 'Construction Funding'. The 'Display name' column for this row is also highlighted with a red rectangle.

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

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

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

The screenshot shows the 'Objects' sidebar on the left with 'Tables (2)' expanded, showing 'Loan'. Under 'Loan', 'Columns' is selected. The main area displays the 'Columns' view for the 'Loan' table, with columns for Address, Builder, Created By, Created By (Delegate), Created On, Credit Available, and Credit Available (Base). The 'Address' column is highlighted.

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

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

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

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

The screenshot shows the 'Objects' sidebar on the left with 'Cloud flows (1)' selected. The main area displays the 'Cloud flows' view, showing a single item named 'Create Test Data' which is highlighted with a red box.

Display name ↑	Name ↓
Create Test Data	Create Test Data

8. Select **Edit**.

[Edit](#) [Save As](#) [Delete](#) [Run](#) [Send a copy](#) [Submit as template](#) [Export](#) [Turn off](#) [Repair tips off](#)

Dev - labadmin4 > Cloud flows > **Create Test Data**

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

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

The screenshot shows the Microsoft Flow designer interface. At the top, there is a header bar with a blue 'Edit' button and several other options like 'Save As', 'Delete', 'Run', etc. Below the header, the title 'Create Test Data' is visible. The main area contains a 'Parse JSON' step. The step has a purple header with the name 'Parse JSON'. On the left, there is a section labeled '*Content' containing the following JSON sample:

```
[  
  {  
    "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"  
  }]
```

10. Select the back button.

11. Do not navigate away from this page.

Task 3: Run flow

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

The screenshot shows the 'Cloud flows' section of the Power Apps portal. On the left, there's a sidebar with a search bar and categories: All (6), Apps (1), Chatbots (0), Cloud flows (1), and Connection references (1). The 'Cloud flows' category is selected. The main area lists flows with columns for Display name and Name. The 'Create Test Data' flow is highlighted with a red box.

2. Select **Run**.

The screenshot shows the details page for the 'Create Test Data' flow. At the top, there are several action buttons: Edit, Save As, Delete, Run (which is highlighted with a red box), Send a copy, Submit as template, Export, Turn off, and Repair tips off. Below the buttons, it says 'Dev - labadmin4 > Cloud flows > Create Test Data'. Underneath, there are tabs for Details, Flow, and Status.

3. Select **Run flow**.

4. Select **Done**.

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

The screenshot shows the '28-day run history' page. It has a header with a refresh button (highlighted with a red box) and a link to 'All runs'. Below is a table with columns: Start, Duration, and Status. There is one entry: 'Jun 10, 03:31 PM (23 sec ago)', '00:00:03', and 'Succeeded' (which is highlighted with a green box).

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

Task 4: Run loan manager app

1. Navigate to <https://make.powerapps.com> and make sure you are in the **Dev** environment.
2. 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 interface. On the left, there's a sidebar with various navigation options: Home, Create, Learn, Apps (which is selected and highlighted with a purple bar), Tables, Flows, Solutions, More, and Power Platform. Below these are sections for Recent, Pinned, and Manage Loans. The main content area is titled 'Apps' and contains two cards: 'Start with Copilot' and 'Start with data'. Below these cards is a list of apps under the heading 'My apps'. The 'Expense Tracker app' is listed first, followed by the 'Loan Manager' app, which is highlighted with a red box. To the right of the 'Loan Manager' entry are icons for edit, delete, and more options, with a red arrow labeled '2' pointing to the edit icon.

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

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	2/19/202...	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

4. Review the loan.

≡

Home Recent Pinned Manage Loans Loans

← Save Save & Close + New Deactivate Delete Refresh Share

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 6:17 PM
Modified By	MOD Administrator
Modified On	6/26/2023 6:17 PM
Owner	* MOD Administrator
Draws	New Loan Draw