In order to display BOM events in the River of news, we need to retrieve results from the **Ibase Changes** SAP API; the documentation for the API is available at [https://mtuds.visualstudio.com/4b4684cc-e6da-47b7-9b46-c0f79a99c274/\_apis/git/repositories/8a9f04fc-8b85-4537-995e-855ec5d337bb/Items?path=%2F.attachments%2FDTWIN\_IBASE\_CHANGES\_ODATA%20Documentation-31326ca9-c0c2-47af-9f1b-907442e2ccf1.docx&download=false&resolveLfs=true&%24format=octetStream&api-version=5.0-preview.1](https://mtuds.visualstudio.com/4b4684cc-e6da-47b7-9b46-c0f79a99c274/_apis/git/repositories/8a9f04fc-8b85-4537-995e-855ec5d337bb/Items?path=/.attachments/DTWIN_IBASE_CHANGES_ODATA%20Documentation-31326ca9-c0c2-47af-9f1b-907442e2ccf1.docx&download=false&resolveLfs=true&$format=octetStream&api-version=5.0-preview.1) .

The following is a screenshot from Invision with a mock up of the end result:

<https://projects.invisionapp.com/d/main#/console/15799242/366850563/preview>

The fields that should actually be added to the River of news entry by the follower and displayed by the UI are:

* Date of Installation / Date of Removal
* IBase Record (from the InRecno field)
* Material number (if available, from the Matnr field)
* Description (if available, from the the Maktx field)

**High level steps**

* Mock the API.
* Create a new event in rrps.dt.events to represent a change in the BOM; the event should the following fields:  
    
  - Creation time (Crtim):the datetime when the record was created (required).   
  - Update time (Uptim): the datetime when the record was lastly updated (optional).  
  - Part IBase record number (InRecno): the IBase record number of the part (required).  
  - Part material number  (Matnr): the material number of the part (optional).  
  - Part description (Maktx): the part description (optional).  
  - Valid from (Valfr): the datetime when the part was installed (required).  
  - Valid fo (Valto): the datetime when the part was removed (optional). If Valto is equal to 99991231235959 or empty, it means that the part is currently mounted.  
  **- The fields Crname and Upname must not be put into the event.**
* These events could be produced by the existing rrps.dt.integrator.sapbomasbuilt integrator as part of its daily processing; if there are changes to the response of the API, the integrator should fetch the records that have been updated since the previous processing time by specifying the **uptim**parameter accordingly then parse each record.  
    
  - If a record has both Valrf and Valto set, it means that the part has been removed on Valto.  
  - If a record as Valto set to 99991231235959 , it means that the part has been installed.  
    
  The integrator should then cache the date of processing if successful.
* The follower should write RON entries for the events defined in previous steps; the details will have to be written as usual in the Details field of the RON entry. The RON entry will contain the following fields:  
  + Date of Installation / Date of Removal
  + IBase Record (from the InRecno field)
  + Part material number (if available)
  + Part description (if available)
* The UI should be updated to reflect the screenshot above from the RON entries written in the previous step.
* Add tasks for testing.

**Additional changes to the rrps.dt.integrator.sapbomasbuilt integrator**

Recently three new fields have been added to the records in the IBase as built / as maintained response (see documentation at [https://mtuds.visualstudio.com/4b4684cc-e6da-47b7-9b46-c0f79a99c274/\_apis/git/repositories/8a9f04fc-8b85-4537-995e-855ec5d337bb/Items?path=%2F.attachments%2FDTWIN\_IBASE\_AS\_BUILT\_AND%20MAINTAINED\_ODATA%20Documentation\_6-0513e397-6ccc-440f-a284-ebf4f7f701f8.docx&download=false&resolveLfs=true&%24format=octetStream&api-version=5.0-preview.1](https://mtuds.visualstudio.com/4b4684cc-e6da-47b7-9b46-c0f79a99c274/_apis/git/repositories/8a9f04fc-8b85-4537-995e-855ec5d337bb/Items?path=/.attachments/DTWIN_IBASE_AS_BUILT_AND%20MAINTAINED_ODATA%20Documentation_6-0513e397-6ccc-440f-a284-ebf4f7f701f8.docx&download=false&resolveLfs=true&$format=octetStream&api-version=5.0-preview.1) ):

* YYDATUM (Date of record)
* YYFKGRP (Main group)
* YYFGRSP (Subgroup)

In order to store these new fields in the Digital Twin:

* A new version of the SapBomAsBuiltSet event with these additional fields has to be defined.
* The fields have to be added to the body of the T2 response SapBoMAsMaintained.
* The rest follower should serialise these fields to the bom table when processing new SapBomAsBuiltSet events.
* The rest follower should include these fields in the response from engine-bom-as-maintained endpoint.