This document is part of the supplementary material for the paper titled 'LLM-Enabled Business Process Coherence Checking Based on Multi-Level Process Documentation' by Schulte, M.; Franzoi*, S.; Köhne, F.; vom Brocke, J. submitted for publication to the journal Process Science (https://link.springer.com/journal/44311).

Section F:

Notification from the aProCheCk Prototype

Title: 🟡 Incoherencies in the 'Gas Order Processing' Process

Dear Process Owner,

As part of the review conducted by the aProCheCk software, the following changes have been identified in the latest BPMN diagram 'Automatic-Order-Generation-Gas_v2.svg', which are relevant to the associated process document 'Manual-Order-Generation-Gas.svg':

Summary: Task names have been updated to reflect newer versions of the tools used

Changes in the Original Document:
1. The task 'Transmit "delivered" status (Driver App)' has been renamed to 'Transmit "delivered" status (Driver App v2)'.
2. The task 'Transmit quantity to CRM (Telematics)' has been renamed to 'Transmit quantity to CRM (Driver App v2)'.

Inconsistencies with the Associated Process Description:
1. The new task names are not reflected in the process document, which could lead to confusion and potential errors during process execution.

Implications of the Changes:
Adoption of the Changes: If the changes are adopted, the process document needs to be updated to reflect the new task names. This ensures coherency between the documents and that all stakeholders use the current tools and versions, avoiding misunderstandings.
Reversal of the Changes: If the changes are reversed, the process document remains coherent, but the use of the latest versions of the tools will not be documented, potentially leading to outdated practices.

Necessary Changes in the Associated Process Document:
1. Update the process model 'Manual-Order-Generation-Gas.svg' to reflect the new task names: 'Transmit "delivered" status (Driver App v2)',
'Transmit quantity to CRM (Driver App v2)'.

Best regards,
Your aProCheCk Team

Fig. 1 Notification for Second Naturalistic Example Process

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Notification from the aProCheCk Prototype

Title: 🟡 Incoherencies in the 'Gas Order Processing' Process

Dear Process Owner,

The aProCheCk software has identified the following changes and incoherencies between the latest version of the text document 'Training-Material_v2.pdf' and the associated process document 'Automatic-Order-Generation-Gas_v2.svg':

Summary: The timeframe for order creation has been extended.

Changes in the Original Document:
1. The timeframe for creating an order in SAP via the interface from CRM has been extended from 7 days to 14 days before the appointment.

Inconsistencies with the Associated Process Description:
1. The associated process document 'Automatic-Order-Generation-Gas_v2.svg' currently states that the order is created 7 days before the appointment. This information is now incoherent with the new 14-day timeframe in the BPMN document.

Implications of the Changes:
Adoption of the Changes: If the changes are adopted, the associated process document needs to be updated to reflect the new 14-day timeframe. This ensures coherency between the documents and that all process participants have the correct information, avoiding misunderstandings or delays.
Reversal of the Changes: If the changes are reversed, the BPMN document needs to be reverted to the original 7-day timeframe to ensure consistency with the current process document. However, this could negate the benefits of the extended planning period.

Necessary Changes in the Associated Process Document:
1. The associated process document 'Automatic-Order-Generation-Gas_v2.svg' should be updated to state that the order is created 14 days before the appointment instead of 7 days. This ensures that both documents are once again coherent and that process participants have the correct information.

Best regards,
Your aProCheCk Team

Fig. 2 Notification for Third Naturalistic Example Process

This document is part of the supplementary material for the paper titled 'LLM-Enabled Business Process Coherence Checking Based on Multi-Level Process Documentation' by Schulte, M.; Franzoi*, S.; Köhne, F.; vom Brocke, J. submitted for publication to the journal Process Science (https://link.springer.com/journal/44311).

Notification from the aProCheCk Prototype

Title: Incoherencies in the 'Process Vehicle Calculations'

Dear Process Owner,

as part of the review conducted by the aProCheCk software, the following changes and incoherencies have been identified between the latest version of the modelling conventions document (*Functional-Modelling-Style_v2.txt*) and the associated BPMN model (*Vehicle-Insurance-Calculations.bpmn*):

Summary: New naming conventions have been introduced.

Changes in the Original Document:
1. Introduction of New Naming Conventions: It has been established that process names must contain only one verb, and all verbs must be written in lowercase.

Inconsistencies with the Associated Process Description:
1. Multiple Verbs in Process Names: The process name 'read and validate input data' in the BPMN model contains two verbs, which does not conform to the new naming conventions.
2. Capitalization of Verbs: The process name 'Read Order' in the BPMN model contains the capitalized verb 'Read', which also violates the new naming conventions.

Implications of the Changes:
Adoption of the Changes: If the changes are adopted, the BPMN model must be adjusted to comply with the new naming conventions. This would improve the readability and consistency of process names.
Reversal of the Changes: If the changes are reversed, the BPMN model remains unchanged, but this would lead to incoherencies with the new naming conventions.

Necessary Changes in the Associated Process Document:
To restore coherence between the BPMN model and the associated modeling conventions, the following adjustments are necessary:
1. Splitting Activities with Multiple Verbs: The process 'read and validate input data' should be divided into two separate activities, e.g., 'read input data' and 'validate input data'.
2. Correcting Verb Capitalization: The process name 'Read Order' should be changed to 'read order'.

Best regards,
Your aProCheCk Team

Fig. 3 Notification for Fourth Naturalistic Example Process