

July 2022

# Reference Data Management: Reference 360 Cloud-Native MDM

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Informatica®

# Agenda

Reference Data Management

Reference 360 Terminology

Reference Architecture

Reference Data Modeling

Data Quality Rules

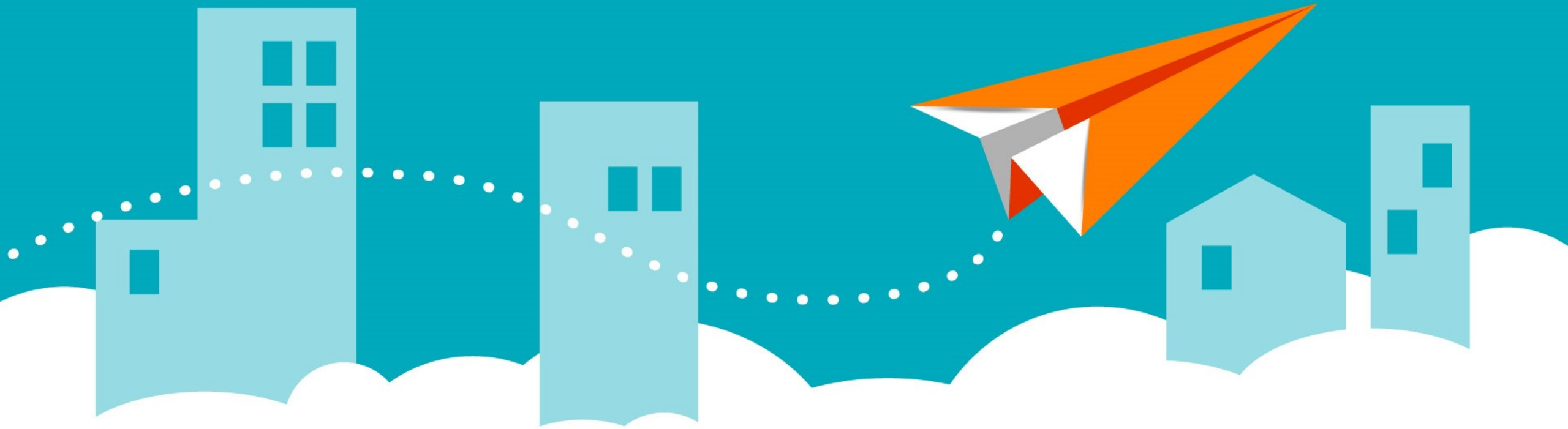
Approval Workflows / Security

Application Integration: REST API

Best Practices



# Reference Data Management



# Types of Enterprise Data

Analysis, Reporting  
& Visualization

Actions & Events,  
Operations



Standards, Lookups,  
Classifications,  
Categorization,  
Cross-References

People, Places  
& Things

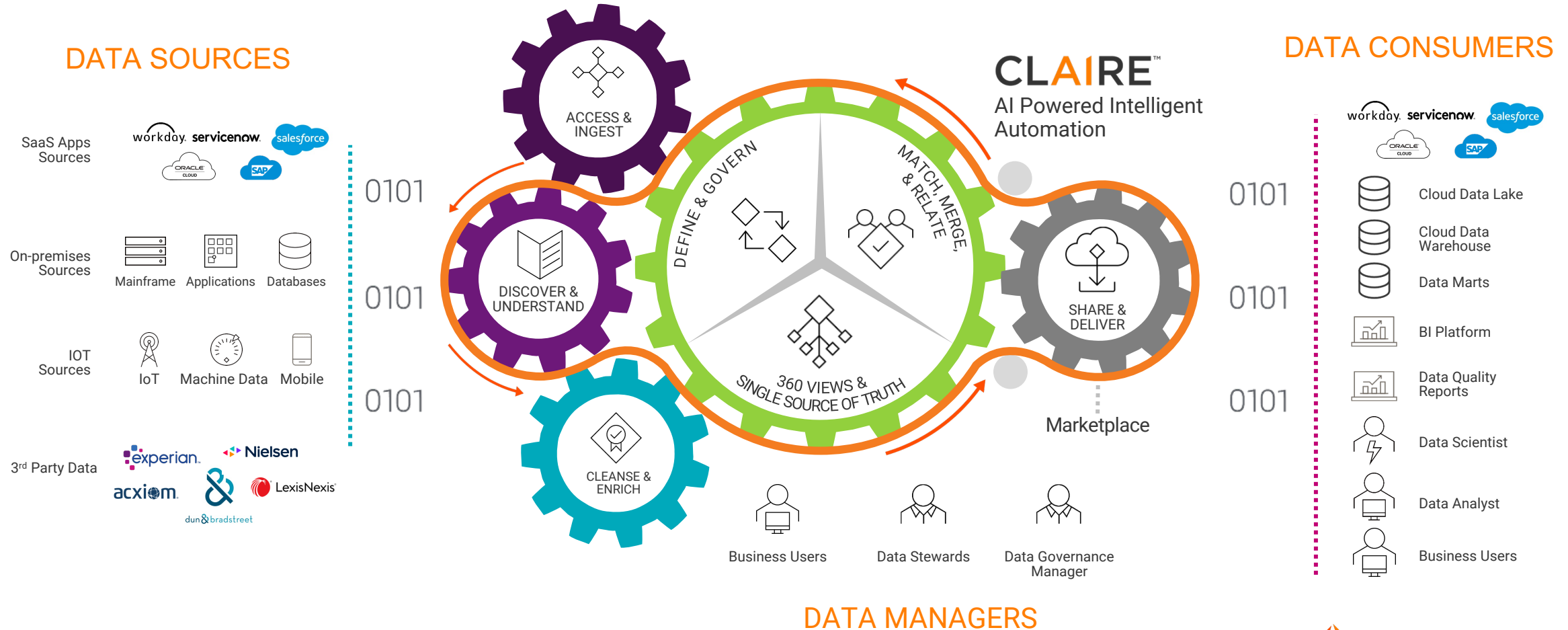
Structure, Security,  
Sizing, Dictionaries

Documents, Videos, Images,  
Contracts, Invoices, SOP,  
Supplier Qualifications

# Establish a Data Management Platform

A holistic data management platform makes trustworthy and actionable data easily available to support operational and analytical activities.

## MASTER DATA MANAGEMENT CLOUD



# Reference Data vs. Master Data

- Examples of **Reference** Data:

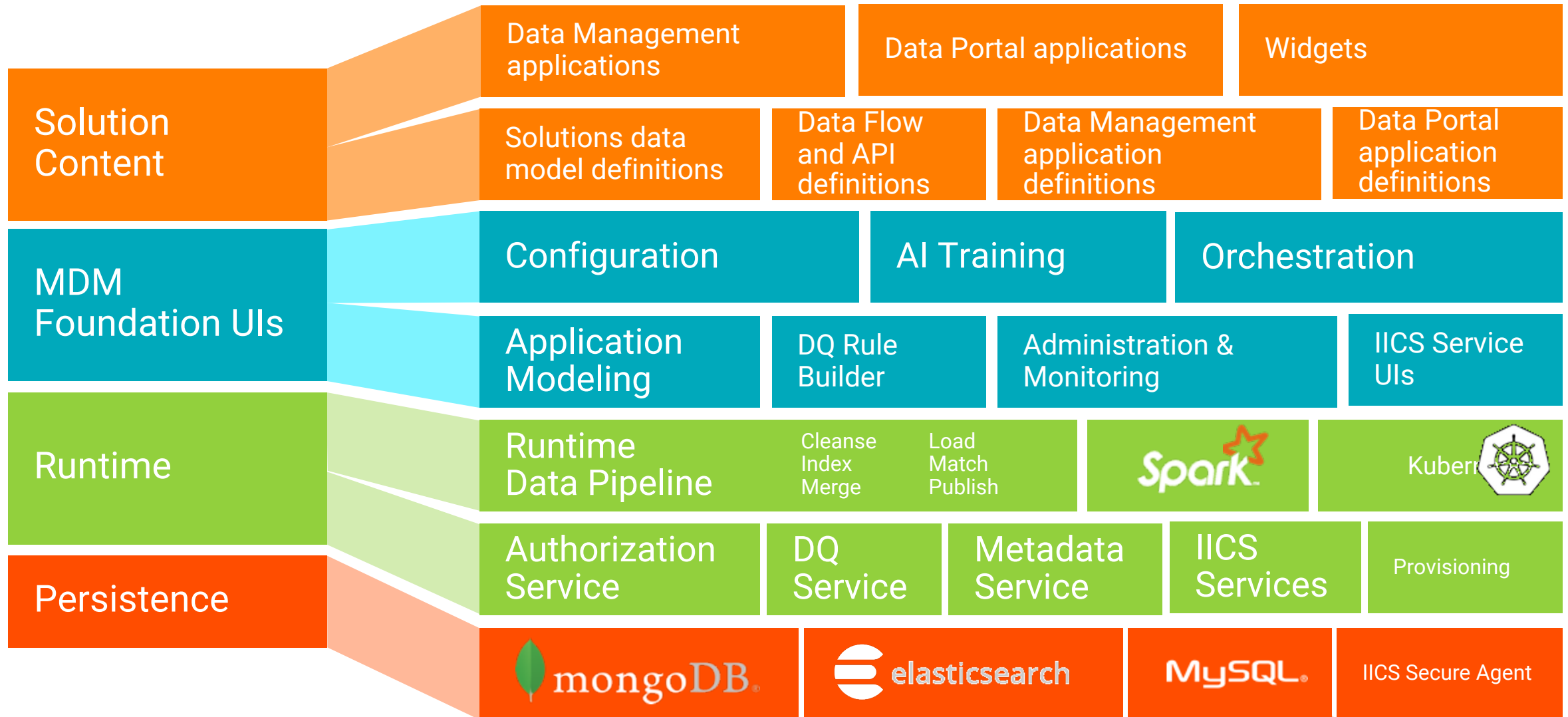
- Countries, States, Geographical Regions, Regulatory Jurisdictions
- Company Brands, Sub-brands, Types, Form Factors, UOM
- Material Classifications, Product Lines, Product Groups
- Marketing Segment, Industry Sectors, Distribution Channels

- Examples of **Master** Data:

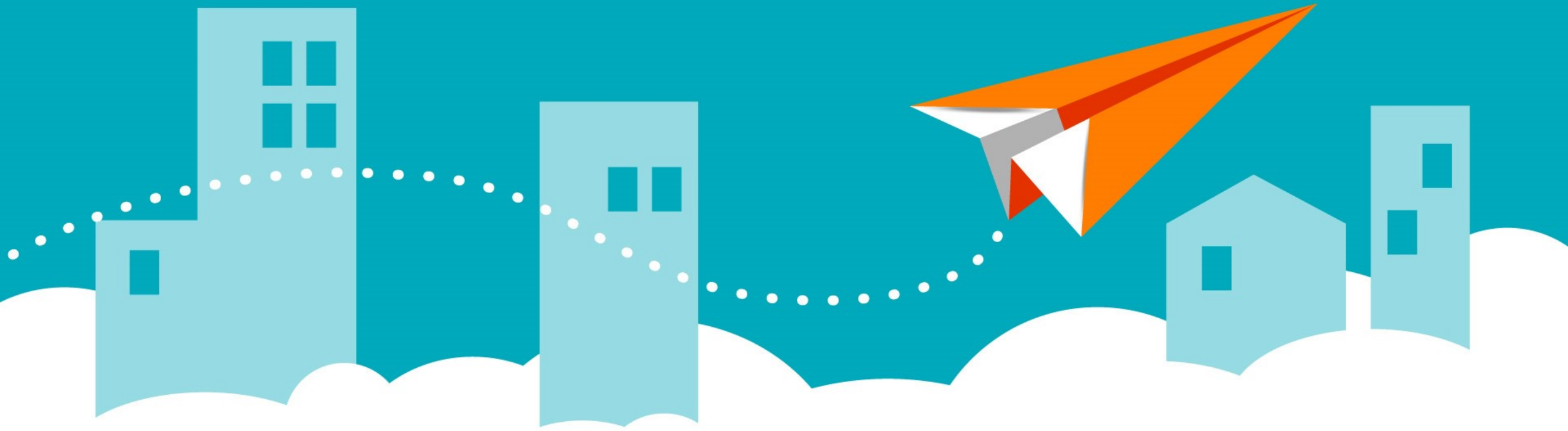
- Customers, Suppliers
- Products
- Employees and Contractors
- Assets, Equipment
- Offices, Facilities, Warehouse Locations

# The Most Modern Microservices Architecture

Delivers unmatched flexibility and scalability



# Reference 360 Terminology





# Reference 360 Terminology



- **Reference Data Sets** - contain a category of reference data, such as country codes or currency codes. May be hierarchical or flat structure. May be dependent on other reference data sets.



- **Code Lists** - a set of code values for a particular application, within a reference data set

- **Code Values** - a unique value, such as a business term, code, or lookup value, within a code list

- **Attributes** – component of a code value, such as a Code, Name, Description



- **Crosswalks** - a one-way relationship between code values in a pair of code lists; provides a way to translate between the code lists, such as different ERP systems or from legacy codes

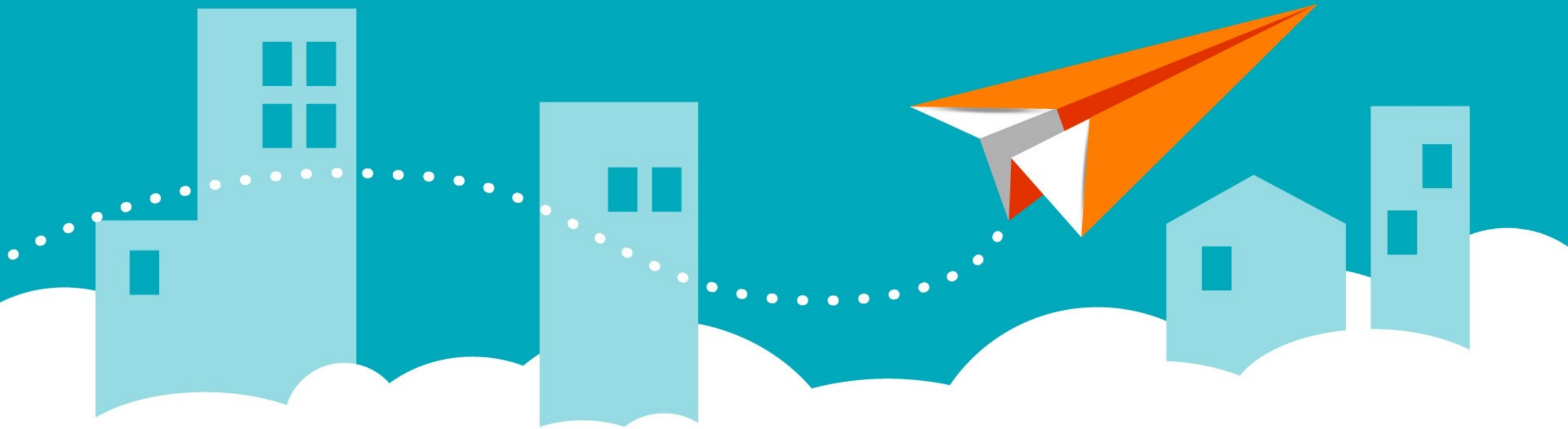


- **Hierarchies** - show how code values are related to other code values in a hierarchy or higher-level categorization, such as World, Region, Country, Sales Area, State

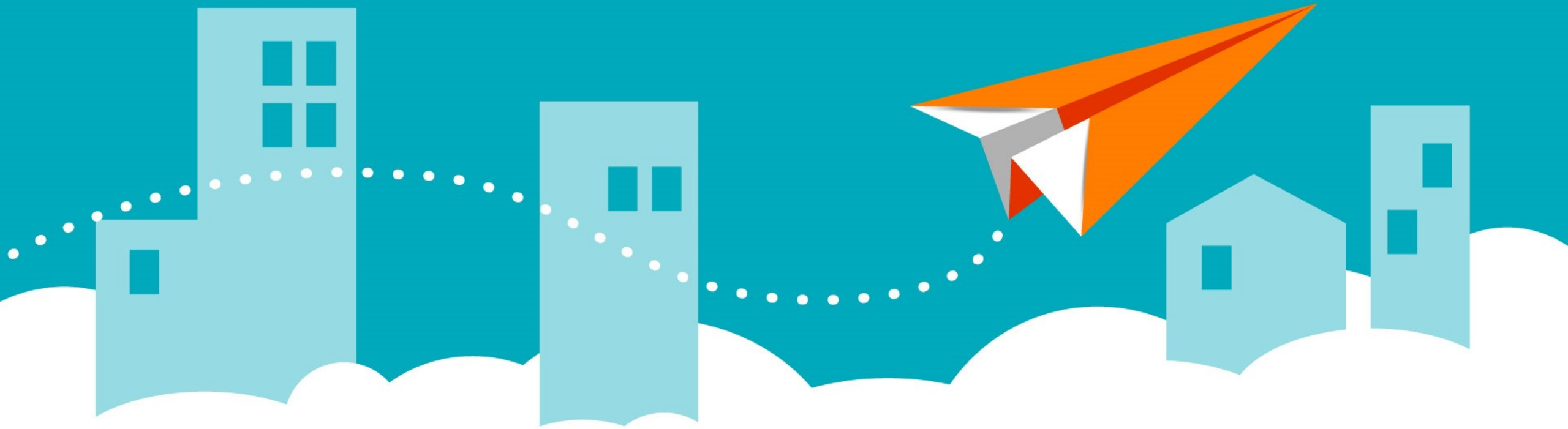
- **Workflows** – create a draft to propose changes to a code list, submit your proposed changes for approval. This creates a task and initiates an approval workflow

- **Enums** – customizable static values within R360, such as Status, Confidentiality, Applications

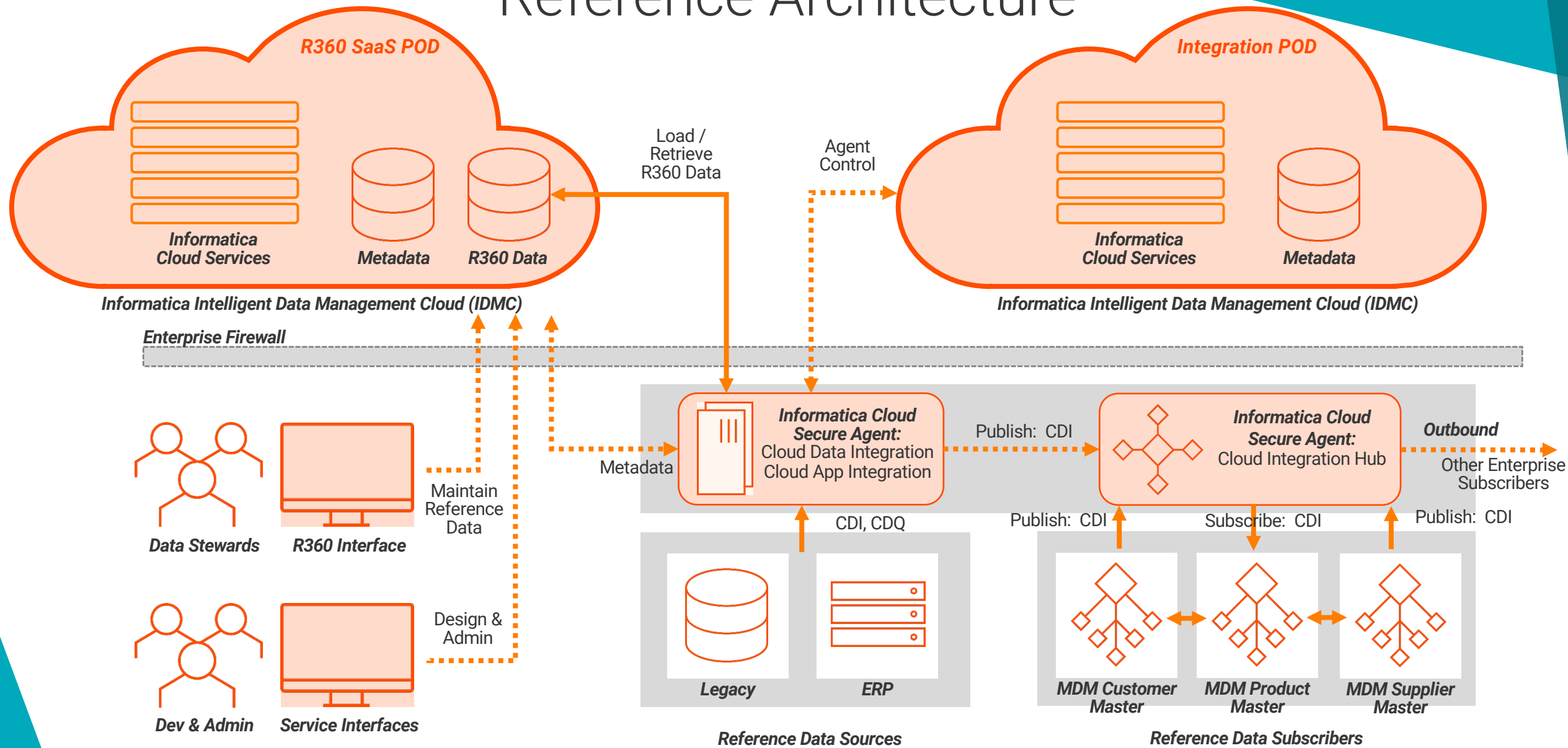
# Reference 360 Demo



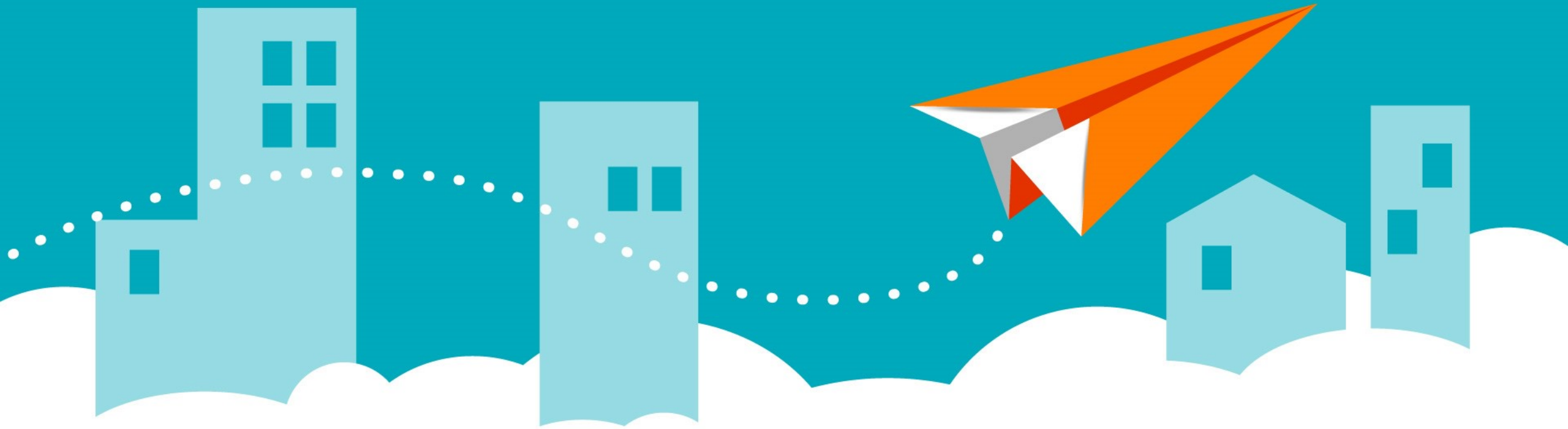
# Reference Architecture



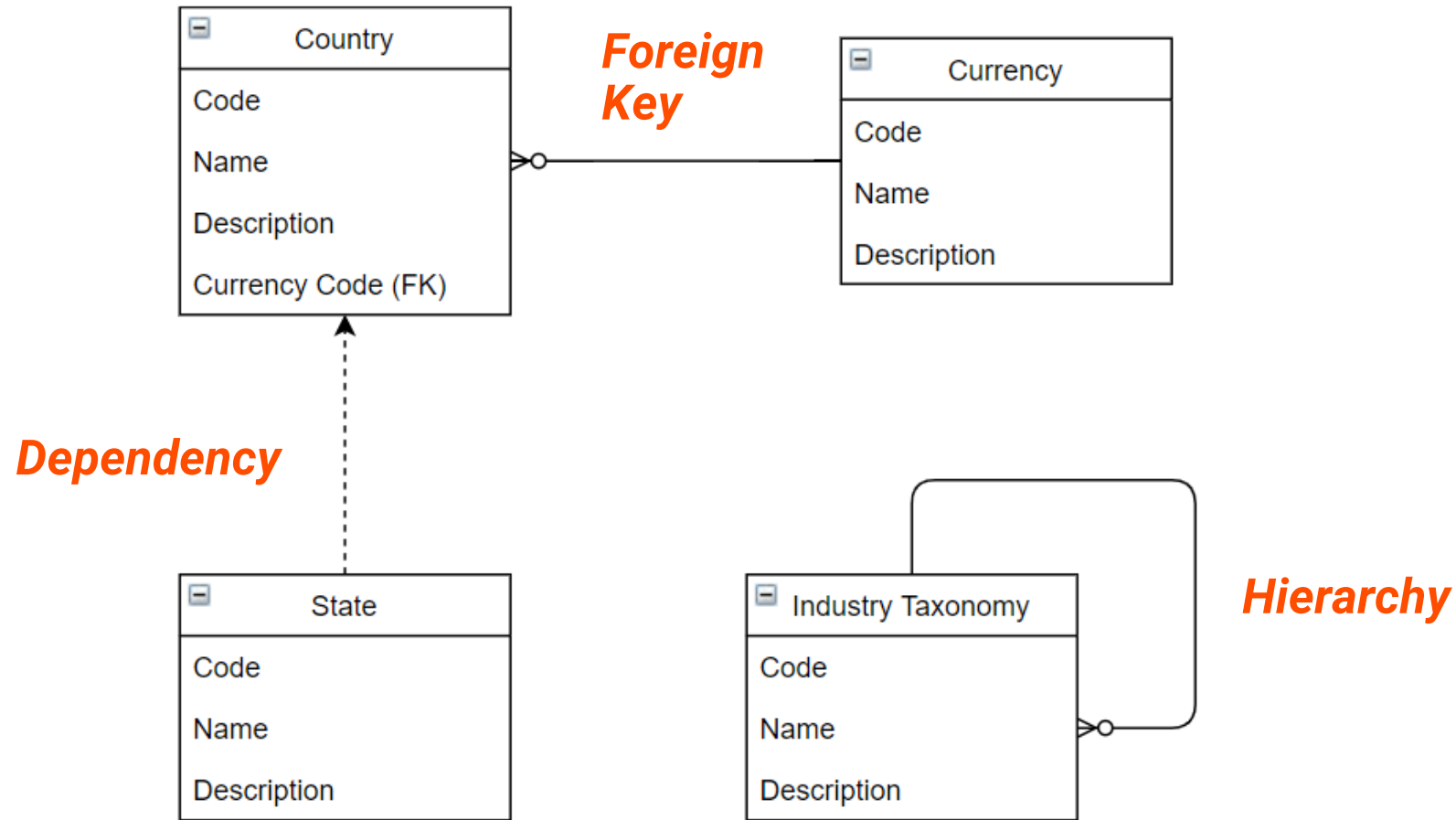
# Reference Architecture



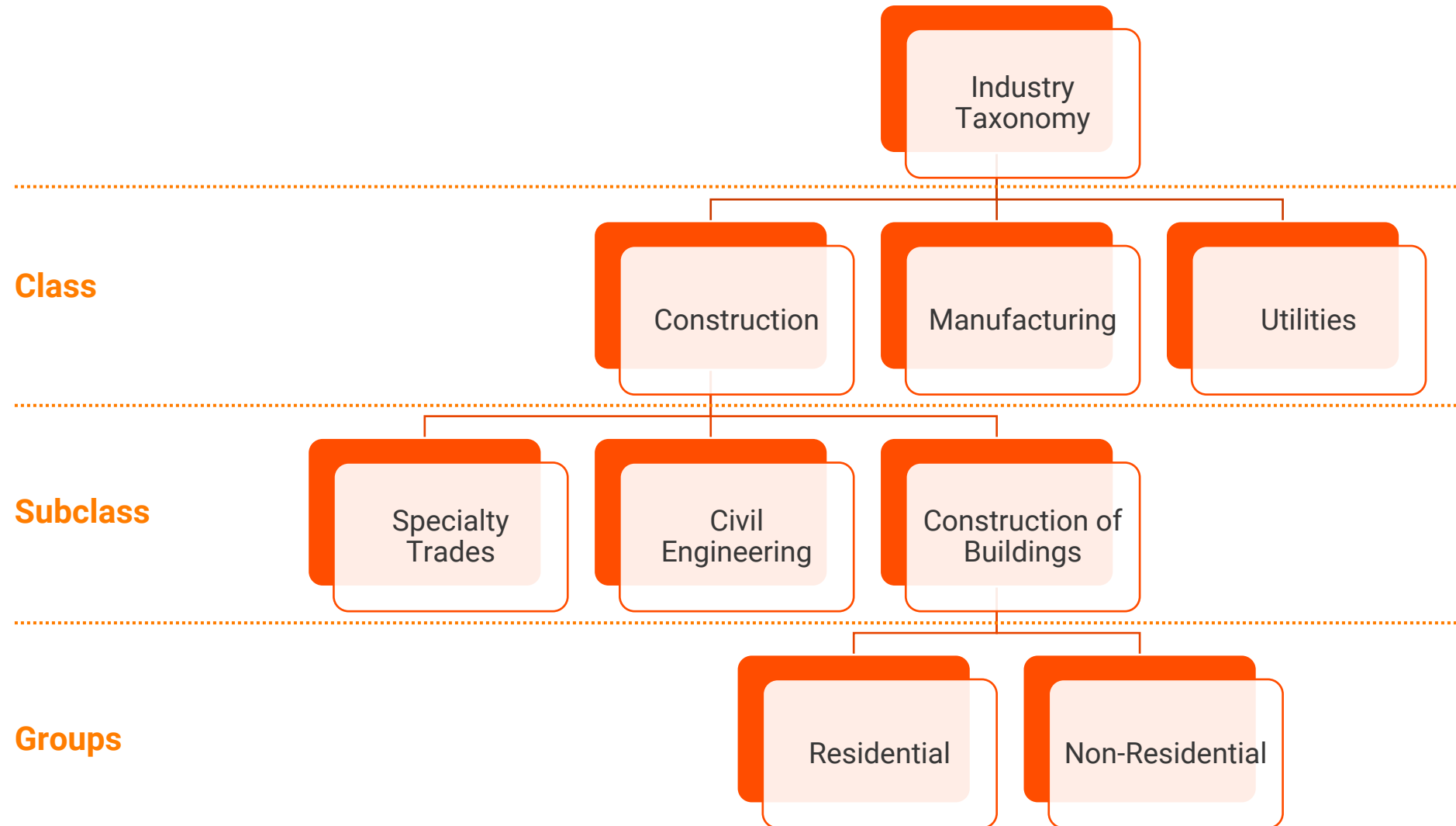
# Reference Data Modeling



# Reference Data Modeling



# Example: Hierarchies



# Example: Hierarchies


Explore

The screenshot displays the Informatica Explore interface. On the left is a navigation pane with a search bar labeled 'Find' and a list of categories. The 'Enterprise Industry Taxonomy' category is selected and highlighted in blue. The main panel on the right shows the 'Enterprise Industry Taxonomy' details. It includes tabs for 'Values', 'Crosswalk', 'Summary', 'Definition', 'Stakeholders', 'Workflow', and 'History'. The 'Values' tab is active, showing a table of taxonomy items. Above the table is a sub-header 'Enterprise Industry Taxonomy (112)' with a search bar and icons for filtering, settings, and sharing. The table has three columns: 'Name', 'Code', and 'Description'. The data is organized into a hierarchy, with some items expanded to show sub-items.

Name	Code	Description
▼		
▶ Accommodation and Food Services	72	Accommodation and Food Services
▶ Agriculture, Forestry, Fishing and Hunting	11	Agriculture, Forestry, Fishing and Hunting
▶ Arts, Entertainment, and Recreation	71	Arts, Entertainment, and Recreation
▼ Construction	23	Construction
▼ Construction of Buildings	236	Construction of Buildings
Nonresidential Building Construction	2362	Nonresidential Building Construction
Residential Building Construction	2361	Residential Building Construction
▶ Heavy and Civil Engineering Construction	237	Heavy and Civil Engineering Construction
▶ Specialty Trade Contractors	238	Specialty Trade Contractors
▼ Manufacturing	31-33	Manufacturing
Apparel Manufacturing	315	Apparel Manufacturing
Beverage and Tobacco Product Manufacturing	312	Beverage and Tobacco Product Manufacturing
Chemical Manufacturing	325	Chemical Manufacturing



# History of Code Lists (★New Interface!)

 ISO Country Codes

Create DraftDeleteSave

ValuesCrosswalkSummaryDefinitionStakeholdersWorkflowHistory

Code List Definition HistoryCode Values History

History Feed (1)

View: DailyApr 11, 2022 - May 11, 2022

FiltersClear All

Change Type (0)  
Clear Event Type Filters

☐ Add☐ Edit☐ Delete

Field Attribute (0)  
Clear Attribute Filters

☐ name☐ description☐ additionalDescription☐ version☐ hierarchical

Add Field Attribute

May 11, 2022

+

Added in name, hierarchical, levels and 2 more

May 11, 2022 at 7:33 PM

Added by integration-test-mrel-user-103

You have reached the end of the history feed for the applied filters.

+

Added in name, hierarchical, levels and 2 more

May 11, 2022 at 7:33 PM

Added by integration-test-mrel-user-103

Show modified fields only

name	ISO Country Codes
hierarchical	No
levels	1

displayColumns (2)

_id	627bc22ea9438479b358bdd0
_value	Name

# Stop Load Jobs, Download Log Files (★New!)

My Jobs

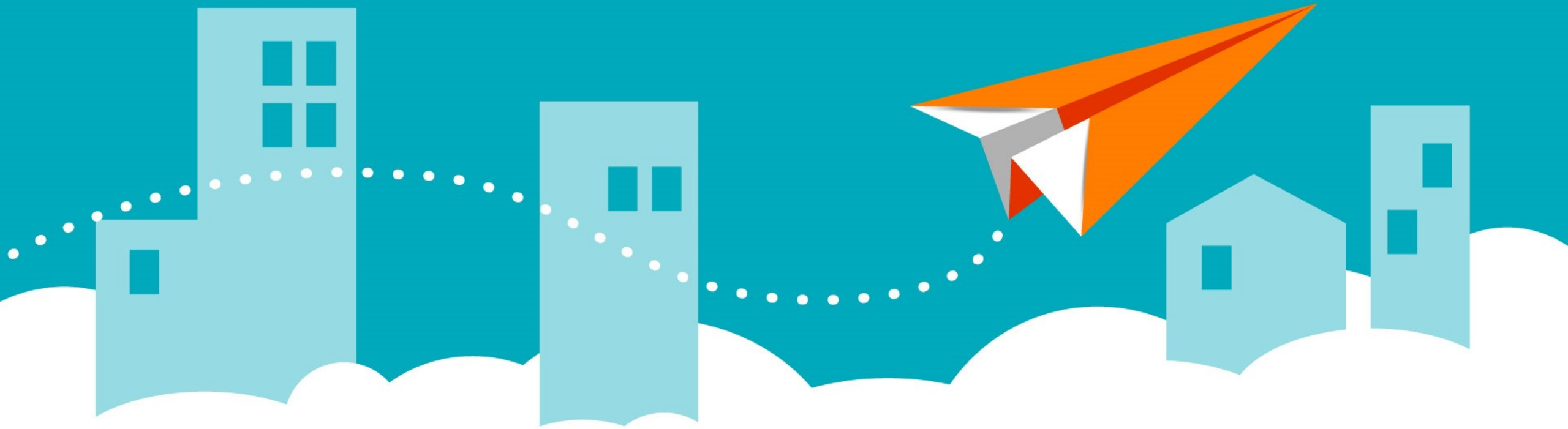
Job Instances Job Schedules

Jobs (33) Updated at Jun 14, 2022, 8:54:17 PM ↺ ↻ ⌵

Asset Name	Job Type	Start Time	End Time	Duration	Status	
Enterpris...	File Import	2022/06/14 08:49:32 pm	2022/06/14 08:50:56 pm	0:01:25	Stopped	⬇
hiercl	File Import	2022/05/17 11:37:49 am	2022/05/17 11:38:12 am	0:00:23	Success	
hiercl	File Import	2022/05/17 11:34:53 am	2022/05/17 11:35:13 am	0:00:20	Error	⬇
CI3	File Import	2022/04/27 10:35:52 am	2022/04/27 10:42:24 am	0:06:33	Error	⬇
CI3	File Import	2022/04/27 10:26:18 am	2022/04/27 10:32:07 am	0:05:48	Error	⬇
test4	File Import	2022/04/27 10:22:45 am	2022/04/27 10:28:30 am	0:05:45	Error	⬇

1 - 25 of 33 Items < Page 1 of 2 > Items Per Page: 25 ▾

# Data Quality Rules



# Reference 360 Data Quality Rules

Attributes Definition > New Basic Rule Association

---

General

Enable rule association: ☒

Applied Field: Description

Name: \*

Description:

---

Condition Validation

Configure a condition to transform or validate the field values.

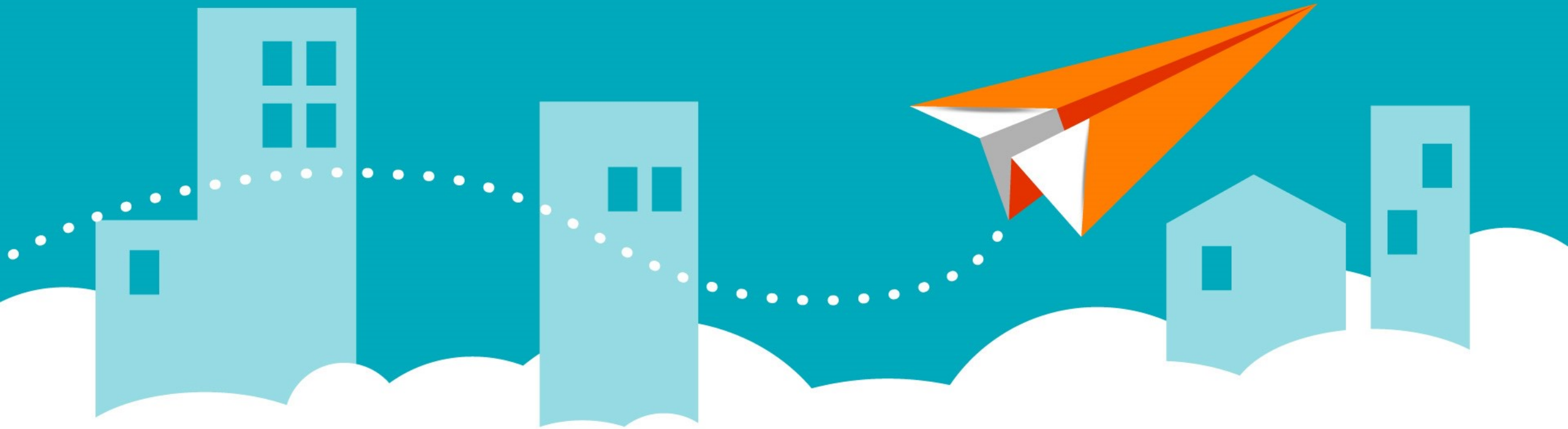
Function: \*

Select a Function

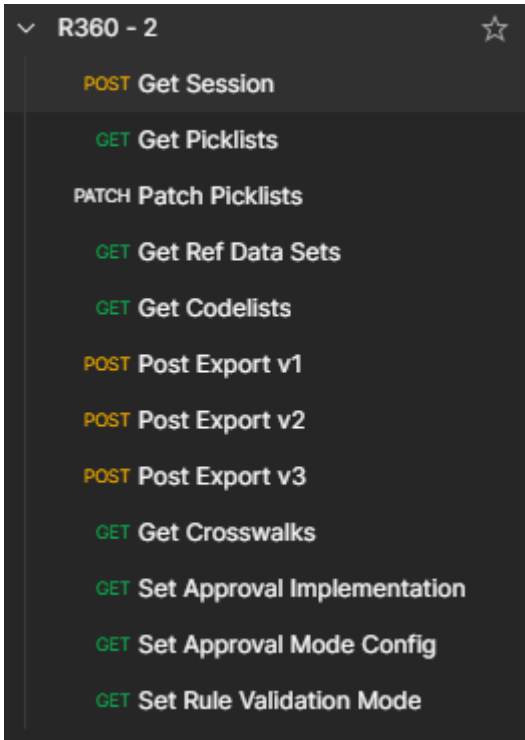
- Maximum Length
- Minimum Length
- Starts With
- Ends With
- No Spaces
- Contains
- Does Not Contain
- Allowed Characters
- Not Allowed Characters

- Basic Rules for data entry are quite simple, and are not applied when Importing data.
- For this reason, it is suggested to use Informatica CDQ (Cloud Data Quality) to design more complex rules.
- The CDQ (Cloud Data Quality) rules can then be used for both:
  - CDI (Cloud Data Integration)
  - Data validation in R360, using an Advanced Rule (★New!)

# Data Integration



# R360 Integration: API Example



- Reference 360 uses a REST API
  - Similar to the IICS Platform REST API
  - Platform Independent
- An example flow might be:
  - Get Session (token)
  - Get Picklists
  - Patch Picklists

# R360 Integration: API Example

The screenshot shows a REST client interface with the following details:

- URL:** `https://dm-us.informaticacloud.com/identity-service/api/v1/Login`
- Method:** POST
- Body Type:** JSON
- Request Body:**

```
1 {  
2   "username": "mboardman@informatica.mdm",  
3   "password": "xxxxxxxx"  
4 }
```
- Response Body (JSON):**

```
1 {  
2   "sessionId": "bv5ie5zYqAJldvXM7Z4PMU",  
3   "sessionExpireTime": "2022-06-30T20:34:05.322Z",  
4   "id": "lmq0ouumLy7jyr9KIftVKq",  
5   "name": "mboardman@informatica.mdm",  
6   "currentOrgId": "g6veXZmjmI5fw3IfMYHt0k",  
7   "currentOrgName": "IPS_Global",  
8   "parentOrgId": "52ZSTB0IDK6dXxaEQLUaQu",  
9   "orgId": "g6veXZmjmI5fw3IfMYHt0k",  
10  "orgName": "IPS_Global",  
11  "..."  
12 }
```

## ■ Get Session Token

- Login with a Native account (not SAML) and password
- “sessionId” token is returned in JSON response

# R360 Integration: API Example

R360 - 2 / Get Ref Data Sets

GET <https://use4-mdm.dm-us.informaticacloud.com/rdm-service/external/v1/rds...>

Params Authorization Headers (8) Body Pre-request Script Tests Settings

✓ Host <calculated when request is sent>

✓ User-Agent PostmanRuntime/7.29.0

✓ Accept \*/\*

✓ Accept-Encoding gzip, deflate, br

✓ Connection keep-alive

✓ IDS-SESSION-ID ajwPHA7ZUoWdaX8Y1RgaGf

Key Value

Body Cookies Headers (21) Test Results

Pretty Raw Preview Visualize JSON

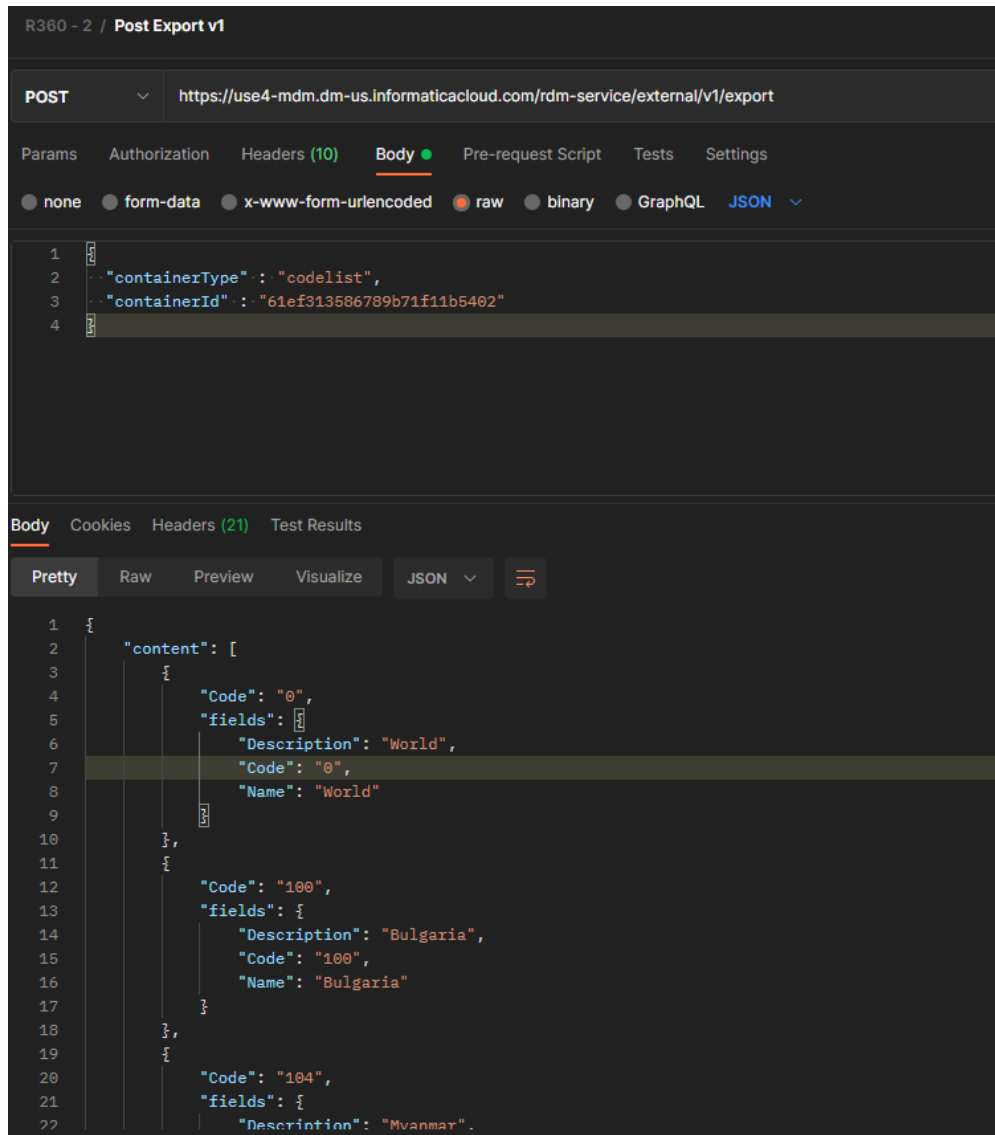
```
59 {
60   "domain": "0",
61   "confidentiality": "1",
62   "priority": "0",
63   "status": "1"
64 },
65 {
66   "name": "Countries",
67   "id": "61ef3134a5a18b6c2220145d",
68   "hierarchical": false,
69   "levels": 1,
70   "defaultList": "61ef313586789b71f11b5402",
71   "domain": "4",
72   "confidentiality": "0",
73   "priority": "0",
74   "status": "1"
75 },
76 {
77   "name": "Currencies",
78   "id": "61ef309ca5a18b6c2220144c",
79   "hierarchical": false,
```

## ■ Get Reference Data Sets

- Session token is entered as a new header: "IDS-SESSION-ID"
- JSON response contains the list of all reference data sets, each with an "id" and default code list



# R360 Integration: API Example



The screenshot shows a Postman interface for an API request. The top bar indicates the request is a POST to `https://use4-mdm.dm-us.informaticacloud.com/rdm-service/external/v1/export`. The 'Body' tab is selected, showing a JSON payload with `containerType` set to `codelist` and `containerId` set to `61ef313586789b71f11b5402`. The bottom section shows the 'JSON' response, which is a list of objects under the `content` key. Each object contains `Code`, `fields` (with `Description`, `Code`, and `Name`), and `Name`.

```
1 {
2   "content": [
3     {
4       "Code": "0",
5       "fields": {
6         "Description": "World",
7         "Code": "0",
8         "Name": "World"
9       }
10    },
11    {
12      "Code": "100",
13      "fields": {
14        "Description": "Bulgaria",
15        "Code": "100",
16        "Name": "Bulgaria"
17      }
18    },
19    {
20      "Code": "104",
21      "fields": {
22        "Description": "Mvanmar".
```







## ■ Export v1

- Session token is entered as a new header: "IDS-SESSION-ID"
- Body contains the container type ("codelist") and the id of the container you want to export
- JSON response contains the list of all values in the code list

# R360 Integration: CDI Example

## Swagger Files





















Generate a Swagger definition file for a REST-based service.

Actions	Name▲	Swagger JSON File
 	<a href="#">Reference 360 Export</a>	ExportJSON.json
 	<a href="#">Reference 360 GetRefDataSets</a>	GetReferenceDataSets.json
 	<a href="#">Reference 360 Login</a>	GetSession.json

# R360 Integration: CDI Example

## Connections

Configure connections to work with applications, databases, and files.

Actions	Name▲	Type	Runtime Environment	Service URL
    	<a href="#">cnct_Files_Temp</a>	Flat File	Informatica Virtual DNU	/data/temp
    	<a href="#">cnct_R360_ExportJSON</a>	REST V2 (Informatica Cloud)	Informatica Virtual DNU	
    	<a href="#">cnct_REST_GetReferenceDataSets</a>	REST V2 (Informatica Cloud)	Informatica Virtual DNU	
    	<a href="#">cnct_REST_GetSession</a>	REST V2 (Informatica Cloud)	Informatica Virtual DNU	

# R360 Integration: CDI Example

m\_R360\_GetSession | Valid

Save Run

Design

Source Target Aggregator

Source exp\_SetSessionKey Target

Parameters

Input Parameters

No Input Parameters.

In-Out Parameters

param\_SessionKey string

Properties Preview Source

General

Source

Field Mapping

Fields

Details

Connection: cnct\_REST\_GetSession (REST V2) View... New Connection... New Parameter...

Operation: GetSession Select... Preview Data...

Request Options

Request Message: Configure...

Advanced

# R360 Integration: CDI Example

m\_R360\_GetReferenceDataSetsValid

SaveRun

Design

SourceTargetAggregatorCleanse

Source

filter\_ListName

exp\_SetListID

Target

Parameters

Input Parameters

param\_ListNamestringparam\_SessionKeystring

In-Out Parameters

param\_ListIDstring

Properties

PreviewSource

General

Source

Field Mapping

Fields

Details

Connection:cnct\_REST\_GetReferenceDataSets (REST ...View...New Connection...New Parameter...

Operation:GetReferenceDataSetsSelect...Preview Data...

Request Options

Request Message:Configure...

Advanced



# R360 Integration: CDI Example

m\_R360\_ExportJSON | Valid

Save Run

Design

Source Target Aggregator

Source Target

Parameters

Input Parameters

- param\_SessionKey string
- param\_ListID string

In-Out Parameters

No In-Out Parameters.

Properties Preview Source

General

Source

Field Mapping

Fields

Details

Connection: cncf\_R360\_ExportJSON (REST V2) View... New Connection... New Parameter...

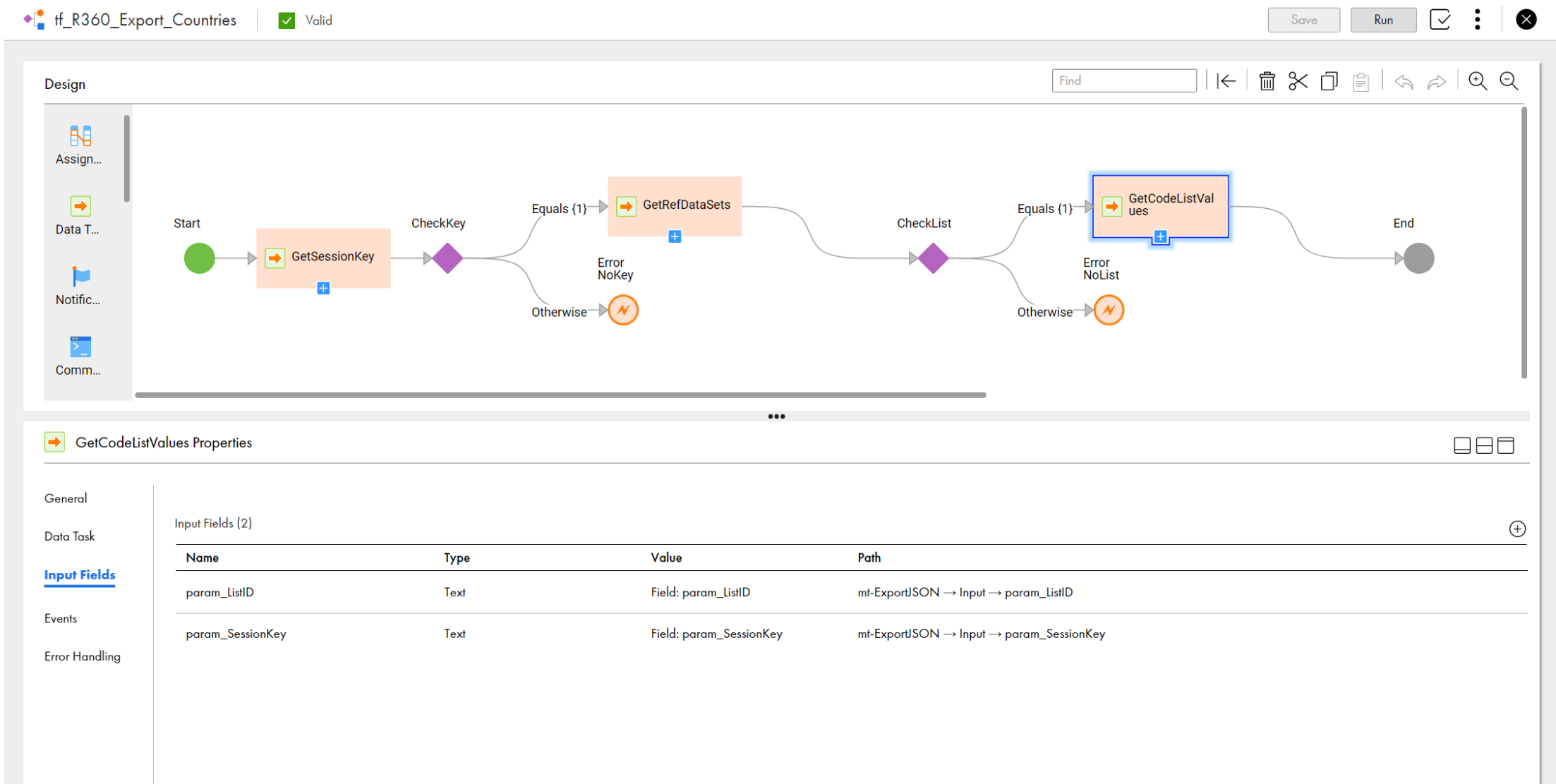
Operation: ExportJSON Select... Preview Data...

Request Options

Request Message: Configure...

Advanced







# R360 Integration: CDI Example



# R360 Integration: CDI Example

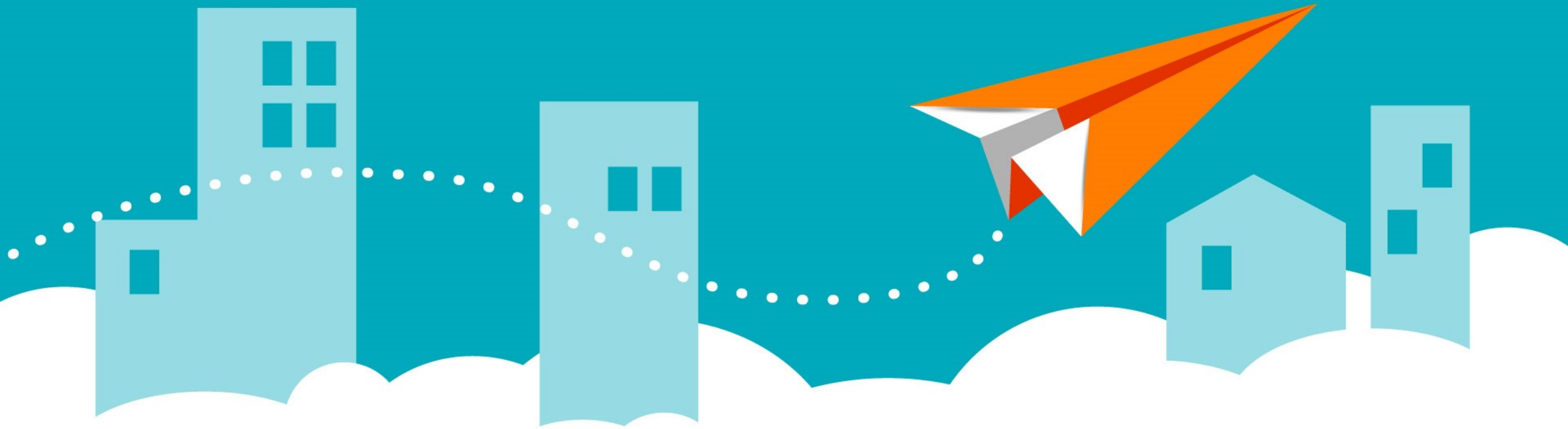
My Jobs | Data Integration > if\_R360\_Export\_Countries-675339048241827840

Jobs (3) Updated 10:26:59 AM CST

Instance Name	Location	Subtasks	Start Time	End Time	Rows Processed	Status
 mt_ExportJSON-2	z_MattB		Feb 7, 2022, 7:57 AM	Feb 7, 2022, 7:57 AM	1	 Success
 mt_GetRefDataSets-7	z_MattB		Feb 7, 2022, 7:56 AM	Feb 7, 2022, 7:57 AM	1	 Success
 mt_GetSessionKey-7	z_MattB		Feb 7, 2022, 7:56 AM	Feb 7, 2022, 7:56 AM	1	 Success



# Users, Groups and Roles



# Users, Groups, Roles

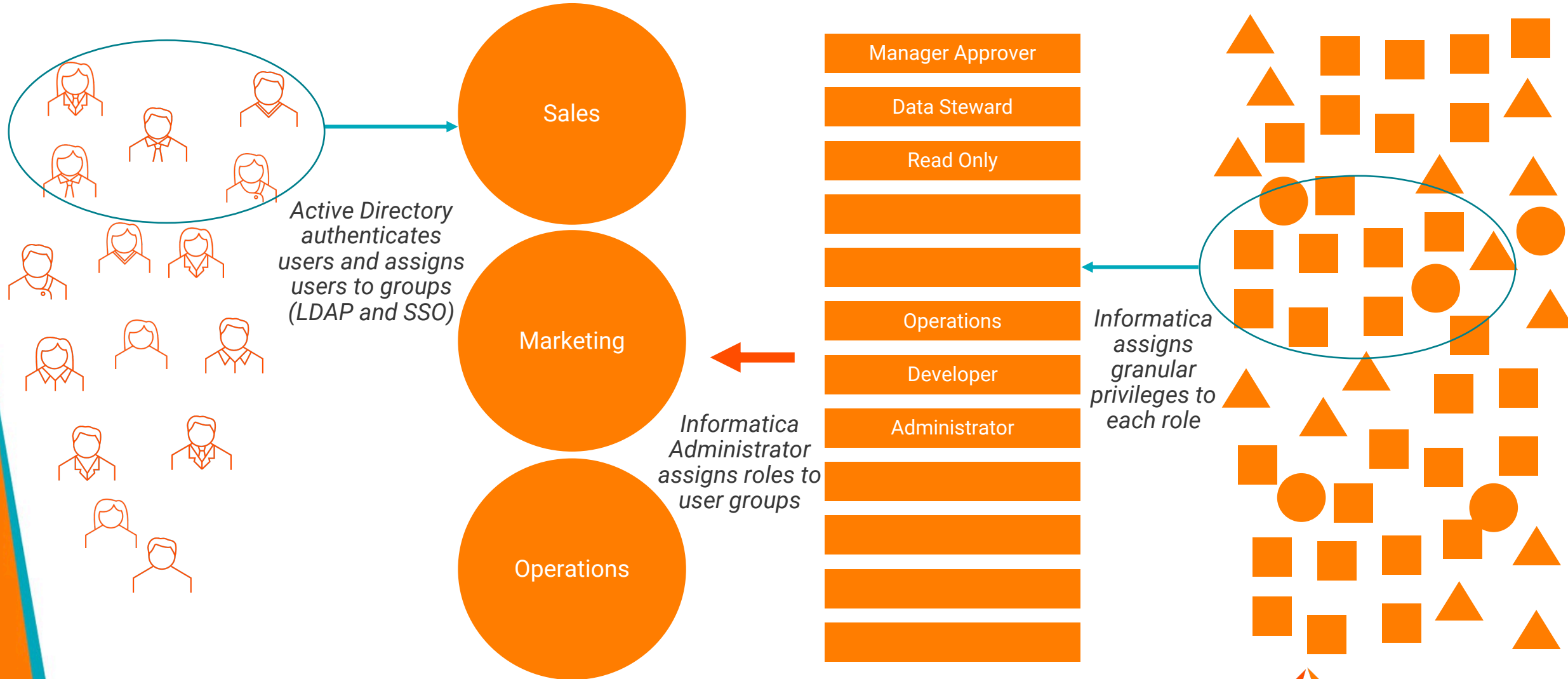
- A **user** is an individual account (unique email) in Informatica Intelligent Cloud Services.
  - Reference 360 users must have an Informatica Intelligent Cloud Services user account
  - You create and manage users in the Administrator applet
- A **group** is a **collection of users** who have something in common, such as working on the same team.
  - Add users to groups to efficiently manage privileges for a collection of users
  - User groups in Reference 360 may map 1-to-1 with your AD user groups
- A **role** is a **collection of privileges** that you assign to users or groups, to allow access and provide various privileges in Reference 360.
  - Start with built-in roles, create custom roles where you need to fine-tune access

# Users

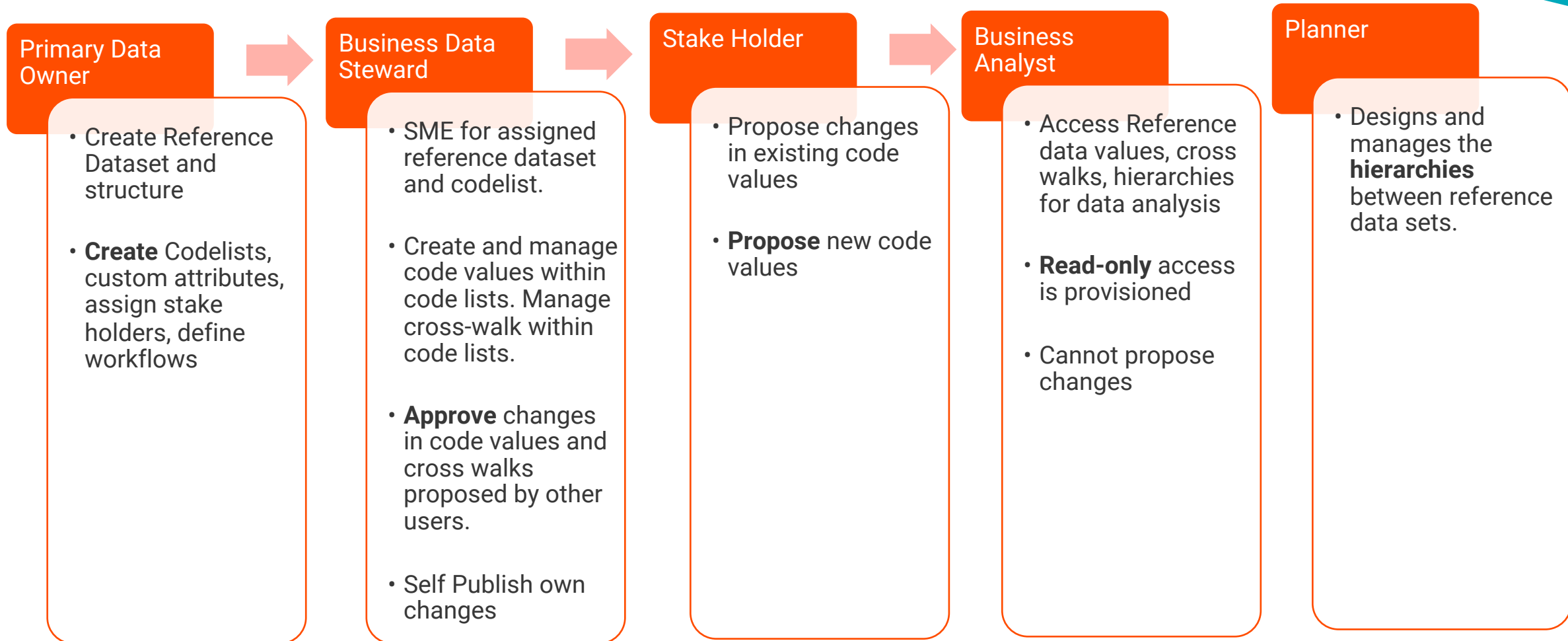
# Groups

# Roles

# Privileges



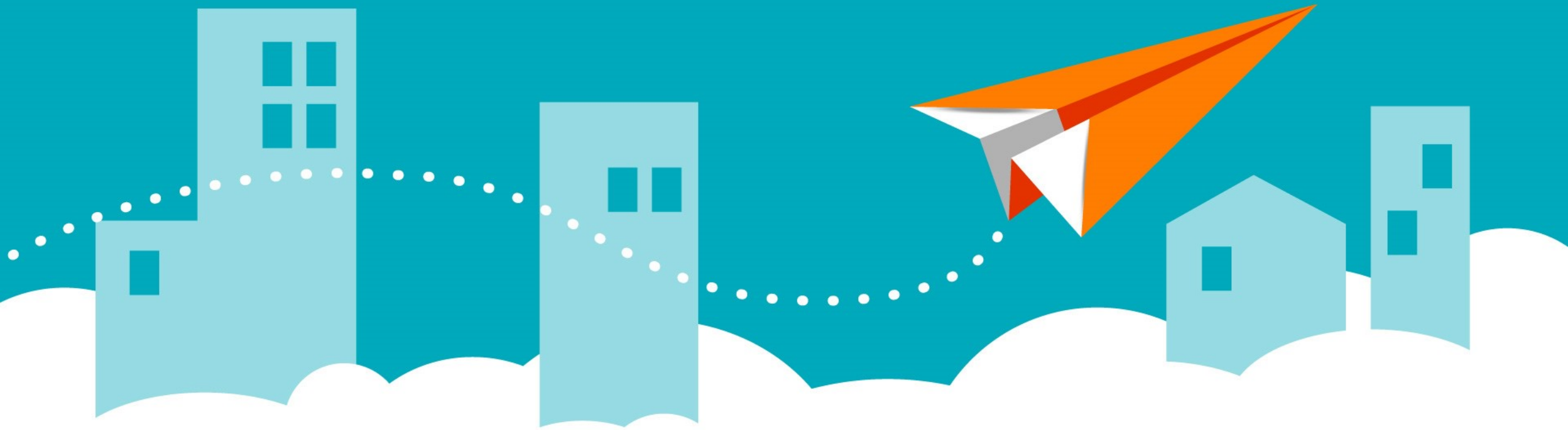
# Reference 360 Roles



# Guidelines for Assigning Roles

- To provide users with access to MDM - Reference 360, **administrators** must assign at least one Reference 360 role to users or groups to which the users belong.
- **Primary owners** can assign **stakeholder** roles for assets to users.
- Role privileges are **cumulative**.
- Users who have multiple roles or who belong to groups receive the **combined privileges** associated with each role.
- When administrators assign Reference 360 roles to users or groups, assign the role with the **minimum number of privileges** that are required for each user to work with Reference 360.
- Assign **stakeholder** roles only to those users or groups that work with an asset.

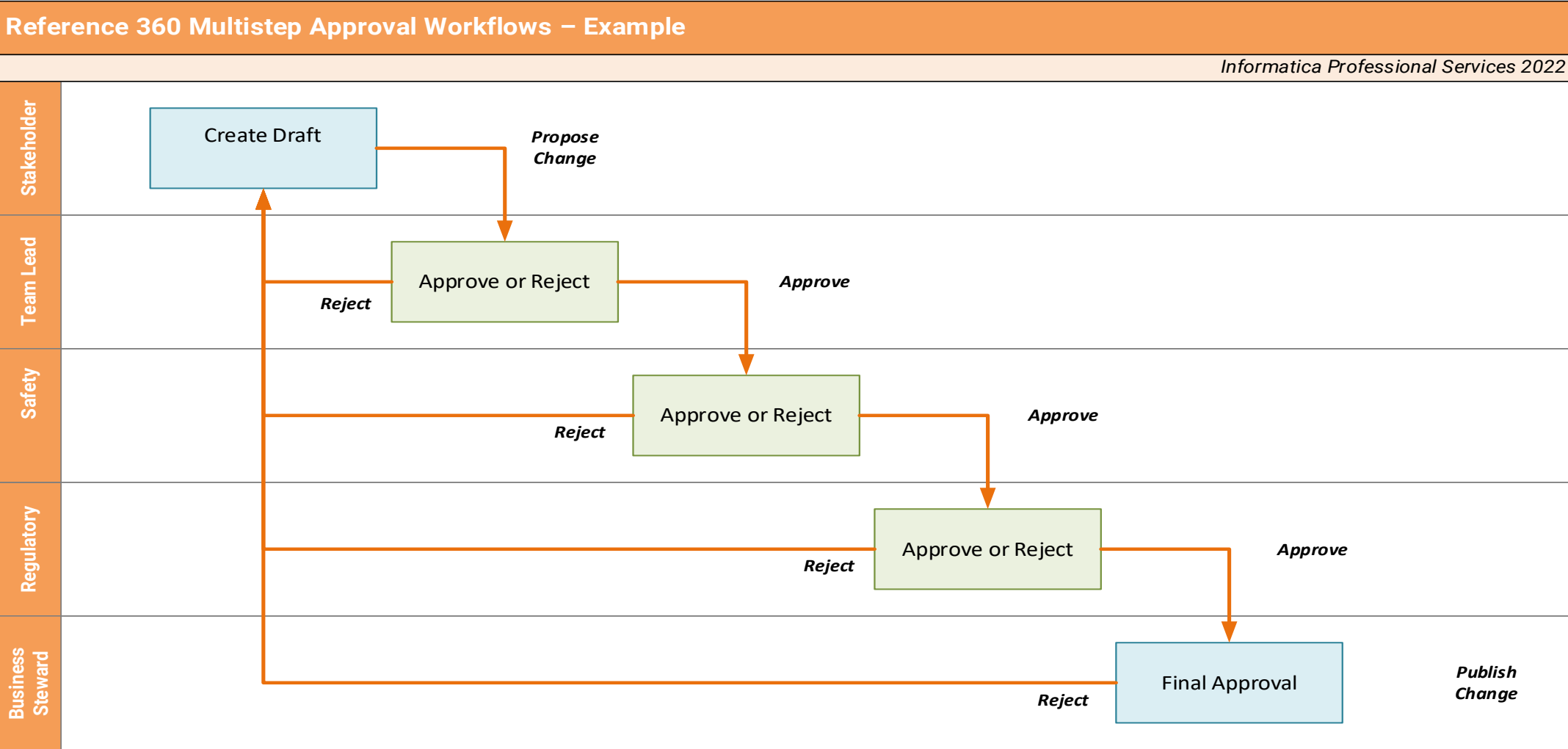
# Approval Workflows



# Workflows in Reference 360

Approval Workflow	Description	Activity
One-step	One-step approval workflows contain one approval task. This workflow is the default approval workflow for all code lists.	<p>An approver can approve the changes, reject the changes, or send the changes back to the originator.</p> <p>If the changes are approved, the changes become part of the active version of the code list.</p>
Multi-step	Multi-step approval workflows contain multiple approval tasks.	<p>The first approver can approve the changes or send back the changes to the originator.</p> <p>If the first approver approves the changes, the next approver can approve the changes or send the changes back to the originator.</p> <p>The next approver can also approve the changes or send the changes back to the originator.</p> <p>After the task reaches the final approver, the final approver can approve the changes, reject the changes, or send the changes back to the originator. If the changes are approved, the changes become part of the active version of the code list.</p>

# Multistep Workflows





# Example of a Multistep Workflow

Regions Create Draft Delete Save ✕

**Values** **Crosswalk** **Summary** **Definition** **Stakeholders** **Workflow** **History**

▼ Task Name:  Add Approval Task ↑ ↓ ✕

Approvers	Task Actions						
reviewer01	<table><thead><tr><th>Action</th><th>Comment</th></tr></thead><tbody><tr><td>Approve</td><td><input type="text" value="Optional"/></td></tr><tr><td>Send Back</td><td>Required</td></tr></tbody></table>	Action	Comment	Approve	<input type="text" value="Optional"/>	Send Back	Required
Action	Comment						
Approve	<input type="text" value="Optional"/>						
Send Back	Required						

▼ Task Name:  ↑ ↓ ✕

Approvers	Task Actions						
anthen01	<table><thead><tr><th>Action</th><th>Comment</th></tr></thead><tbody><tr><td>Approve</td><td><input type="text" value="Optional"/></td></tr><tr><td>Send Back</td><td>Required</td></tr></tbody></table>	Action	Comment	Approve	<input type="text" value="Optional"/>	Send Back	Required
Action	Comment						
Approve	<input type="text" value="Optional"/>						
Send Back	Required						

▼ Task Name:  ↑ ↓ ✕

Approvers	Task Actions								
anthen01, aneef01, csteinle01, mkrishta01, mrsharma01, oweber01, rculbreth01, rparamore01	<table><thead><tr><th>Action</th><th>Comment</th></tr></thead><tbody><tr><td>Approve</td><td><input type="text" value="Optional"/></td></tr><tr><td>Send Back</td><td>Required</td></tr><tr><td>Reject</td><td>Required</td></tr></tbody></table>	Action	Comment	Approve	<input type="text" value="Optional"/>	Send Back	Required	Reject	Required
Action	Comment								
Approve	<input type="text" value="Optional"/>								
Send Back	Required								
Reject	Required								

# Viewing the History of a Task (★New!)

**History Details**

History Feed (1)

Filters [Clear All](#)

- ▼ Change Type (0)  
[Clear Event Type Filters](#)
  - ☐ Add
  - ☐ Edit
  - ☐ Delete
- ▼ Field Attribute (0)  
[Clear Attribute Filters](#)
  - ☐ status
  - ☐ effectiveDate
  - ☐ approvedByName
  - ☐ Name
  - ☐ Code[Add Field Attribute ▼](#)

June 10, 2022

**Added in Name and Code**  
June 10, 2022 at 8:59 PM  
Added by integration-test-demo-user-ow06

You have reached the end of the history feed for the applied filters.

View: **Daily** May 11, 2022 - Jun 10, 2022

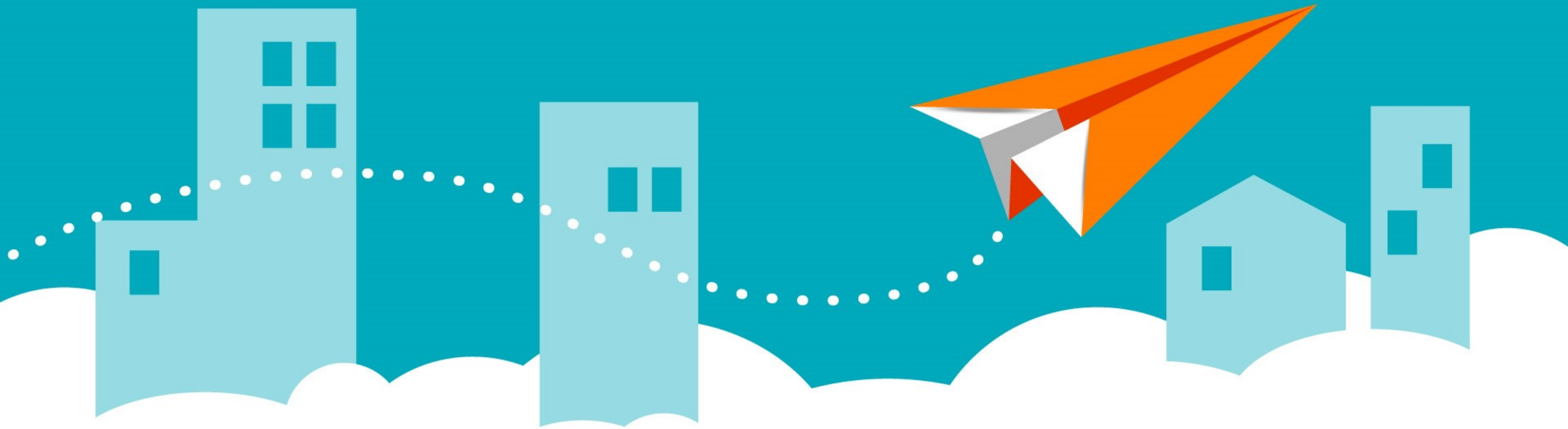
**Added in Name and Code**  
June 10, 2022 at 8:59 PM  
Added by integration-test-demo-user-ow06

**Business Entity Fields** [Task Details](#)

Change List ID	62a36298a95f8921db88a3c7
Requested By	integration-test-demo-user-ow06
Requested On	06/10/2022 08:58:38 PM
Approved By	integration-test-demo-user-ow06
Approved On	06/10/2022 08:59:26 PM

[Close](#)


# Workflow Demo



# Example: Create User Groups from R360 Roles

User Group	Test User	Primary Owner Role	Stakeholder Role	Business Steward Role	Business Analyst Role
R360_DataOwner (Create)	R360_Owen	X			
R360_Contributor (Propose Change)	R360_Conrad		X		
R360_Steward (Final Approval)	R360_Stew			X	
R360_ReadOnly (Analyze)	R360_Ramona				X
R360_Regulatory (Approve)	R360_Reggie				X
R360_FoodSafety (Approve)	R360_Frank				X

# Owen logs in to create a new Reference Data Set

 WFD\_Countries Delete

Owen R360  
R360\_Owen  
  
Profile  
Settings  
Log Out

SummaryDefinitionStakeholdersHistory

▼ General Properties

Reference Data Set:\*

WFD\_Countries

Description:

Domain:

Geography

▼

Confidentiality:

Public

▼

Priority:

Low

▼


▼ Status

Status:

Complete

▼

Effective Date:




Approved by:


▼

45

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# Owen assigns the following stakeholders

 WFD\_Countries Delete Save ✕

Summary

Definition

Stakeholders

History

Stakeholders

Role	User or Group
Reference 360 Business Analyst	R360_FoodSafety
Reference 360 Stake Holder	R360_Contributor
Reference 360 Primary Owner	R360_DataOwner
Reference 360 Business Analyst	R360_Regulatory
Reference 360 Business Steward	R360_Steward
Reference 360 Business Analyst	R360_ReadOnly

# Owen assigns the following workflow approval steps

Enterprise WFD\_Countries Create Draft Delete Save ✕

Values Crosswalk Summary Definition Stakeholders **Workflow** History

▼ Task Name:  Add Approval Task ↕ ↕ 🗑️

Approvers ✎

R360\_FoodSafety

Task Actions

Action	Comment
Approve	<input type="text" value="Required"/>
Send Back	Required

▼ Task Name:  ↕ ↕ 🗑️

Approvers ✎

R360\_Regulatory

Task Actions

Action	Comment
Approve	<input type="text" value="Required"/>
Send Back	Required

▼ Task Name:  ↕ ↕ 🗑️

Approvers ✎

R360\_Steward

Task Actions

Action	Comment
Approve	<input type="text" value="Optional"/>
Send Back	Required
Reject	Required

# Conrad logs in and creates a first draft

The screenshot displays the Informatica Enterprise WFD\_Countries interface. At the top, a yellow banner indicates the current state is a "Draft" with a blue information icon. To the right of the banner are links for "Compare with Published Version" and "View". Below the banner is a navigation bar with tabs: "Values" (selected), "Crosswalk", "Summary", "Definition", "Stakeholders", "Workflow", and "History". The main content area on the left is titled "Enterprise WFD\_Countries (0)" and features a search bar with a funnel icon and the text "Find". Below the search bar is a table with columns "Name", "Code", and "Description". The table is currently empty. To the right of the table is a sidebar with a vertical ellipsis menu. The sidebar contains the text "Select one or more code values." and a user profile dropdown menu. The dropdown menu shows the user's name "Conrad R360 R360\_Conrad" and options for "Profile", "Settings", and "Log Out".

Enterprise WFD\_Countries

Draft ⓘ

Compare with Published Version View

Values Crosswalk Summary Definition Stakeholders Workflow History

Enterprise WFD\_Countries (0)

Find

Name ▼	Code	Description
--------	------	-------------

Select one or more code values.

Conrad R360 R360\_Conrad

Profile Settings Log Out



# Conrad adds some new countries for review

The image displays three overlapping 'New Code Value' dialog boxes, each representing a new country being added for review. The dialog boxes are arranged in a staggered fashion, with the 'United States' dialog in the background, the 'Mexico' dialog in the middle, and the 'Canada' dialog in the foreground.

**United States Dialog:**

- Name: \* United States
- Code: \* USA
- Description: United States of America
- Status: Review
- Effective Date: (empty field)
- Buttons: Save and New

**Mexico Dialog:**

- Name: \* Mexico
- Code: \* MEX
- Description: Mexico
- Status: Review
- Effective Date: (empty field)
- Buttons: Save and New

**Canada Dialog:**

- Name: \* Canada
- Code: \* CAN
- Description: Canada
- Status: Review
- Effective Date: (empty field with calendar icon)
- Buttons: Save and New, Save, Cancel

# Conrad saves his changes and sees the new values

The screenshot shows the Informatica Enterprise WFD\_Countries interface. At the top, there's a title bar with "Enterprise WFD\_Countries" and a "Save" button. Below this is a yellow banner indicating the state is a "Draft". To the right of the banner are links for "Compare with Published Version" and "View Published Version". A navigation bar contains tabs for "Values", "Crosswalk", "Summary", "Definition", "Stakeholders", "Workflow", and "History". The "Values" tab is active, displaying a table titled "Enterprise WFD\_Countries (3)". The table has columns for "Name", "Code", and "Description". It lists three entries: Canada (CAN), Mexico (MEX), and United States (USA). To the right of the table is a large empty area with the text "Select one or more code values.".

Name	Code	Description
Canada	CAN	Canada
Mexico	MEX	Mexico
United States	USA	United States of America

# A new task is created for Conrad to submit for approval

Workflow Inbox

Quick Filters ▾ | [Open Tasks \(2\)](#) ↺ ↻ ↻

Task ID	Title	Task	Priority	Status	Owner	Creator	Modified On
671822106916...	<a href="#">Edit Enterprise WFD Countries 2</a>	Edit Task	Medium	Assigned	R360_Conrad	R360_Conrad	01/28/2022
671771851298...	<a href="#">Edit Enterprise WFD_Countries</a>	Edit Task	Medium	Assigned	R360_Conrad	R360_Conrad	01/28/2022

...

[↑](#) | [Edit Task](#) | [Edit Enterprise WFD Countries 2](#) Send for Approval Discard Draft

▼ Task Details

Task:	Edit Task	Assign To:	R360_Conrad	Due Date:	
Status:	Assigned	Created By:	R360_Conrad	Created On:	01/28/2022
Priority:	↑ Medium	Modified By:		Modified On:	01/28/2022
Code List:	🔍 <a href="#">Enterprise WFD Countries 2</a>	Comments:			

▼ Compare Versions

# Conrad checks that the draft is correct

Edit Enterprise WFD\_Countries

Send for Approval

Discard Draft

▼ Task Details

Task:Edit Task

Status:Assigned

Priority:Medium

Code List:Enterprise WFD\_Countries

Assign To:R360\_Conrad

Created By:R360\_Conrad

Modified By:

Comments:

Due Date:

Created On:01/28/2022

Modified On:01/28/2022

▼ Compare Versions

Show only changes

Moved (0)

Deleted (0)

Edited (0)

Added (3)

Previous

Next

- / 3

Active

Pending

Name	Code	Description	Name	Code	Description

# Conrad submits to Food Safety for approval

Send for Approval

Task Details

Task Title:

Approve Code List - 'Enterprise WFD\_Countries'

Priority:

Low

Due Date:

First Approver:

R360\_FoodSafety

Final Approver:

R360\_Steward

Comment:

Compare Versions

☒ Show only changes

☐ Moved (0)

☐ Deleted (0)

☐ Edited (0)

☒ Added (3)

Previous

Next

- / 3

Active

Draft

Send for Approval

Cancel

# Conrad gets an email confirmation

Request: Approval for code list changes to Enterprise WFD\_Countries



noreply@informaticacloud.com

To ✓ Boardman, Matthew

Retention Policy Exchange online 3 Years delete (3 years)

You successfully sent the following approval request:

Reference data set: WFD\_Countries  
Code list: Enterprise WFD\_Countries  
Approvers: Frank R360 (R360\_Frank)  
Request date: 2022-01-31  
Comments:


- The confirmation email includes the approver that the task has been sent to

# Frank in Food Safety gets an email alert

Request: Approval for code list changes to Enterprise WFD\_Countries



noreply@informaticacloud.com

To  Boardman, Matthew

Retention Policy Exchange online 3 Years delete (3 years)

Expires 1/30/2025



You are requested to review and approve the changes in the following approval request. You can log in to Reference 360 to review the changes.

Reference data set: WFD\_Countries

Code list: Enterprise WFD\_Countries

Requester: Conrad R360 (R360\_Conrad)

Request date: 2022-01-31

Comments:

You can access the task at [https://urldefense.com/v3/https://use4-mdm.dm-us.informaticacloud.com/rdm-ui/taskmanager;!!KpaPruf1FCEp!yosZR5M48SAbcA381BGGhZtfcWDatszLAogY1ToBmaGYZeG7amLWqMbCDQYqCQgL6Jo\\$](https://urldefense.com/v3/https://use4-mdm.dm-us.informaticacloud.com/rdm-ui/taskmanager;!!KpaPruf1FCEp!yosZR5M48SAbcA381BGGhZtfcWDatszLAogY1ToBmaGYZeG7amLWqMbCDQYqCQgL6Jo$)

# Frank logs in to see the new approval task

Workflow Inbox

Frank R360  
R360\_Frank

Profile  
Settings  
Log Out

Quick Filters ▾

[Open Tasks \(1\)](#)

Task ID	Title	Task	Priority	Status	Owner	Creator	Modified On
672821692510...	<a href="#">Review Enterprise WFD_Countries</a>	Review Task	Low	Unassigned		R360_Conrad	01/31/2022

...

▾ | Review Task | [Review Enterprise WFD\\_Countries](#)

Claim

▼ Task Details

Task: Review Task

Status: Unassigned

Priority: ▾ Low

Code List: ⓘ [Enterprise WFD\\_Countries](#)

Assign To:

Created By: R360\_Conrad

Modified By:

Comments:

Due Date: 01/31/2022

Created On: 01/31/2022

Modified On: 01/31/2022

▼ Compare Versions



# Frank looks at the changes and claims the task

Review Enterprise WFD\_Countries

Claim

▼ Task Details

Task: Review Task

Assign To:

Due Date: 01/31/2022

Status: 

Unassigned

Created By: R360\_Conrad

Created On: 01/31/2022

Priority: 

↓ Low

Modified By:

Modified On: 01/31/2022

Code List: 

?

 Enterprise WFD\_Countries

Comments:

▼ Compare Versions

☒ Show only changes

Moved (0)

Deleted (0)

Edited (0)

☒ Added (3)

Previous

Next

- / 3

Active


Name	Code	Description
<div></div>		
<div></div>		
<div></div>		

Pending

Name	Code	Description
<div><div></div>Canada</div>	CAN	Canada
<div><div></div>Mexico</div>	MEX	Mexico
<div><div></div>United States</div>	USA	United States of America

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 Informatica

# Frank can approve, send back to Conrad, or release task

Review Enterprise WFD\_Countries

ReleaseApproveSend Back

Task Details

Task:Review Task

Assign To:R360\_Frank

Due Date:01/31/2022

Status:Assigned

Created By:R360\_Conrad

Created On:01/31/2022

Priority:Low

Modified By:R360\_Frank

Modified On:01/31/2022

Code List:Enterprise WFD\_Countries

Comments:

Compare Versions

☒ Show only changes

Moved (0)

Deleted (0)

Edited (0)

Added (3)

Previous

Next

- / 3

Active


Name	Code	Description

Pending

Name	Code	Description
Canada	CAN	Canada
Mexico	MEX	Mexico
United States	USA	United States of America

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 Informatica

# Frank agrees with the changes, and approves

Approve Changes

Comment: \*

Looks good. What do you think Reggie?

OK

Cancel

Approved: Code list changes to Enterprise WFD\_Countries



noreply@informaticacloud.com

To Boardman, Matthew

[Retention Policy](#) [Exchange online 3 Years delete \(3 years\)](#)

Expires 1/30/2025

You successfully approved the changes in the following approval request. The request will be sent for next approval.

Reference data set: WFD\_Countries

Code list: Enterprise WFD\_Countries

Requester: Conrad R360 (R360\_Conrad)

Approvers: Frank R360 (R360\_Frank)

Approval date: 2022-01-31


Comments: Looks good. What do you think Reggie?

# Conrad also gets an email confirmation

Update: Approval for code list changes to Enterprise WFD\_Countries



noreply@informaticacloud.com

To  Boardman, Matthew

Retention Policy Exchange online 3 Years delete (3 years)

Your approval request was successfully sent for the next approval:

Reference data set: WFD\_Countries

Code list: Enterprise WFD\_Countries

Approvers: Frank R360 (R360\_Frank)

Request date: 2022-01-31


Comments: Looks good. What do you think Reggie?

# Reggie in Regulatory gets an email alert

Request: Approval for code list changes to Enterprise WFD\_Countries




noreply@informaticacloud.com

To  Boardman, Matthew

Retention Policy Exchange online 3 Years delete (3 years)

Expires 1/30/2025

 We removed extra line breaks from this message.

You are requested to review and approve the changes in the following approval request. You can log in to Reference 360 to review the changes.

Reference data set: WFD\_Countries

Code list: Enterprise WFD\_Countries

Requester: Conrad R360 (R360\_Conrad)

Previous reviewer: Frank R360 (R360\_Frank) Request date: 2022-01-31

Comments: Looks good. What do you think Reggie?

You can access the task at [https://urldefense.com/v3/\\_https://use4-mdm.dm-us.informaticacloud.com/rdm-ui/taskmanager\\_!!KpaPruf1FCEp!3Eo-iYSD2Pkir\\_sdFoThGjhzqMduaLE3U7Nr69PdQVd1c50F1HEU0ycQRnNL5gDfv8M\\$](https://urldefense.com/v3/_https://use4-mdm.dm-us.informaticacloud.com/rdm-ui/taskmanager_!!KpaPruf1FCEp!3Eo-iYSD2Pkir_sdFoThGjhzqMduaLE3U7Nr69PdQVd1c50F1HEU0ycQRnNL5gDfv8M$)

# Reggie logs in to see the new approval task

Workflow Inbox

Reggie R360  
R360\_Reggie

Profile  
Settings  
Log Out

Quick Filters

Open Tasks (1)

Task ID	Title	Task	Priority	Status	Owner	Creator	Modified On
67282536920...	Review Enterprise WFD_Countries	Review Task	Low	Unassigned		R360_Conrad	01/31/2022

...

↓

Review Task

Review Enterprise WFD\_Countries

Claim

Task Details

Task: Review Task

Status: Unassigned

Priority: ↓ Low

Code List: ? Enterprise WFD\_Countries

Assign To:

Created By: R360\_Conrad

Modified By:

Comments: Looks good. What do you think Reggie?

Due Date: 01/31/2022

Created On: 01/31/2022

Modified On: 01/31/2022

Compare Versions

# Reggie looks at the changes and claims the task

Review Enterprise WFD\_Countries

Claim

Task Details

Task: Review Task

Assign To:

Due Date: 01/31/2022

Status: Unassigned

Created By: R360\_Conrad

Created On: 01/31/2022

Priority: Low

Modified By:

Modified On: 01/31/2022

Code List: Enterprise WFD\_Countries

Comments: Looks good. What do you think Reggie?

Compare Versions

Show only changes

Moved (0)

Deleted (0)

Edited (0)

Added (3)

Previous

Next

- / 3

Active

Pending

Name	Code	Description	Name	Code	Description
			Canada	CAN	Canada
			Mexico	MEX	Mexico
			United States	USA	United States of America

# Reggie can approve, send back to Conrad, or release task

Review Enterprise WFD\_Countries

Release

Approve

Send Back

Task Details

Task:

Review Task

Assign To:

R360\_Reggie

Due Date:

01/31/2022

Status:

Assigned

Created By:

R360\_Conrad

Created On:

01/31/2022

Priority:

Low

Modified By:

R360\_Reggie

Modified On:

01/31/2022

Code List:

Enterprise WFD\_Countries

Comments:

Looks good. What do you think Reggie?

Compare Versions

Show only changes

Moved (0)

Deleted (0)

Edited (0)

Added (3)

Previous

Next

- / 3

Active

Name	Code	Description

Pending

Name	Code	Description
Canada	CAN	Canada
Mexico	MEX	Mexico
United States	USA	United States of America

64

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# Reggie agrees with the changes, and approves

**Approve Changes** ⓧ

Comment: \*

Approved, please go ahead

**OK** Cancel

Approved: Code list changes to Enterprise WFD\_Countries



noreply@informaticacloud.com

To ✓ Boardman, Matthew

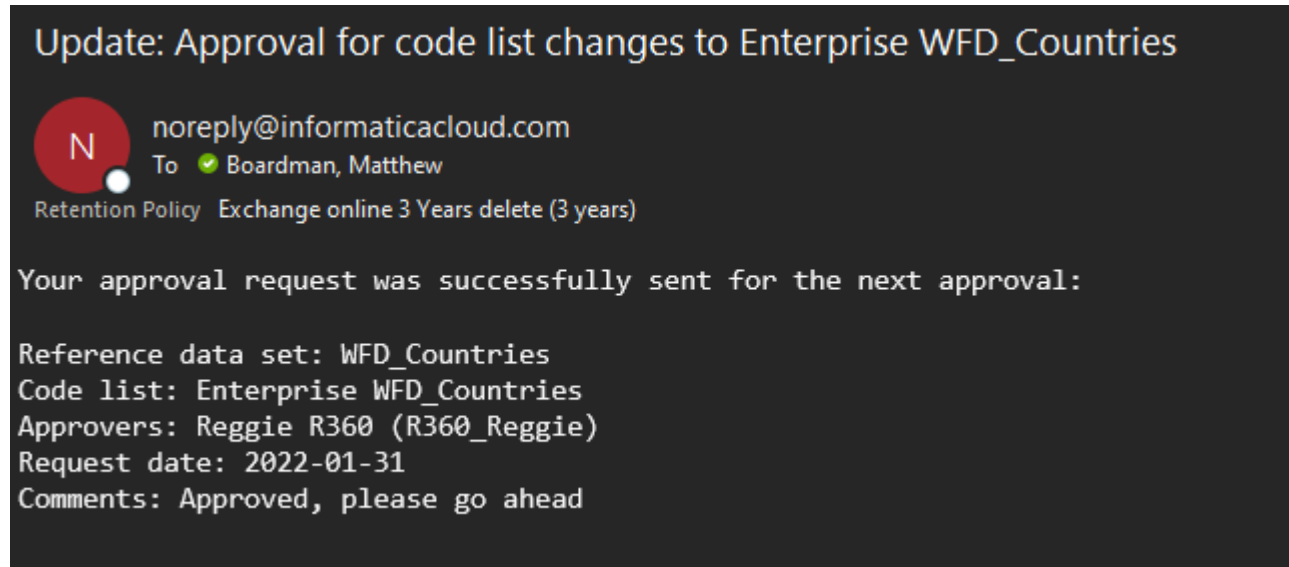
Retention Policy Exchange online 3 Years delete (3 years)

Expires 1/30/2025

You successfully approved the changes in the following approval request. The request will be sent for next approval.

Reference data set: WFD\_Countries  
Code list: Enterprise WFD\_Countries  
Requester: Conrad R360 (R360\_Conrad)  
Approvers: Reggie R360 (R360\_Reggie)  
Approval date: 2022-01-31  
Comments: Approved, please go ahead

# Conrad also gets an email confirmation



# Stew gets an email alert for final approval



# Stew logs in to see the new approval task

Workflow Inbox

Stew R360  
R360\_Stew

Profile  
Settings  
Log Out

Quick Filters ▾

[Open Tasks \(1\)](#)

Task ID	Title	Task	Priority	Status	Owner	Creator	Modified On
672827611877...	<a href="#">Approve Enterprise WFD_Countries</a>	Approval Task	Low	Unassigned		R360_Conrad	01/31/2022

...

↓ | Approval Task | [Approve Enterprise WFD\\_Countries](#)

Claim

▼ Task Details

Task: Approval Task

Status: Unassigned

Priority: ↓ Low

Code List: ⓘ [Enterprise WFD\\_Countries](#)

Assign To:

Created By: R360\_Conrad

Modified By:

Comments: Approved, please go ahead

Due Date: 01/31/2022

Created On: 01/31/2022

Modified On: 01/31/2022

▼ Compare Versions

# Stew looks at the changes and claims the task

Approve Enterprise WFD\_Countries

Claim

▼ Task Details

Task: Approval Task

Assign To:

Due Date: 01/31/2022

Status: Unassigned

Created By: R360\_Conrad

Created On: 01/31/2022

Priority: ↓ Low

Modified By:

Modified On: 01/31/2022

Code List: ? Enterprise WFD\_Countries

Comments: Approved, please go ahead

▼ Compare Versions

☒ Show only changes

☐ Moved (0)

☐ Deleted (0)

☐ Edited (0)

☒ Added (3)

⬅ Previous Next ➡ - / 3

Active

Name	Code	Description
+		
+		
+		

Pending

Name	Code	Description
+	Canada	CAN Canada
+	Mexico	MEX Mexico
+	United States	USA United States of America

# Since Stew is the final approver, he can also Reject task

Approve Enterprise WFD\_Countries

ReleaseApproveRejectSend Back

Task Details

Task: Approval Task

Assign To: R360\_Stew

Due Date: 01/31/2022

Status: Assigned

Created By: R360\_Conrad

Created On: 01/31/2022

Priority: Low

Modified By: R360\_Stew

Modified On: 01/31/2022

Code List: Enterprise WFD\_Countries

Comments: Approved, please go ahead

Compare Versions

Show only changes

Moved (0)Deleted (0)Edited (0)Added (3)

PreviousNext- / 3

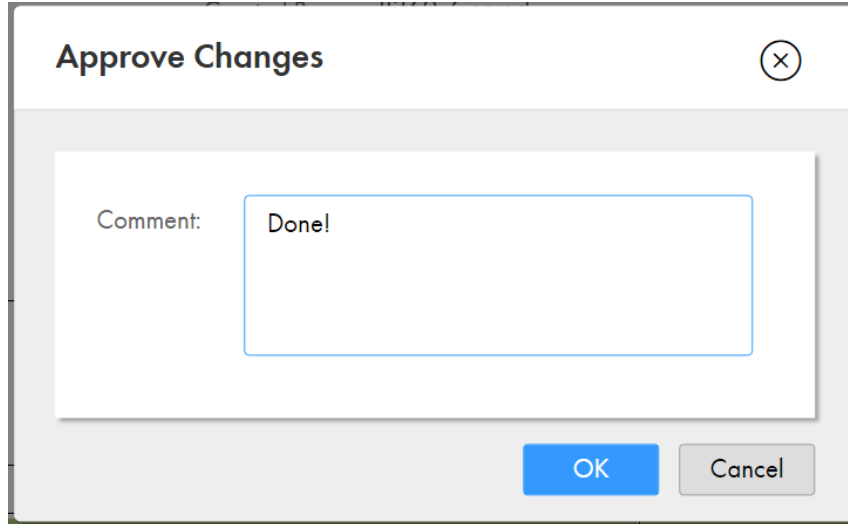
Active

Name	Code	Description

Pending

Name	Code	Description
Canada	CAN	Canada
Mexico	MEX	Mexico
United States	USA	United States of America

# Stew agrees with the changes, and approves



Approve Changes


Comment: Done!

OK Cancel

Approved: Code list changes to Enterprise WFD\_Countries



noreply@informaticacloud.com

To  Boardman, Matthew

Retention Policy Exchange online 3 Years delete (3 years)

You successfully approved the changes in the following approval request:

Reference data set: WFD\_Countries

Code list: Enterprise WFD\_Countries

Requester: Conrad R360 (R360\_Conrad)

Approval date: 2022-01-31

Comments: Done!

# Conrad also gets an email confirmation



- The workflow has completed, so these changes are no longer in a draft state and have been published. The enterprise integrations will publish the changes automatically to subscribing applications.



# Ramona logs in and sees the new published values

Informatica Reference 360

Multiple

Search

PepsiCo, Inc.

Ramona R360 R360\_Ramona

Profile

Settings

Log Out

Home

Explore

Workflow Inbox

My Jobs

Search

Find

Material Class

Material Risk Level

Materials\_DNU

Materials\_Test

Material Subclass

Material Subclass Type

Material Supplier Site Type

One Level Hierarchy

Pepsi Materials v1 Demo

Pepsi Materials v2 Demo

PH (L1-L2-L3)

Products\_Hierarchy\_DNU

Quality and Performance Parameters

R360 Training Set

State

WFD\_Countries

Enterprise WFD\_Countries

WFD Countries 2

Enterprise WFD\_Countries

Values

Crosswalk

Summary

Definition

Stakeholders

Workflow

History

Enterprise WFD\_Countries (3)

Find

Name

Code

Description

Canada

CAN

Canada

Mexico

MEX

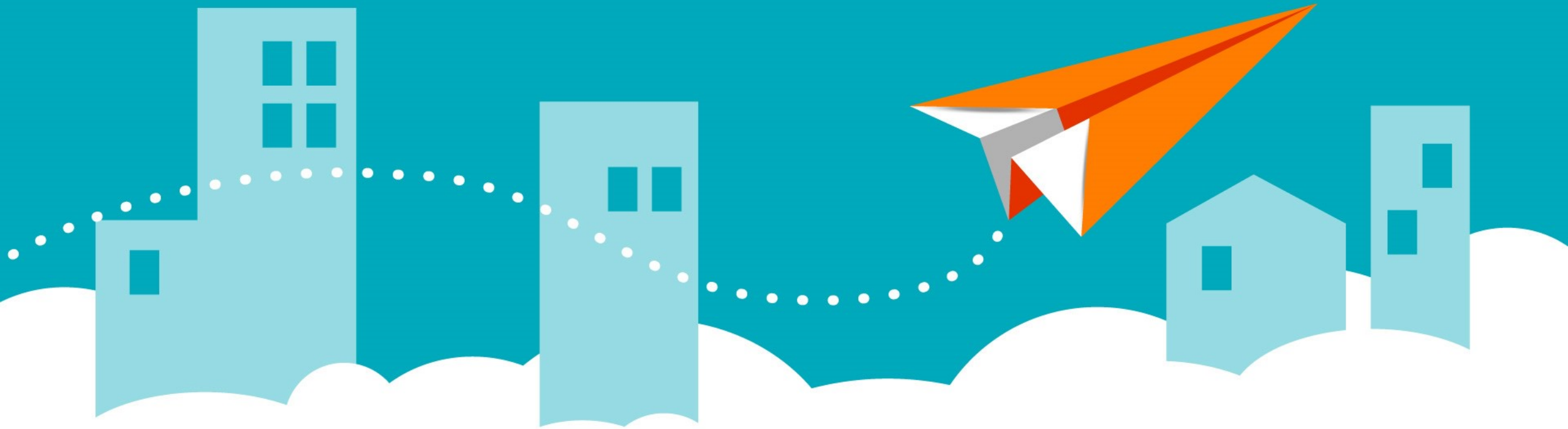
Mexico

United States

USA

United States of America

# Best Practices



# Reference 360 Best Practices

## ■ Functional

- Types of Master Data / Reference Data
- Folder Organization
- Naming Conventions
- Picklists (Enums)
- Users / Groups / Roles
- Multistep Approval Workflows

## ■ Technical

- PODS / Orgs / Sub-Orgs
- IP Whitelisting
- SAML SSO
- Pub / Sub Integration
- Code Promotion (Dev, Test, Prod)
- Source Control: GIT integration
- Log Aggregation

# May 2022 Update: What's New?

- For Business 360 SaaS customers, Reference 360 supports Reference Data Management Basic Edition license.
- Enhanced user interface to show the history of code lists, crosswalks, and code values of a code list.

# June 2022 Update: What's New?

- Add advanced rule associations to code list attributes.
- Stop reference data import and file import jobs.
- On the History tab, view task details of code values of a code list.
- Import code values to a draft code list.
- When you publish or discard a draft code list with a large number of code values, a system-generated Reference 360 Draft job runs.
- Extend a hierarchy model that contains data.



# Thank you!

- Informatica Network:  
<https://network.informatica.com/>
- Informatica Product Documentation:  
<https://docs.informatica.com/>
- Informatica Velocity:  
<https://velocity.informatica.com/>