

Wave

- [Description](#)
- [Wave Connection](#)
 - [How to create connection](#)
 - [How to change the access time](#)
 - [How to reset password](#)
- [Talend](#)
 - [Detail job](#)
 - [Flow job](#)
 - [Access rights](#)
- [Source](#)
 - [Format](#)
- [Destination](#)
 - [Data Ocean](#)
 - [Product](#)
 - [Format](#)
 - [Sizing](#)
 - [Assessment](#)
- [Loading](#)
 - [1.1 Incremental Load](#)
 - [Source to ODS](#)
 - [ODS to DM](#)
 - [1.2 Full load](#)
 - [1.3. Reloading data](#)
 - [Source to ODS](#)
 - [ODS to DM](#)
 - [1.4 Plan to schedule](#)
 - [1.5 Timing](#)
- [Criticality](#)
- [Logging](#)

Description

Wave is a external tool that calculate cost of saving on each project. Talend can get the data via API of this server and the output of the API is excel file.

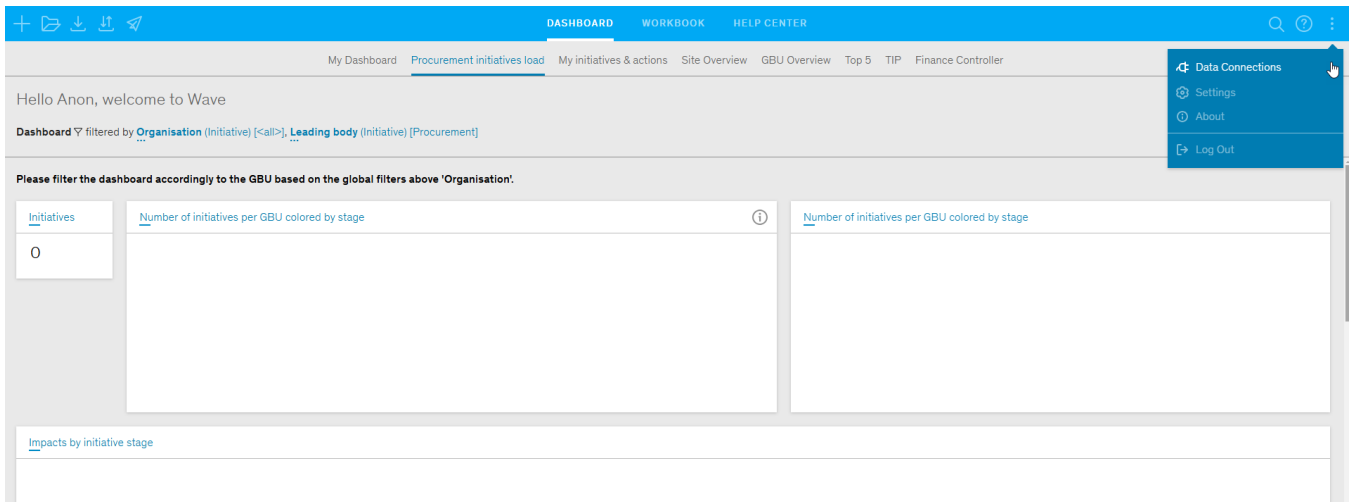
It is required to create a connection and setup the access time to allow Talend read the data. If Talend access out side of the allow time, it will not get the file.

The password is also required to reset every 6 months since the password will be expired

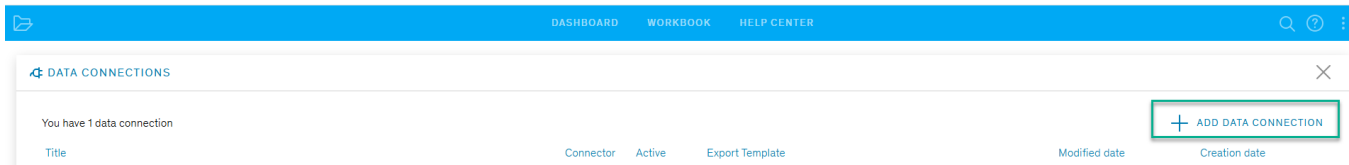
Wave Connection

How to create connection

1. Login <https://solvay.mckinseywave.com/login/auth>
2. Go to Data Connection



3. Click on ADD DATA CONNECTION



4. Enter the name of the connection and data/time that allow to access.

If not set schedule, it is required to login on the web in order to allow the access.

The time is GMT+1 time zone

New data connection: (Step 1 of 2)

PowerBI

Connector: Power BI (dropdown) | Export Template: Power BI Data Extract (dropdown) | Active: ☒

Automatic deactivation will happen if the connection is not used for longer than 17 days or the owner does not log into Wave for longer than 17 days

ⓘ You must be logged into Wave when using the connection, or it must occur during one of the following schedules:

Schedule #1

Day of week	Time
Sunday	Time (dropdown)
Monday	Time (dropdown)
Tuesday	Time (dropdown)
Wednesday	Time (dropdown)
Thursday	Time (dropdown)
Friday	Time (dropdown)
Saturday	Time (dropdown)

CREATE **CANCEL**

5. It will generate URL endpoints, username and password. Click on generate password and save it.

Please note that each password will be expired every 6 months and the interface is required to access at least every 17 days, otherwise, the connection will be deactivated.

Connect to Wave: PowerBI_Template

Follow these steps to allow Power BI to pull data from Wave

1. Select "Get Data" and choose "Web" in Power BI Desktop
2. Copy the URL below

```
https://5cc98d328b7f.cdn.mckinseywave.com/api/data-connection/dff52a23-e5f1-43e1-8cab-d361777b497a/export
```



3. Paste the above URL into the URL field and click OK
4. Choose "Basic" in the "Access Web content" popup
5. Copy the email address below

```
talend_admin_dev@solvay.com
```



6. Paste the above email address into the user name field
7. Enter the previously generated password into the password field
8. If you need to reset the password then click the button below
9. Click "Connect". It may take several minutes to retrieve a large data export
10. You must be logged into Wave or be within the defined schedule for data connection calls to succeed

GENERATE PASSWORD

CLOSE (YOU CAN RETURN HERE LATER)

How to change the access time

1. Login <https://solvay.mckinseywave.com/login/auth>
2. Go to Data Connections same as create connection
3. Right click on the connection that you want to change and select Update

The screenshot shows the 'DATA CONNECTIONS' interface. At the top, it says 'You have 1 data connection'. Below this is a table with the following columns: Title, Connector, Active, Export Template, Modified date, and Creation date. The table contains one row with the title 'PowerBI'. A context menu is open over the 'PowerBI' row, showing options: Connect, Update (highlighted with a mouse cursor), View activity, Clear cache, and Delete. In the top right corner of the interface, there is a '+ ADD DATA CONNECTION' button.

Title	Connector	Active	Export Template	Modified date	Creation date
PowerBI	Power BI	On	Power BI Data Extract	18-Nov-2024 5:06 AM	16-Oct-2024 11:18 AM

4. Change date/time and click UPDATE

Update data connection: PowerBI

PowerBI

Connector: Power BI | Export Template: Power BI Data Extract | Active: ☒

i You must be logged into Wave when using the connection, or it must occur during one of the following schedules:

Schedule #1: Friday | 12:00 PM - 01:00 PM Europe/Rome

Schedule #2: Monday | 05:00 AM - 06:00 AM Europe/Rome

Schedule #3: Day of week | Time

Schedule #4: Day of week | Time

Schedule #5: Day of week | Time

UPDATE **CANCEL**

5. In case of the connector is deactivated, just mark it active here and keep login to the Wave in order to avoid deactivate.

How to reset password

1. Login <https://solvay.mckinseywave.com/login/auth>
2. Go to Data Connections same as create connection
3. Right click on the connection that you want to change and select Connect

DASHBOARD WORKBOOK HELP CENTER

DATA CONNECTIONS

You have 1 data connection

Title	Connector	Active	Export Template	Modified date	Creation date
PowerBI	Power BI	On	Power BI Data Extract	18-Nov-2024 8:45 AM	16-Oct-2024 11:18 AM

Connect
Update
View activity
Clear cache
Delete

+ ADD DATA CONNECTION

4. Click on reset password

Connect to Wave: PowerBI_Template

Follow these steps to allow Power BI to pull data from Wave

1. Select "Get Data" and choose "Web" in Power BI Desktop
2. Copy the URL below

```
https://5cc98d328b7f.cdn.mckinseywave.com/api/data-connection/dff52a23-e5f1-43e1-8cab-d361777b497a/export
```



3. Paste the above URL into the URL field and click OK
4. Choose "Basic" in the "Access Web content" popup
5. Copy the email address below

```
talend_admin_dev@solvay.com
```



6. Paste the above email address into the user name field
 7. Enter the previously generated password into the password field
 8. If you need to reset the password then click the button below
- [GENERATE PASSWORD](#)
9. Click "Connect". It may take several minutes to retrieve a large data export
 10. You must be logged into Wave or be within the defined schedule for data connection calls to succeed

CLOSE (YOU CAN RETURN HERE LATER)

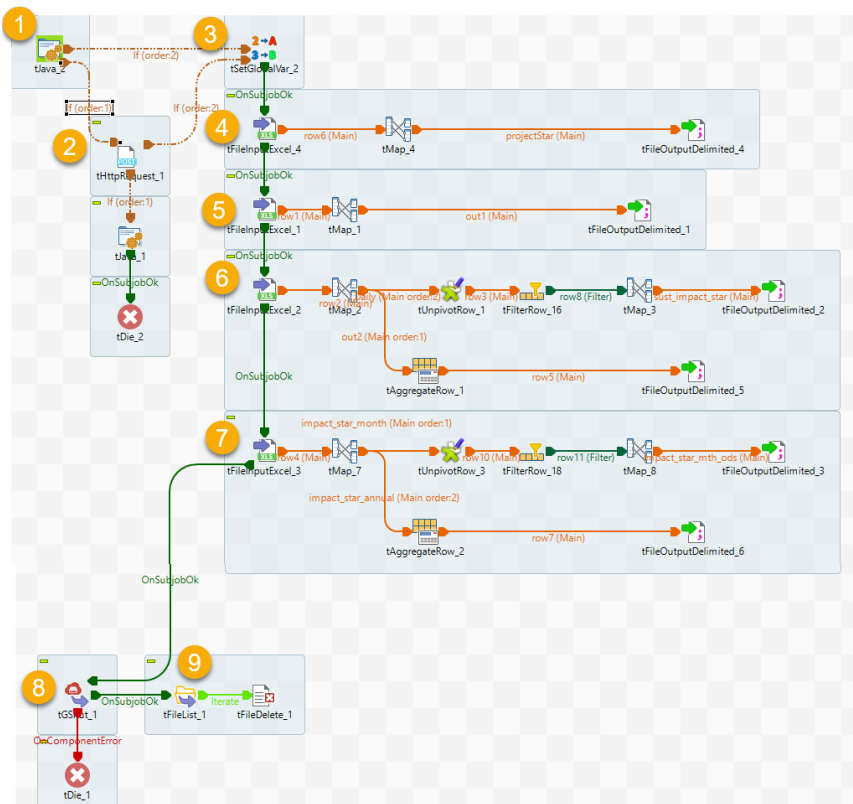
Talend

The Talend project is on DATA_OCEAN_DOMAIN_INDUSTRIAL

The project will required 4 sheets from the file output from the API. Then, in order to improve the performance of the loading and the size of data, the impactStar and SustainabilityImpactStar sheet are normalize into 2 tables

Detail job

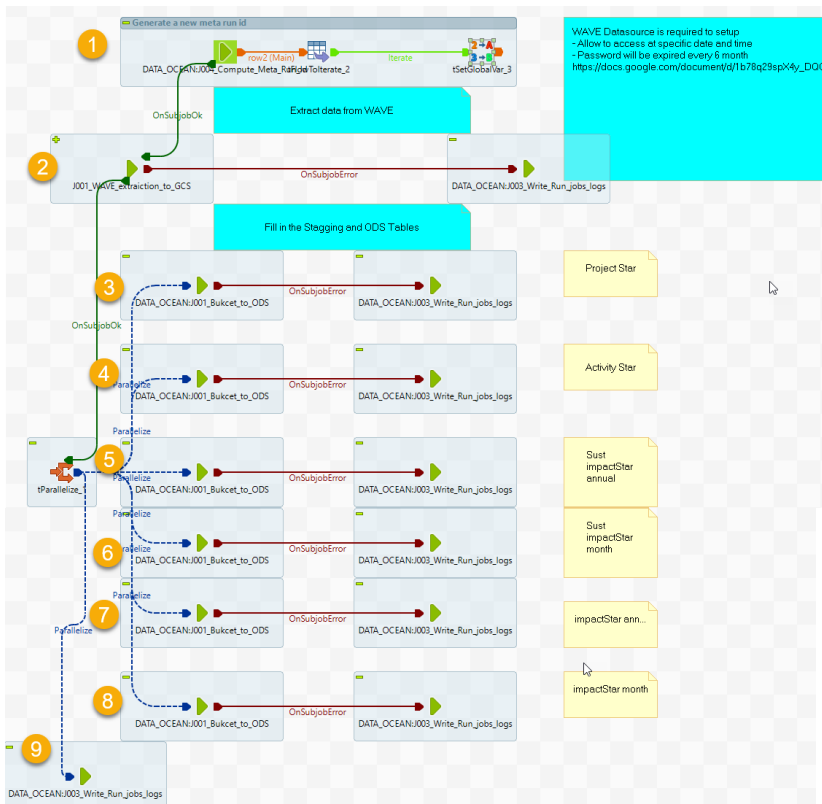
- J001_WAVE_extraiction_to_GCS



1. tJava to check I_VAR_WAVE_reload, true will get the file wave.xlsx, false will get from Wave API
2. tHttpRequest to call Wave api in case I_VAR_WAVE_reload = false
 - a. if return code = 200, the api will generate the file wave.xlsx
 - b. if return code != 200, the email will be sent to inform DataOps
3. tSetGlobalVar to set current date for the snapshot value of this loading
4. tFileInputExcel4 to read wave.xlsx on projectStar Sheet, then transform with tMap and save file to "WAV_IND_0000_0000_F001_[yyyyMMddHHmmss]_0000_F_D_project_star.csv"
5. tFileInputExcel1 to read wave.xlsx on activityStar Sheet, then transform with tMap and save file to "WAV_IND_0000_0000_F002_[yyyyMMddHHmmss]_0000_F_D_activity_star.csv"
6. tFileInputExcel2 to read wave.xlsx on sustainabilityImpactStar Sheet, then spit into 2 files
 - a. month : unpivot by changing column (period) to row and remove the line which does not have data blank or 0 and save to "WAV_IND_0000_0000_F003_[yyyyMMddHHmmss]_0000_F_D_sust_impact_star_month.csv"
 - b. annual : keep all columns except the Purpose and period and aggregate the row to reduce duplicate rows and save file to "WAV_IND_0000_0000_F003_[yyyyMMddHHmmss]_0000_F_D_sust_impact_star_annaul.csv"
7. tFileInputExcel3 to read wave.xlsx on impactStar Sheet, then spit into 2 files
 - a. month : unpivot by changing column (period) to row and remove the line which does not have data blank or 0 and save to "WAV_IND_0000_0000_F004_[yyyyMMddHHmmss]_0000_F_D_impact_star_month.csv"
 - b. annual : keep all columns except the Purpose and period and aggregate the row to reduce duplicate rows and save file to "WAV_IND_0000_0000_F004_[yyyyMMddHHmmss]_0000_F_D_impact_star_annaul.csv"
8. Upload all 6 files to GCS
9. Delete the 6 files from Talend server

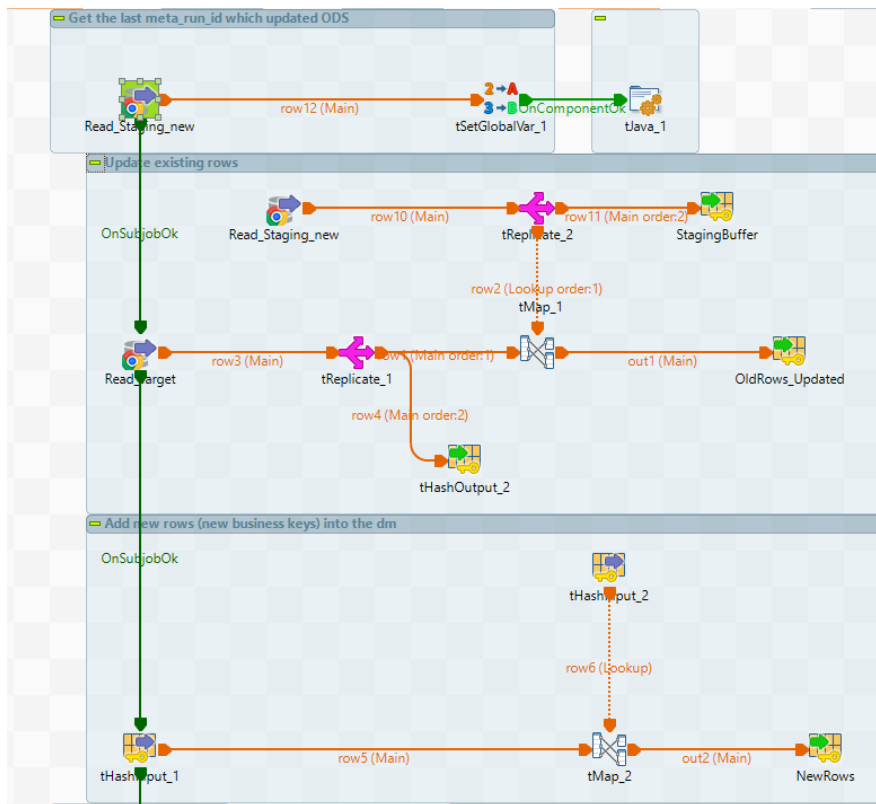
Flow job

- F001_WAVE_TO_BQ



1. Setup meta_run_id and filename of the output file
2. Call the detail job and pass parameters
3. Call the standard job to upload the projectStar files from GCS to ODS
4. Call the standard job to upload the activityStar files from GCS to ODS
5. Call the standard job to upload the sustainabilityImpactStar annual files from GCS to ODS
6. Call the standard job to upload the sustainabilityImpactStar month files from GCS to ODS
7. Call the standard job to upload the impactStar annual files from GCS to ODS
8. Call the standard job to upload the impactStar month files from GCS to ODS
9. Update the log.

■ F011_DIM_wave_project_star_SCD1



Select only last loading in ODS update to DIM_wave_project_star

Access rights

It is required to get access from WAVE admin ednamaria.coan@solvay.com

Source

- <https://solvay.mckinseywave.com/login/auth> prj-data-dm-industrial-[env]
- The API URL will be configured on Wave connection and the URL will keep in parameter I_VAR_WAVE_url_api

Format

- columnar format (Excel - .xlsx)

Destination

Data Ocean

- Bucket = cs-ew1-prj-data-dm-industrial-[env]-staging
- DataOcean GCP = prj-data-dm-industrial-[env]
- STG Table name = prj-data-dm-industrial-[env].STG.
 - STG_WAV_0000_0000_F001_F_D_project_star
 - ~~STG_WAV_0000_0000_F002_F_D_activity_star~~
 - STG_WAV_0000_0000_F003_F_D_sust_impact_star_annual
 - STG_WAV_0000_0000_F003_F_D_sust_impact_star_month
 - STG_WAV_0000_0000_F004_F_D_impact_star_annual
 - STG_WAV_0000_0000_F004_F_D_impact_star_month
- ODS Table name = prj-data-dm-industrial-[env].ODS
 - ODS_WAV_0000_F001_F_D_project_star
 - ~~ODS_WAV_0000_F002_F_D_activity_star~~
 - ODS_WAV_0000_F003_F_D_sust_impact_star_annual
 - ODS_WAV_0000_F003_F_D_sust_impact_star_month
 - ODS_WAV_0000_F004_F_D_impact_star_annual
 - ODS_WAV_0000_F004_F_D_impact_star_month

- DM Tables name = prj-data-dm-industrial-[env].DM
 - DIM_wave_project_star
 - ~~DIM_wave_activity_star~~

Product

- Bucket = cs-ew1-prj-data-industrial-dash-[env]-staging
- Product GCP = prj-data-industrial-dash-[dev]
- Dataset = prj-data-industrial-dash-dev.DataOcean DPL
 - ~~V_ODS_wave_activity_star_fl~~
 - V_ODS_wave_impact_star_annual_fl
 - V_ODS_wave_impact_star_month_fl
 - V_ODS_wave_project_star_fl
 - ~~V_wave_activity_star~~
 - V_wave_impact_star_annual
 - V_wave_impact_star_month
 - V_wave_project_star
 - V_wave_sust_impact_star_annual
 - V_wave_sust_impact_star_month

Format

- columnar format

Sizing

ProjectStar around 7000 records

Sust ImpactStart annual around 9000 records

Sust ImpactStart month around 54000 records

ImpactStart annual around 85,000 records

ImpactStart month around 1,226,000 records

Assessment

Data should be the same as output file and

[SELECT distinct snapshot FROM `prj-data-dm-industrial-dev.ODS.ODS\\_WAV\\_0000\\_F004\\_F\\_D\\_impact\\_star\\_annual`
order by snapshot desc](#)

[The current date of snapshot should be available](#)

Loading

1.1 Incremental Load

Source to ODS

N/A Always full load from the file

ODS to DM

I_VAR_dim_wave_project_star_reload = incremental

1.2 Full load

Set I_VAR_WAVE_reload = false

[PL_INDUS_WAVE](#) will load the output excel file from Wave API and save the current time as snapshot field

1.3. Reloading data

Source to ODS

Set I_VAR_WAVE_reload = true (in case of load historical data, manual file, which is not get from Wave API)

Key users will provide the historical file and load the file manually by rename the file to wave.xlsx on folder \\Acew1dt\Indeng02\data\DEV\DATA_OCEAN_DOMAIN_INDUSTRIAL\InOut\WAVE. The file must have the same sequence of column same as the normal extraction.

ODS to DM

I_VAR_dim_wave_project_star_reload = QUALIFY ROW_NUMBER() OVER (PARTITION BY snapshot, projectStar ORDER BY meta_ods_insert_date DESC) = 1

1.4 Plan to schedule

Weekday at 04:01 AM CET

1.5 Timing

The average time expected for loading: around 20 mins

Criticality

High/Medium/Low

Logging

On project prj-data-dm-industrial-[environment]

```
select job.job_name, job.meta_start_date, job.meta_execution_id, logs.meta_run_id, logs.meta_source_system, logs.meta_step, logs.meta_status, logs.
meta_num_lines, logs.meta_error_lines from STG.log_tables logs join STG.run_jobs job on logs.meta_run_id = job.meta_run_id
where logs.meta_run_id in (SELECT meta_run_id FROM STG.run_jobs order by meta_start_date desc limit 100)
and job_name like '%WAVE%'
and meta_start_date > DATE_SUB(CURRENT_TIMESTAMP(), INTERVAL 24 HOUR)
order by job.meta_start_date desc
```