



Outlook

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**Fwd: Feedback on BIAR implementation document from Justus**

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**From** Sandy Labuschagne <slabuschagne@contractor.linuxfoundation.org>**Date** Wed 11/26/2025 6:47 PM**To** Ume Sauda Ghanyani <sauda.ghanyani@paysyslabs.com>; Usama Abdul Manan <usama.manan@paysyslabs.com>**Cc** Justus Ortlepp <jortlepp@contractor.linuxfoundation.org>; Syed Faizan Ali <faizan.ali@paysyslabs.com>; Joshua Arnold <jarnold@linuxfoundation.org>

Hi

Please see below additional comments from Justus on the BIAR implementation document. My main concern has been the completeness and availability of all JSON objects attributes in the Lakehouse for reporting purposes. Justus and I have agreed that it may not be feasible to flatten the entire JSONB message structure up-front, and we are comfortable to provisionally sign off the BIAR Implementation document on the understanding that there will be an ongoing operational process that will allow the extension of JSON objects as it is required.

Regards

Sandy Labuschagne

Product Owner, the Tazama Project

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[tazama.org](https://tazama.org)

----- Forwarded message -----

**From:** **Justus Ortlepp** <[jortlepp@contractor.linuxfoundation.org](mailto:jortlepp@contractor.linuxfoundation.org)>**Date:** Wed, Nov 26, 2025 at 10:58 AM**Subject:** Re: Feedback on BIAR implementation document from Justus**To:** Sandy Labuschagne <[slabuschagne@contractor.linuxfoundation.org](mailto:slabuschagne@contractor.linuxfoundation.org)>

Hello,

I think this is OK in general. There are a couple of things we may want to keep an eye on when it comes to the execution. Things I picked up:

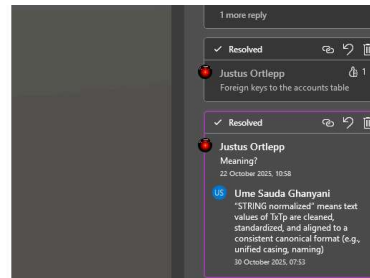
1. There is no reference to the tenantId in any of the data tables which is probably an oversight at this point. TenantId will be essential to ring-fence data warehousing and queries between tenants. I don't think we'll be able to implement RLS here in the same way we're doing it in the core engine since we're not going to have PostgreSQL as the foundation. Maybe this

functionality does exist in our stack, so perhaps we should take a look to see if we can emulate that functionality easily.

2. Conditions are volatile over time - we want to make sure that the evolution of condition data is adequately tracked (status changes, etc). I think condition alterations should probably be the source of an audit report which means the condition warehousing should be somewhat transactional.
3. Your comments about the scope of the mapping from JSON to silver/bronze also needs to be remembered. I don't know if it is feasible to flatten the entire JSONB message structure up-front, but we want an ongoing operational process that will allow the extension as it is required.
4. I don't know how this will be implemented:

3.1.9 transactionRelationship (edge: typically, account--account)

Field	Raw (Ozone)	Bronze (Hudi)	Silver (Hudi + Spark)	Gold (Analytics / Dashboards)
<u>from_</u> <u>to_</u> (source, destination) (FK)	As-is.	STRING	FK <u>src_account_id</u> , <u>dst_account_id</u> , <u>edge_type</u> =TX.	to Network graph flow), corridor matrices.
<u>TxTp</u>	As-is.	STRING <u>normalized</u>	Mapped <u>dim_tx_type</u>	to Filter and series splits.
<u>CreDtM</u>	As-is.	TIMESTAMP	Event <u>time</u> , SCD (slow <u>change</u> dimension)-2 validity if needed.	Daily/weekly aggregations, peak hours.



Reminder that the TxTp will, in future, be pulled from the name that the end-user gives the event in the DEMS API, so I'm not sure if standardizing it would be appropriate, since you may want to keep the relationship with the name as it is provided by the user. It is therefore, at this point, more of a "key" that provides end-to-end traceability of the event throughout the system.

6. This was more a comment around consistency.

## 2.5 Evaluation Results

### 3.2.33.1.12 transaction (evaluation/report fact)

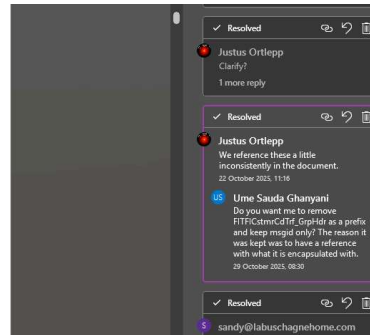
a) Identifiers and linkages

Field	Raw (Ozone)	Bronze (Hudi)	Silver (Hudi + Spark)	Gold (Analytics / Dashboards)
<u>_id_</u> <u>raw_</u> <u>key</u>	Stored as-is (JSON).	Cast to STRING; lineage only.	Kept as str_* columns on facts; not business keys.	Drill-down/audit only.
<u>FITFCatmCdTr</u> <u>GrpHId</u> <u>MsgId</u>	As-is.	STRING trimmed.	FK → silver.pacs002_status_gp_hdr_msgid (primary key there, per your note). #002-missing; optionally fall back to silver.pacs002_txn_grp_h dr_msgid.	Used for recon and "click-through to message".
<u>transactionId</u>	As-is.	STRING; null allowed.	Internal natural key for this evaluation. Also keep a surrogate <u>eval_id</u> BIGINT as PK.	Used to join child result tables and for drill-downs.
<u>transaction_TxTp</u>	As-is.	Normalized STRING.	Conform via <u>dim_tx_type</u> .	Filters/series in evaluation dashboards.

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I don't have a preference either way, and I'm not sure it matters since the msgId here is local to the specific transaction and is not referenced as a foreign key anywhere else.

Hmmm. OK, yeah, I think maybe there's a misunderstanding around this:

## 2.5 Evaluation Results

### 3.2.33.1.12 transaction (evaluation/report fact)

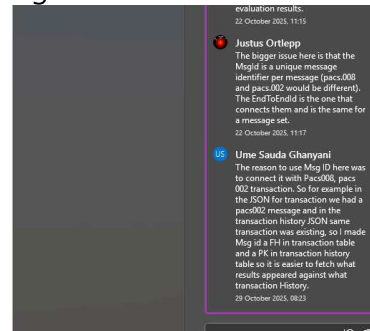
a) Identifiers and linkages

Field	Raw (Ozone)	Bronze (Hudi)	Silver (Hudi + Spark)	Gold (Analytics / Dashboards)
<u>_id_</u> <u>raw_</u> <u>key</u>	Stored as-is (JSON).	Cast to STRING; lineage only.	Kept as str_* columns on facts; not business keys.	Drill-down/audit only.
<u>FITFCatmCdTr</u> <u>GrpHId</u> <u>MsgId</u>	As-is.	STRING trimmed.	FK → silver.pacs002_status_gp_hdr_msgid (primary key there, per your note). #002-missing; optionally fall back to silver.pacs002_txn_grp_h dr_msgid.	Used for recon and "click-through to message".
<u>transactionId</u>	As-is.	STRING; null allowed.	Internal natural key for this evaluation. Also keep a surrogate <u>eval_id</u> BIGINT as PK.	Used to join child result tables and for drill-downs.
<u>transaction_TxTp</u>	As-is.	Normalized STRING.	Conform via <u>dim_tx_type</u> .	Filters/series in evaluation dashboards.

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msgId has no cross-system relevance outside of the transaction that it is related to.

7. This feels like an oversight. From a certain perspective, I think comments should be considered unstructured, so falls somewhat out of scope, but I think we may be missing additional contextual information around the comments. This is not an issue for the lakehouse, which only trickles the context down - this is an issue in the CMS itself. We may want to keep an eye out for this when we get

to the UAT. I at least expect some kind of comment hierarchical context to deal with replies and multi-part conversations.

3.3.83.2.8

Comments

Field	Raw	Bronze	Silver	Gold
<u>comment_id</u> (PK)	As-is	UUID	PK	Drill-down.
<u>case_id or task_id</u> (FK)	As-is	UUID	FK to either (nullable pair with constraint)	Engagement metrics.
<u>user_id</u>	As-is	UUID	FK + <u>dim_user</u>	Analyst engagement.
<u>note_text</u>	As-is	STRING	Kept (len cap + PII policy)	Not charted.
<u>created_at, updated_at</u>	As-is	TIMESTAMP	Event times	Comment velocity.

Resolved

Justus Ortlepp

Can comments be related / linked to other comments? E.g. replies, quotes, conversations, etc.? Would we need to add additional identifiers to maintain these links?

22 October 2025, 11:35

Ume Sauda Ghanyani

Comments are not interlinked.

29 October 2025, 08:29

Thoughts?

J

On Tue, Nov 25, 2025 at 12:14 PM Sandy Labuschagne <[slabuschagne@contractor.linuxfoundation.org](mailto:slabuschagne@contractor.linuxfoundation.org)> wrote:

Regards  
Sandy Labuschagne  
Product Owner, the Tazama Project  
The Linux Foundation  
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----- Forwarded message -----  
From: **Sandy Labuschagne** <[slabuschagne@contractor.linuxfoundation.org](mailto:slabuschagne@contractor.linuxfoundation.org)>  
Date: Mon, Nov 10, 2025 at 4:44 PM  
Subject: Fwd: Feedback on BIAR implementation document from Justus  
To: Justus Ortlepp <[jortlepp@contractor.linuxfoundation.org](mailto:jortlepp@contractor.linuxfoundation.org)>

Latest BIAR docs attached

Regards  
Sandy Labuschagne  
Product Owner, the Tazama Project  
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----- Forwarded message -----  
From: **Ume Sauda Ghanyani** <[sauda.ghanyani@paysyslabs.com](mailto:sauda.ghanyani@paysyslabs.com)>  
Date: Fri, Nov 7, 2025 at 10:22 AM  
Subject: Re: Feedback on BIAR implementation document from Justus

To: Sandy Labuschagne <[slabuschagne@contractor.linuxfoundation.org](mailto:slabuschagne@contractor.linuxfoundation.org)>  
Cc: Justus Ortlepp <[jortlepp@contractor.linuxfoundation.org](mailto:jortlepp@contractor.linuxfoundation.org)>, Usama Abdul Manan <[usama.manan@paysyslabs.com](mailto:usama.manan@paysyslabs.com)>, Syed Faizan Ali <[faizan.ali@paysyslabs.com](mailto:faizan.ali@paysyslabs.com)>

Dear Sandy,

Please find attached two versions of the document: **(1) Clean** and **(2) With Comments**.

We have:

- Incorporated the ERD shared by Justus. (the current approach with Bronze, Silver and Gold layer remains consistent)
- Addressed all comments and applied the requested changes.
- Kept everything else unchanged.

Kindly review at your convenience and let me know if any changes are required.

Best regards,

Ume Sauda Ghanyani

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**From:** Sandy Labuschagne <[slabuschagne@contractor.linuxfoundation.org](mailto:slabuschagne@contractor.linuxfoundation.org)>  
**Sent:** Thursday, October 23, 2025 2:38 PM  
**To:** Ume Sauda Ghanyani <[sauda.ghanyani@paysyslabs.com](mailto:sauda.ghanyani@paysyslabs.com)>  
**Cc:** Justus Ortlepp <[jortlepp@contractor.linuxfoundation.org](mailto:jortlepp@contractor.linuxfoundation.org)>; Usama Abdul Manan <[usama.manan@paysyslabs.com](mailto:usama.manan@paysyslabs.com)>; Syed Faizan Ali <[faizan.ali@paysyslabs.com](mailto:faizan.ali@paysyslabs.com)>  
**Subject:** Re: Feedback on BIAR implementation document from Justus

Make a note in section 4 that user stories will be provided by the Tazama product team at a later stage and it should be ignored for now. That way we don't lose the comments that have been made so far.

Regards  
Sandy Labuschagne  
Product Owner, the Tazama Project  
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On Thu, Oct 23, 2025 at 11:12 AM Ume Sauda Ghanyani <[sauda.ghanyani@paysyslabs.com](mailto:sauda.ghanyani@paysyslabs.com)> wrote:  
Hi Sandy,

Thank you for the feedback, I will review it and will get back to you if we require a session on it.

As for the section 4, do you want it to be completely removed, and we should assume that we will receive that from product team in the form of user stories when in development phases?

Best Regards,  
Ume Sauda Ghanyani

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**From:** Sandy Labuschagne <[slabuschagne@contractor.linuxfoundation.org](mailto:slabuschagne@contractor.linuxfoundation.org)>  
**Sent:** Thursday, October 23, 2025 1:42 PM  
**To:** Usama Abdul Manan <[usama.manan@paysyslabs.com](mailto:usama.manan@paysyslabs.com)>; Ume Sauda Ghanyani <[sauda.ghanyani@paysyslabs.com](mailto:sauda.ghanyani@paysyslabs.com)>; Syed Faizan Ali <[faizan.ali@paysyslabs.com](mailto:faizan.ali@paysyslabs.com)>  
**Cc:** Justus Ortlepp <[jortlepp@contractor.linuxfoundation.org](mailto:jortlepp@contractor.linuxfoundation.org)>  
**Subject:** Feedback on BIAR implementation document from Justus

Hi

PFA feedback from Justus (combined with my feedback) on the BIAR implementation document.

We need to discuss section 4 as the report specifications lack detail, and our suggestion is to defer this to the development phase. We suggest that you remove it from the document for now and we will provide clearer report specifications, in the form of user stories, during development.

Regards  
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**Justus Ortlepp**  
*Product Manager*



Open Source Transaction Monitoring Software  
supporting Inclusive Instant Payments Systems