

# The Discussion on WT2 on FS\_AIML\_CN

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# Summary

- WT2, especially the extension of coordination between AF and NWDAF, should be included in the scope of SID.

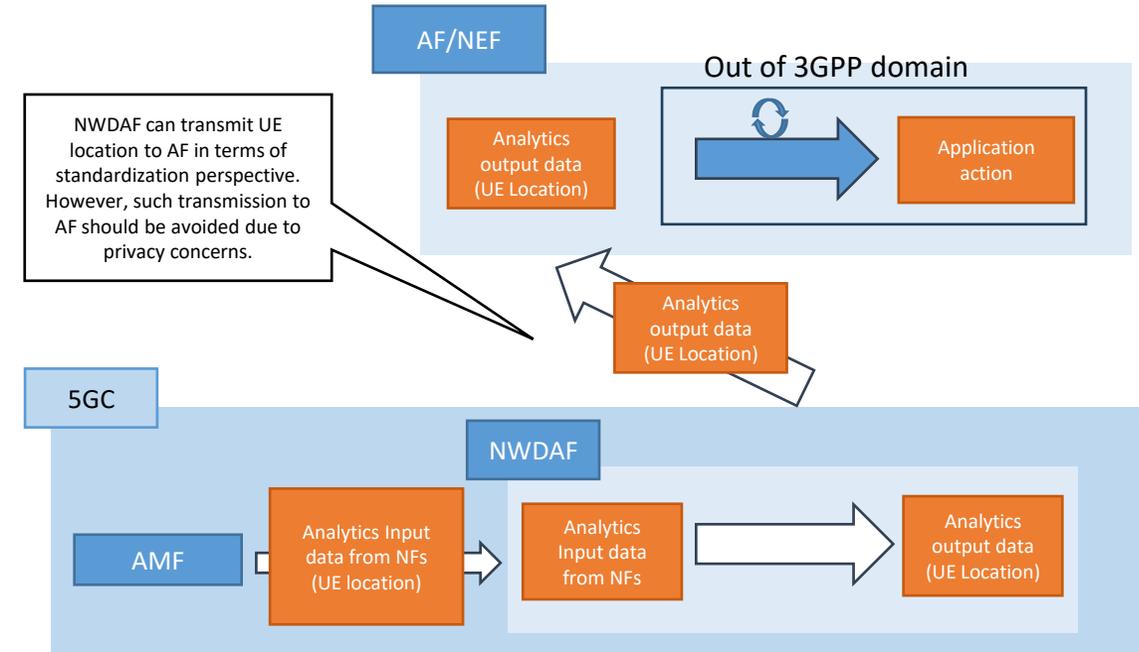
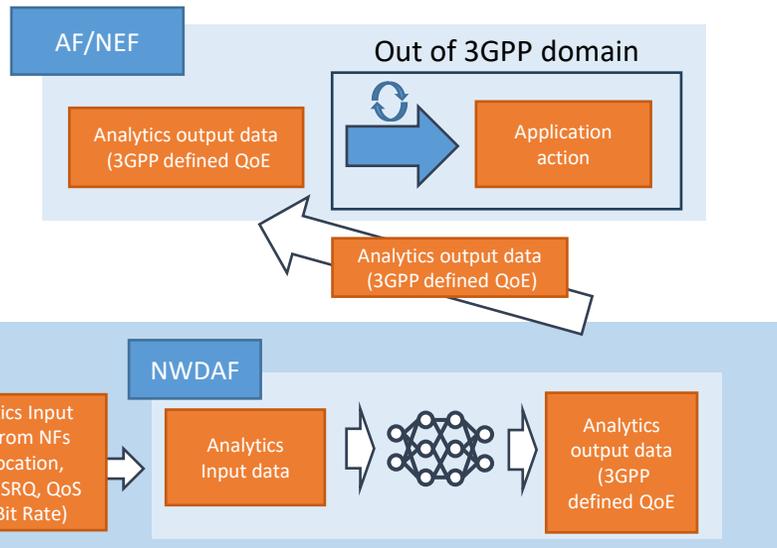
# WT2: Motivation of 5GC enhancement for VFL

## Motivation of VFL: Enable more flexible coordination between 5GC and AF without exposing raw data from 5GC to AF.

In the following slides, VFL motivation, the effect of VFL, and potential enhancement to support VFL are explained using an example of QoE analytics.

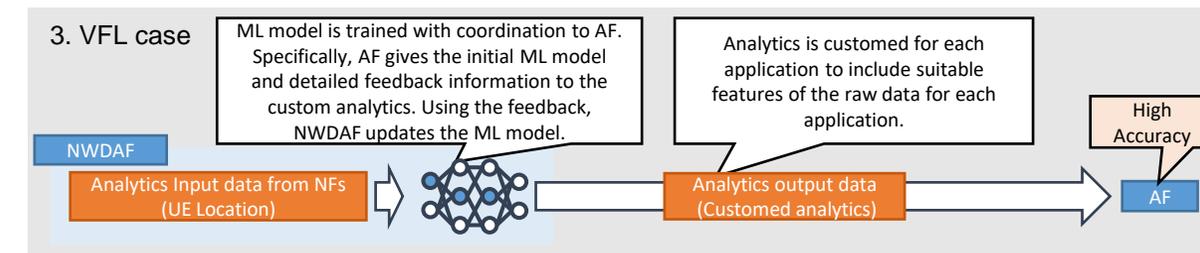
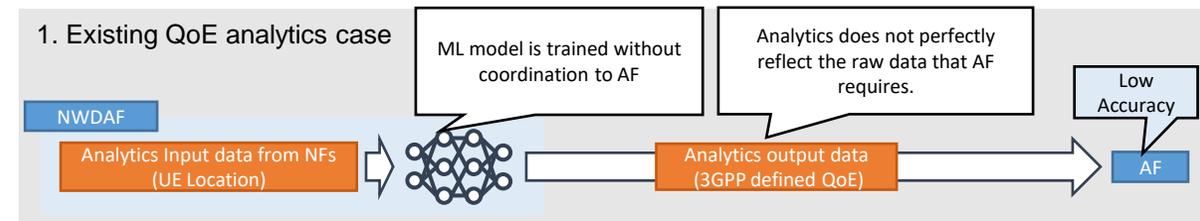
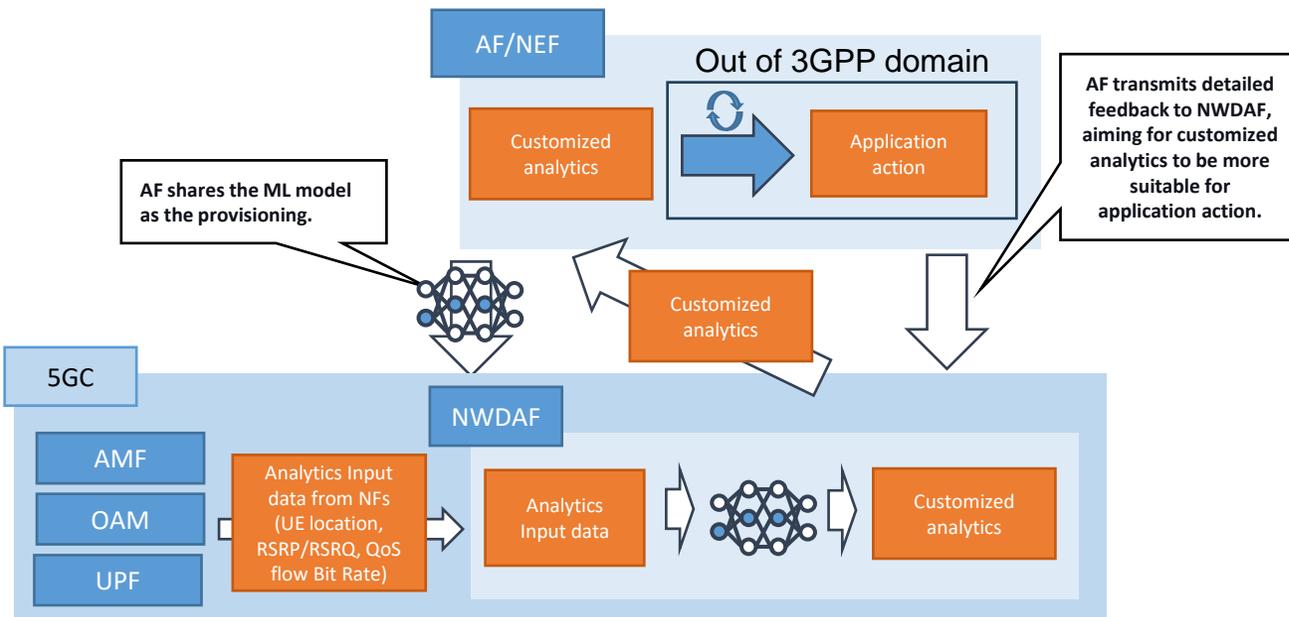
- Current QoE analytics:** AF obtains QoE analytics, whose data model is defined in 3GPP. Then, the analytics is generally used for an arbitral purpose, such as optimizing the application's action.
- Issue:** Since applications are diverse, defining analytics for each application is impractical. Thus, in the NWDAF's conversion procedure from raw analytics input data to the analytics output in a standardized data model, the analytics input data is partly dropped. Valuable information for the application may be included in the dropped data and lacks in the analytics output.

- Straightforward approach:** AF uses analytics that exposes raw analytics input data (e.g., UE's location by UE mobility analytics). Using the raw data, AF can directly generate application action.
- Concern in Straightforward approach:** Such raw data transmission is not preferred due to privacy concerns.



# WT2: Effect of VFL

- Summary of VFL functionality:** NWDAF uses the ML model given by the AF, update the ML model using the feedback from AF, and transmit analytics to the AF using the ML model.
- Effect of VFL:** From NWDAF, AF obtains analytics that “optimized for each application”. The optimized analytics improves the application action, without any raw data exposure from 5GC.



# WT2: Potential 5GC enhancement for VFL

## Two potential enhancements to the coordination between NWDAF and AF should be studied.

- How to share the ML model between AF and NWDAF?
- How to train the ML model while maintaining coordination between AF and NWDAF. The feedback procedure from AF to NWDAF should be enhanced.

