

Case Study

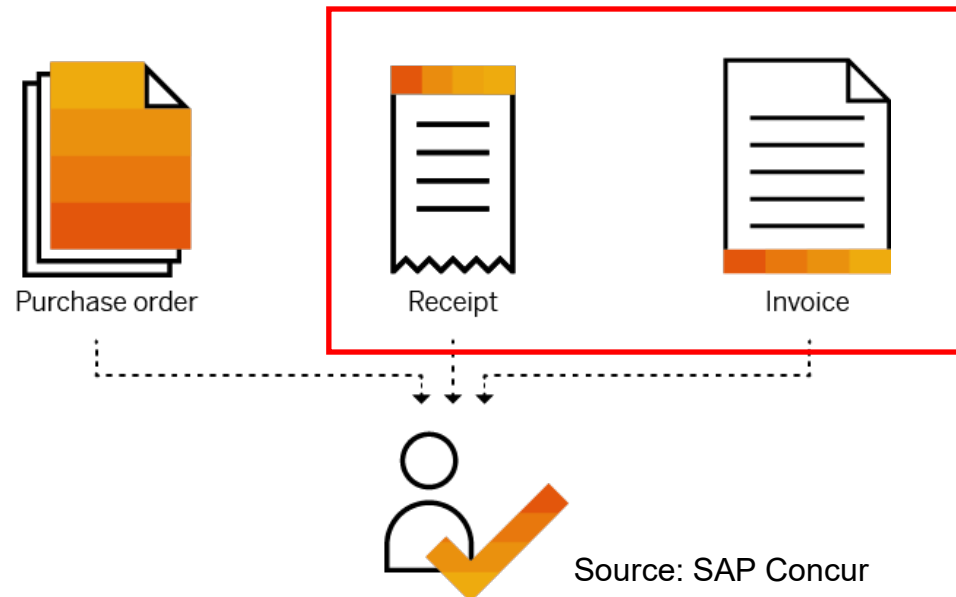
Big Data and Audit

Case tasks



Compliance (1)

3-way match: The process of comparing the purchase order (PO), the goods receipt note (GRN) and the supplier's invoice (I) before approving the invoice for payment.



2-way match: goods receipt note (GRN) and the supplier's invoice (I)

Compliance (2)

Goods Received Not Invoiced (GRNI):

Goods have been received, probably matched to a purchase order, but there is no corresponding invoice.

In most cases, the invoice is the last thing to arrive before a 3-way match, so every transaction will appear as an GRNI at some point.

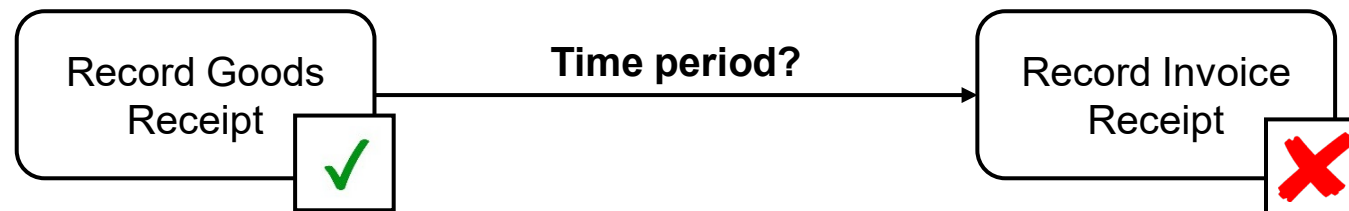
Yet, it becomes an issue, if an invoice does not appear in a timely fashion after the receipt of goods. The absence of an invoice after a prolonged amount of time points to a systematic problem with the purchase-to-pay process and should draw attention of the auditors.

Compliance (3)

Task Compliance:

Analyze whether “Goods Received Not Invoiced (GRNI)” exist within the data and provide further detail for identified cases.

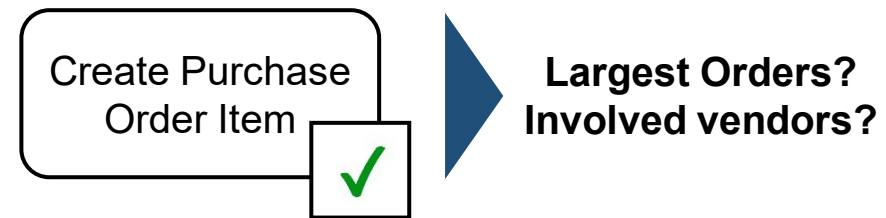
Please put together a dashboard for future use of your audit colleagues.



Finance (1)

Task Finance:

Show the cases with the largest order value.



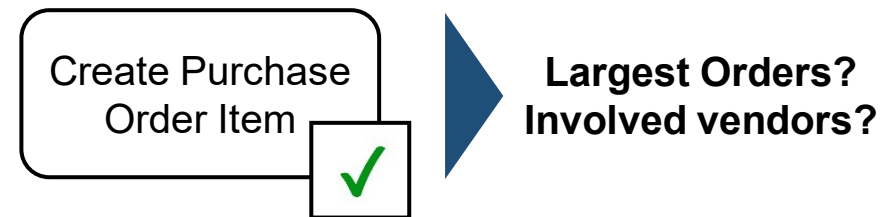
Hints:

- Order values can be found using the attribute “CUMULATIVE NET WORTH (EUR)”.
- The individual cases have “CASE CONCEPT:NAME” as identifier (ID).
- To be able to focus on the amount that is included in the single activity “Create Purchase Order Item”, navigate through “BPI_Challenge_2019_csv” to “EVENT CONCEPT:NAME” first.

Finance (2)

Task Finance:

Show the cases with the largest order value.



Largest orders?

Sort the OLAP table by order size.

Involved vendors?

Regarding the vendors for the very large orders:

Select single vendors and examine their other orders. Were there little or many? Were the others also large?

Fraud (1)

There are several options for analysis, e.g. do you have “suspicious” cases, in which there were deviations from the standard procedure? This can be a hint for errors or fraud.

Normally work is done on weekdays. If people perform activities on Sundays (or very early in the morning) it might be because they want to be alone and undisturbed.

Task Fraud:

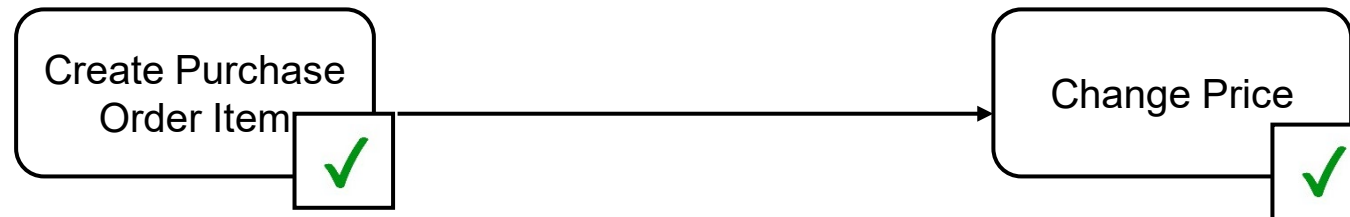
Search for cases with activities on Sundays.

Hints:

- Edit the pie diagram (→ Edit Mode = on + Double click on it)
- In the menu on the right side delete the “Dimension: CASE SPEND AREA TEXT”, add the “Dimension: BPI_Challenge_2019_csv → EVENT TIME:TIMESTAMP → Weekday”, accept with “Done”.

Operations (1)

Some purchase orders are changed after they have been created. Possible changes include the ordered quantity, but also the price of the item.. For the auditor, these changes could mean that the process is not always followed as intended.



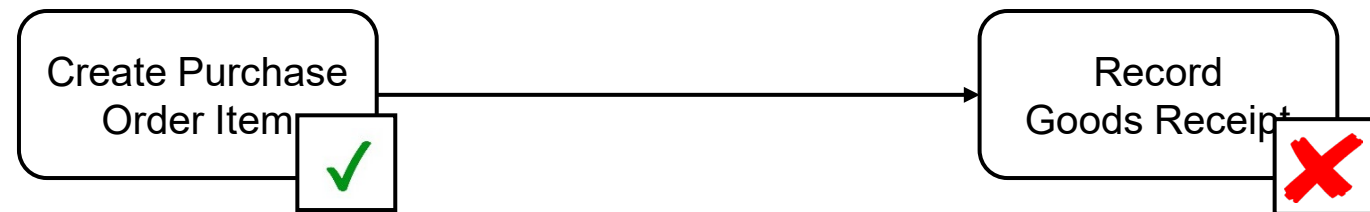
Task (a):

Take a look at all cases containing changes to the price after the purchase order was created (increases or decreases). How many cases comprise increases or decreases of the price respectively?

Operations (2)

Goods receipt generally includes the process of matching the received goods with the purchase order. It involves checking whether the goods are suitable for the purpose they were ordered and are in good condition.

There might be purchase orders without any corresponding goods receipt. Exhibiting a large number of purchase orders, without the goods being received yet, could indicate a faulty process layout prone to errors.



Task (b):

Analyze all cases with purchase orders missing goods receipt.

When were these purchase orders created?

Final presentations and discussion

For the final discussion your team is asked to:

1. Briefly show your work done in Celonis
(dashboard for compliance, finance, fraud, operations (a) and (b))
2. Express an opinion on the future importance of process mining for internal auditing, external auditing and consulting.