

FlexFile analysis with *readflexfile*



costverse packages and functions work with the FlexFile in Final Form. Final Form is defined as 20 Java Script Object Notation (JSON) files representing 18 data groups and metadata located within a zip file.

Scope Definitions

Orders or Lots	Identified in Block 17 of DD FORM 2794. When appropriate, the Order/Lot will have sequence or fiscal year buy information associated with it.
End Item	Uniquely identify a Platform, Model, Version, Flight, Variant, Kit or equivalent grouping or variant of a reported unit or system.
Units or Sublots	Identifies the unique sequential unit number produced for each Order/Lot and End Item as defined in Blocks 17 and 18 of the DD FORM 2794, respectively.

Core Data Tables

Report Metadata, Actual Cost Hour Data (ATD)
Forecast at Completion Cost Hour Data (FAC), Summary
Cost Data, WBS Dictionary Definitions, WBS Element
Remarks, Summary Remarks

Key Data Attributes

CLINs, Functional Category, Functional Overhead Category,
Standard Functional Category, Detailed Standard Category,
WBS Element, Nonrecurring/Recurring, Reporting Period

Scope Relationships

	Orders or Lots	End Items
ATD	Hours Dollars Quantities	Hours Dollars
FAC	Hours Dollars Quantities	Quantities

flexample :: Example Datasets

flexample::examples()

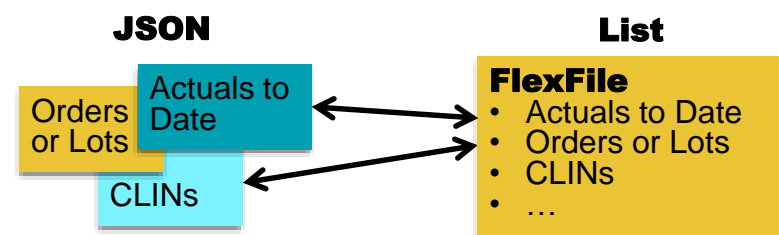
Hello! I contain the following example files:

- Sample_FlexFile_A.zip
- Sample_FlexFile_Aircraft.zip

To access a file, use 'system.file("extdata", "Replace With Your Filename", package = "flexample")'.

Read and Write

read_flexfile(file) - returns a list of tibbles of class 'flexfile' or 'quantityreport' from a zip folder submission of the FlexFiles. Each tibble corresponds to its respective JSON table.



write_flexfile(x) - write object of class 'flexfile' or 'quantityreport' into a zip folder of JSON tables.

Helpful Utilities

determine the class of a data object:

is_flexfile(x), is_quantityreport(x)

is_flexfile_flat(x), is_quantityreport_flat(x)

coerce object to class 'flexfile' or 'quantityreport':

as_flexfile(x, ...), as_quantityreport(x, ...)

list objects containing tables and fields for the respective specs:

flexfile_spec, quantity_spec

list of data model enumeration tables:

flexfile_enum

convert object back to the original data model naming convention:

snake_to_data_model(x, flexfile_spec)

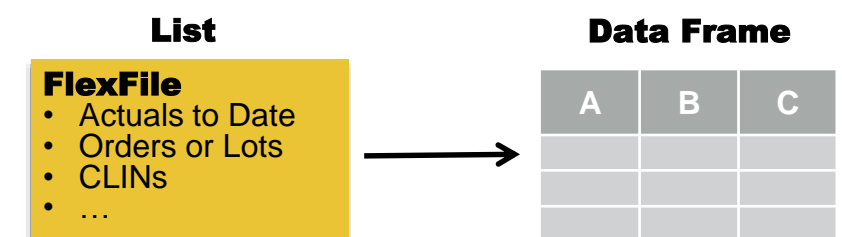
Data Processing

allocate_flexfile(flexfile) - applies the allocations provided in the Allocation Methodology table to the Actual Cost Hour Data table (if applicable).

ezflexfile::rollup_flexfile(flexfile) - operates on the flexfile list object and rolls up the Actual Cost Hour Data and Forecast at Completion Cost Hour Data tables.



flatten_data(flexfile, ...) - generic function that is used to create a single flat data frame from a list of data frames. Returns an object of a new class of 'flexfile_flat' or 'quantityreport_flat'



Example Workflow

read and convert from the zipped JSON to a single flat table:

read_flexfile("file_name.zip") %>%

allocate_flexfile() %>%

rollup_flexfile() %>% # optional

flatten_data()

use iteration functions to modify and stack a list of files:

read_folder("folder_name", read_flexfile) %>%

purrr::map(allocate_flexfile) %>%

purrr::map(rollup_flexfile) %>% # optional

purrr::map_dfr(allocate_flexfile, .id = "report_id")