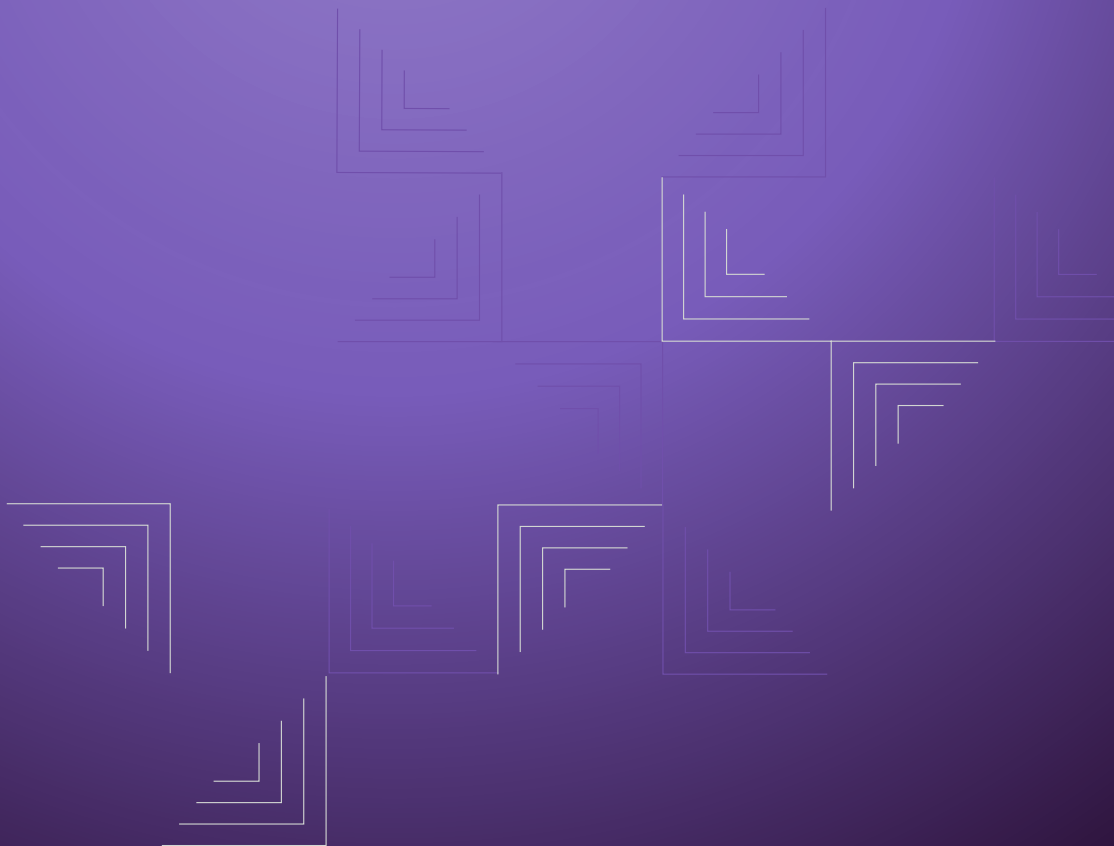




Essentials: Purchase Order Management



Contents

Page	Analytic Name
3	Split purchase orders <i>PO Analytic 01</i>
5	Duplicate purchase orders <i>PO Analytic 02</i>
7	Purchase orders created and approved by the same user <i>PO Analytic 03</i>
9	Goods received voucher before purchase order date <i>PO Analytic 04</i>
11	Goods received voucher is 30 days past the purchase orders approval date <i>PO Analytic 05</i>
13	Price differences between purchase order items with the same vendor <i>PO Analytic 06</i>
15	Same user created the purchase order and receipted the goods received voucher <i>PO Analytic 07</i>
17	Purchase orders report by month <i>PO Analytic 08</i>
19	Split purchase requisitions <i>PO Analytic 09</i>
21	Compare purchase orders to purchase requisitions <i>PO Analytic 10</i>
23	Purchase orders with no purchase requisitions <i>PO Analytic 11</i>



Split Purchase Orders

PO_ANALYTIC_01_PMCS101

Identifies split purchase orders where the same material was ordered from the same vendor by the same creator within a configurable number of days

Context

Identifies possible incorrect or fictitious purchase transactions that should be investigated. Additionally, less stringent approvals are applied to lower value purchase orders.

Risk

Incorrect or fraudulent purchase transactions resulting in a possible financial loss.

Procedure

Identifies split purchase orders where the same material was ordered from the same vendor by the same creator within a configurable number of days.

Note: In some businesses, separate purchase orders are created for delivery of the same materials to different locations. These orders may look like split purchase orders.

Analytic Logic

Extracts all approved purchased orders for the period under review to determine potential split purchase orders where the order is for the same vendor for the same material by the same creator within a determinable number of days of each order. The quantity may differ between orders.

Variables

Number of days.

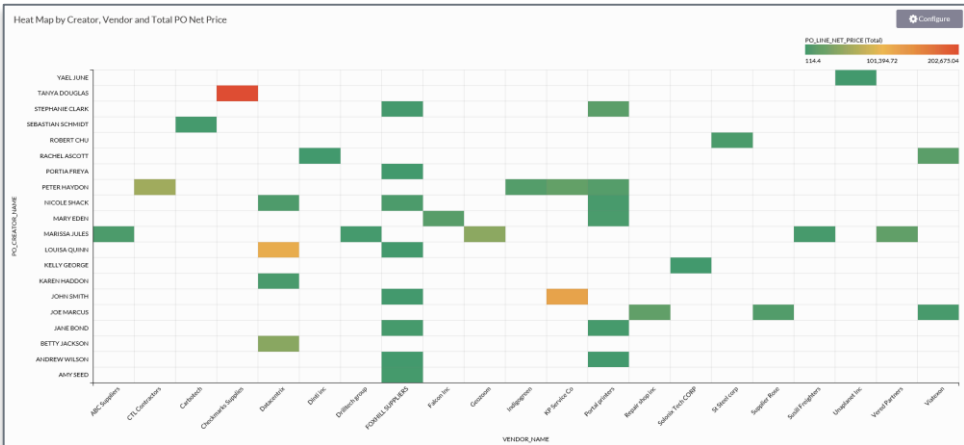
Example

Grouping	PO Number	PO Line Number	Line Description	Quantity	Date
Group 1	23586	01	Steel sheet	2	21/03/2018
Group 1	23587	01	Steel sheet	3	24/03/2018
Group 1	23589	01	Steel sheet	5	25/03/2018

Output Results Field Names

- Company Code
- Company Name
- Plant code for PO Line
- Plant name for PO
- PO Vendor ID
- Vendor Name
- PO Document Date
- PO Number
- PO Line Number
- Material Number
- Material Line Description
- PO Line Quantity
- PO Line Net Price
- PO Line Net Price Currency
- PO Creator
- PO Creator Name
- Results Grouping

Output Visualization Examples



Net price by description for a vendor



Duplicate Purchase Orders

PO_ANALYTIC_02_PMCS102

Identifies duplicate purchase orders where the same quantity of material was ordered from the same vendor within a configurable number of days

Context

Identifying possible incorrect or fraudulent orders placed.

Risk

Incorrect or fraudulent purchase transactions resulting in a possible financial loss.

Procedure

Identifies duplicate purchase orders where the same quantity of material was ordered from the same vendor within a configurable number of days.

Note: In some cases purchase orders may be the same but are for staggered delivery dates and are intended to be raised as such.

Analytic Logic

Extracts all approved purchase orders for the period under review to determine potential duplicate purchase orders where the order is for the same vendor for the same material and the same quantity within a determinable number of days of each order. The orders can be created by different users.

Variables

Number of days.

Example

Grouping	PO Number	Po Line Number	Line Description	Quantity	Date
Group 1	24621	01	Hard drives	2	21/03/2018
Group 1	24985	01	Hard drives	2	24/03/2018
Group 1	24257	01	Hard drives	2	25/03/2018

Fields used for analytics logic

Output Results Fields

Company Code

Company Name

Plant code for PO Line

Plant name for PO

PO Vendor ID

Vendor Name

PO Document Date

PO Number

PO Line Number

Material Number

PO Material Description

PO Line Quantity

PO Line Net Price

PO Line Net Price Currency

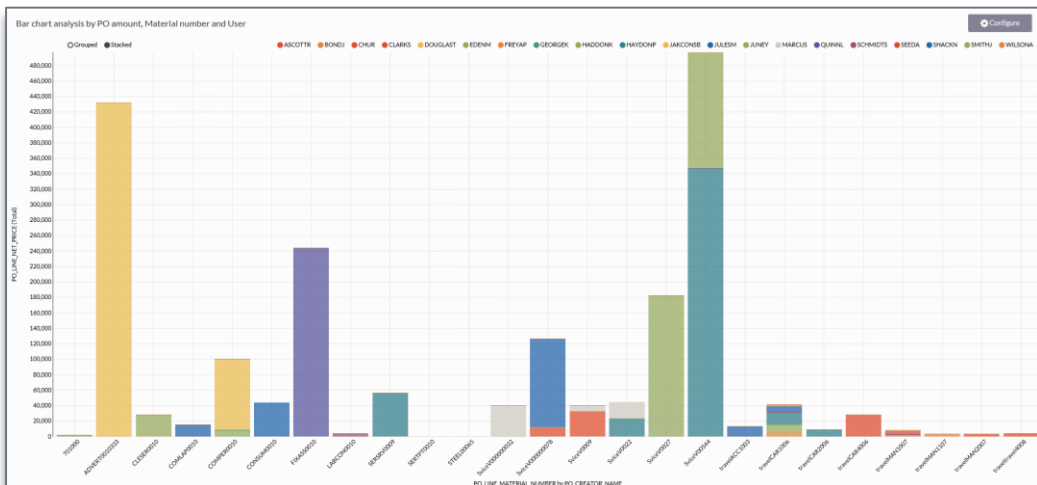
PO Creator

PO Creator Name

Results Grouping

Output Visualization Example

Bar chart analysis by PO amount, material number and user





Purchase Orders Created And Approved By The Same User

[PO_ANALYTIC_03_PMCS103](#)

Identifies where the same user created and approved the purchase order

Purchase Orders Created And Approved By The Same User

Context

Good business practice requires adequate segregation of duties between the creation and approval of purchase orders to ensure accuracy and validity of purchase orders.

Risk

Incorrect or fraudulent purchase transactions resulting in a possible financial loss.

Procedure

Identifies where the same user created and approved the purchase order.

Analytic Logic

Extracts the creator and approver of all purchases orders to detect where the creator is the same as the approver of the purchase order.

Example

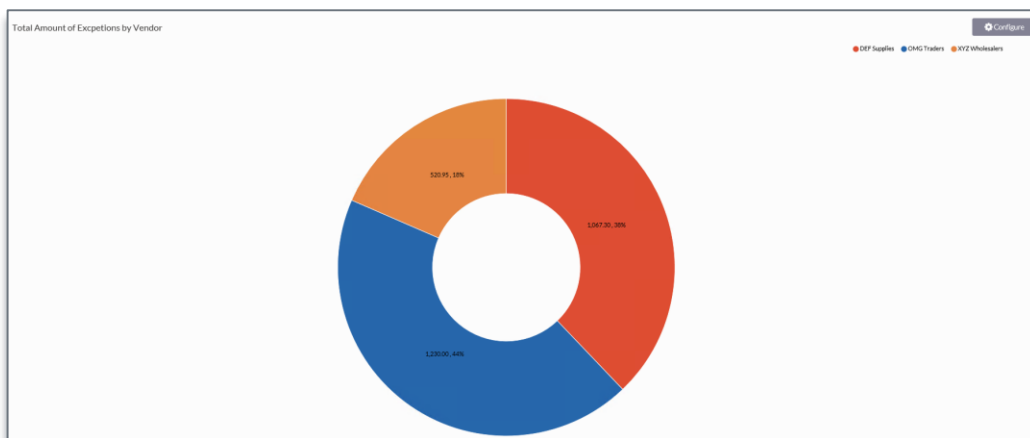
PO Number	PO Approver ID	PO Approver Name	PO Creator ID	PO Creator Name
23586	1234	Joe Soap	1234	Joe Soap
23587	2562	Jane Doe	2562	Jane Doe
23589	1485	Mark Smith	1485	Mark Smith

Fields used for analytics logic

Output Results Field Names

Company Code	Company Name	Plant code for PO Line	Plant name for PO	Approved PO Number
PO Line Number	PO Creator	PO Creator Name	PO Approver ID	PO Approver Name
PO Vendor ID	Vendor Name	PO Document Date	PO Line Description	PO Product Number
PO Line Net Order Value	PO Line Quantity			

Output Visualization Example



Total amount of exceptions by vendor



Goods Received Voucher Before Purchase Order Date

PO_ANALYTIC_04_PMCS104

Identifies where the goods received voucher is before purchase order date

Goods Received Voucher Before Purchase Order Date

Context

Goods should be ordered and received only after the purchase order is created and approved. Instances where the receipt date of goods is before the date the purchase order is created should be investigated to determine the validity and accuracy of the transaction.

Risk

Incorrect or fraudulent purchase transactions resulting in a possible financial loss.

Procedure

Identifies where the goods received voucher is before purchase order date.

Note: In some businesses there is a need for emergency or last minute purchases that are necessary to keep operations running. In these cases, a purchase order may be raised after the services or goods are received.

Analytic Logic

Extracts the date of the goods receipt and the approval date of the purchase order and compare where goods were received before the PO.

Example

GR Doc Number	GR Doc Date	PO Number	PO Doc Date	Day Diff PO GR
15875	27/12/2016	23685	04/01/2017	8
16958	02/03/2017	24697	14/03/2017	12
17542	19/05/2017	25894	29/05/2017	10

Fields used for analytics logic

Output Results Field Names

Company Code

Company Name

Goods Received Plant

Goods Received Plant Name

Goods Received Document Number

Goods Received Reference Document Number

Goods Received Quantity

Goods Received Creator Name

Goods Received Document Date

Goods Received Posting Date

PO Document Date

PO Number

PO Line Number

PO Vendor ID

Vendor Name

Product Code

PO Description

PO Quantity

PO Line Net Price

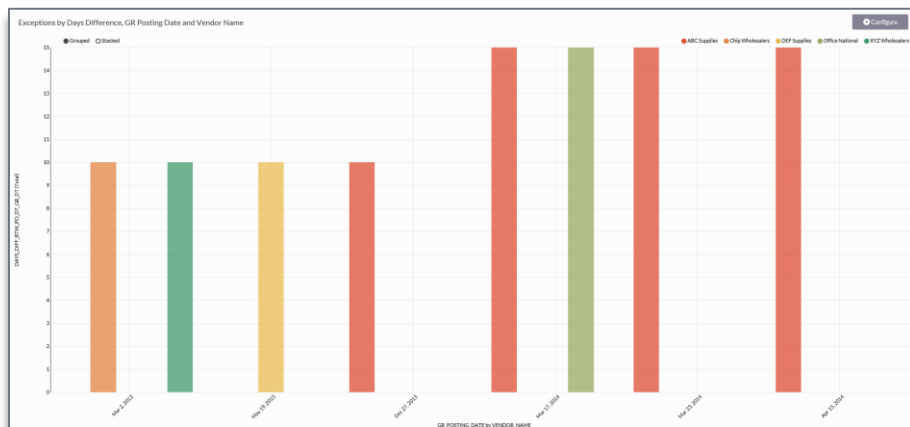
PO Price Currency

PO Creator

Days Difference Between PO Date and GR Date

PO Creator Name

Output Visualization Example



Exceptions by days difference, GR posting and vendor name



Goods Received Voucher Is 30 Days Past The Purchase Order Approval Date

PO_ANALYTIC_05_PMCS105

Identifies where the goods received voucher is 30 days past the purchase order approval date

Goods Received Voucher Is 30 Days Past The Purchase Order Approval Date

Risk

Possible delay in service delivery experienced.

Procedure

Identifies where the goods received voucher is 30 days past the purchase order approval date. Note: Goods that are imported or known to take a long time to deliver based on the vendor or nature of stock may result in false positives for this analytic.

Analytic Logic

Extracts the date of goods receipts that is more than 30 days after the approval date of the purchase order.

Context

Turnaround time between ordering goods and receiving goods should be kept to a minimum. Instances where order and receipt of goods are 30 days and more apart should be investigated.

Example

GR Doc Number	GR Doc Date	PO Number	PO Approval Date	Day Diff PO GR
15875	01/06/2017	23685	27/04/2017	35
16958	03/07/2017	24697	28/05/2017	40
17542	24/08/2017	25894	15/07/2017	40

This date is 30 days or more past the PO approval date

Fields used for analytics logic

Output Results Field Names

Company Code

Company Name

Goods Received Plant

Goods Received Plant Name

GRN Number

GRN Reference Document Number

Goods Received Quantity

GRN Date

GRN Posting Date

GRN Creator

GRN Creator Name

PO Approval Number

PO Number

PO Line Number

PO Vendor ID

PO Line Material Number

PO Line Description

PO Line Net Order Value

Vendor Name

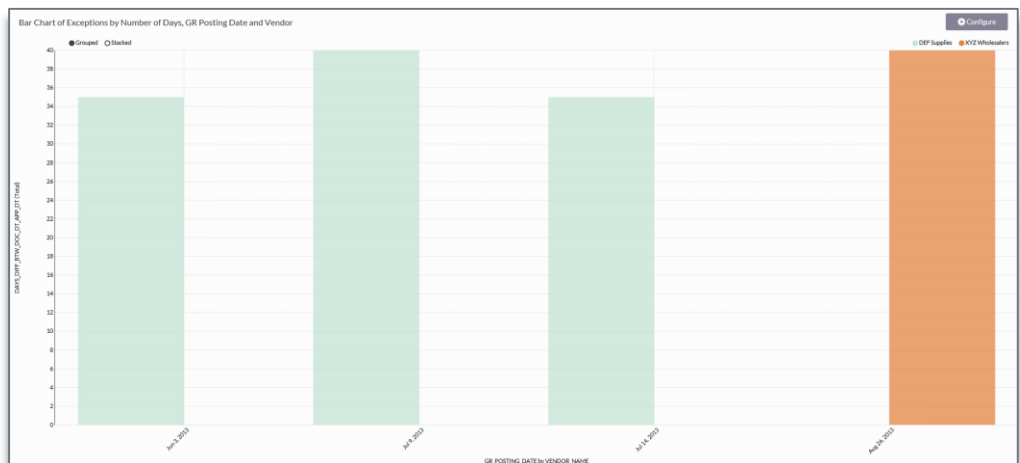
PO Creator

PO Creator Name

Days Difference Between PO Date and GRN Date

Output Visualization Example

Bar chart of exceptions by number of days, GR posting date and vendor





Price Differences Between Purchase Order Items With The Same Vendor

PO_ANALYTIC_06_PMCS107

Identifies price differences between purchase order items with the same vendor

Price Differences Between Purchase Order Items With The Same Vendor

Context

Price differences with the same vendor should be investigated as this could be a result of incorrect capturing. It could also be used to manage supplier performance and service delivery.

Risk

Decreased profit margins due to incorrect capturing or ineffective supplier management.

Procedure

Identifies price differences between purchase order items with the same vendor.

Note: If this analytic is run for a period that is a relatively long cycle for a business, differences may occur because of inflation or expected price increases. The period for analysis is key to obtaining relevant results. For example, if this analytic is run for a month, it is not expected that there would be material differences.

Analytic Logic

Extracts the materials purchased from the same vendor and compares the per unit price (per the stock system) between orders for the period under review to identify where prices are different for the same material between orders.

Example

Vendor Name	PO Material NO	PO Doc Date	PO Line Text	PO Line Net Price
Abc Supplies	2001254	06/01/2017	Red pens	1.5
Abc Supplies	2001254	12/02/2017	Red pens	8.5
Abc Supplies	2001254	07/04/2017	Red pens	4.0

Price differs for same item

Fields used for analytics logic

Output Results Field Names

Company Code

Company Name

PO Plant Code

PO Plant Name

PO Vendor ID

Vendor Name

PO Document Date

PO Number

PO Line Number

PO Line Material Number

PO Line Description

PO Line Quantity

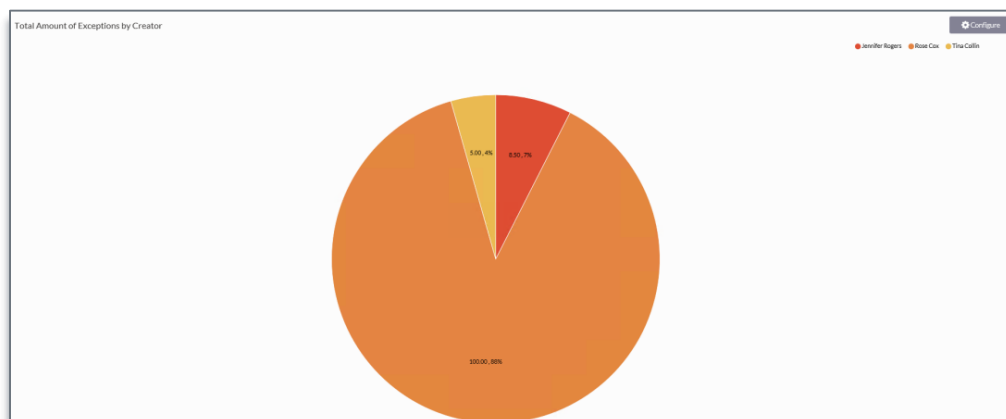
PO Line Net Price

PO Line Net Price Currency

PO Creator

PO Creator Name

Output Visualization Example



Total amount of exceptions by creator



Same User Created The Purchase Order And Receipted The Goods Received Voucher

PO_ANALYTIC_07_PMCS108

Identifies where the same user created the purchase order and receipted the goods received voucher

Same User Created The Purchase Order And Received The Goods Received Voucher

Context

Good business practice requires adequate segregation of duties between the person creating the purchase order and the person receiving goods ordered to ensure accuracy and validity of the purchase transaction.

Risk

Incorrect or fraudulent purchase transactions resulting in a possible financial loss.

Procedure

Identifies where the same user created the purchase order and received the goods received voucher.

Analytic Logic

Extracts the user ID of the creator of a purchase order and the user ID of who received the goods and extracts records where it is the same user ID.

Example

PO Number	PO Creator ID	PO Creator Name	GR Creator ID	GR Creator Name
23586	1245	Sarah Jane	1245	Sarah Jane
23587	2595	Jennifer Roberts	2595	Jennifer Roberts
23589	1467	Tom Harris	1467	Tom Harris

Fields used for analytics logic

Output Results Field Names

Company Code Company Name Goods Received Plant PO Plant Name Goods Received Plant Name

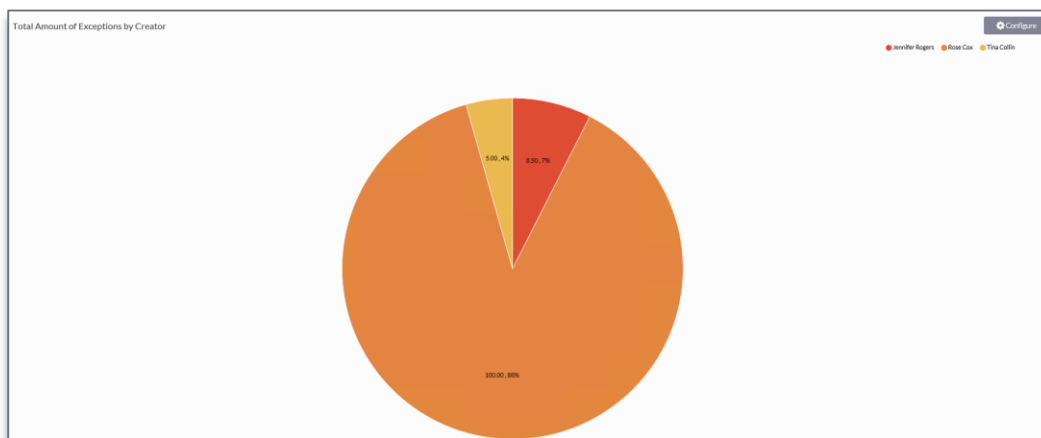
GRN Document Number GRN Reference Document Number Goods Received Quantity GRN Document Date

GRN Posting Date Goods Received Creator Goods Received Creator Name PO Creator PO Creator Name

PO Line Number PO Vendor ID Vendor Name PO Line Material Number PO Document Date

PO Number PO Line Net Price PO Line Description PO Line Quantity PO Line Net Price Currency

Output Visualization Example



Total amount of exceptions by creator



Purchase Orders Report By Month

[PO_ANALYTIC_08_PMCS301](#)

Report of purchase orders per item per month



Purchase Orders Report By Month

Context

Management information used to analyze performance and identify variations from expected/budgeted performance. Deviations should be investigated and results used as input for future planning.

Risk

Ineffective planning and performance management.

Procedure

Report of purchase orders per item per month.

Analytic Logic

Extracts orders of materials from underlying purchase orders and present the data by month and by material.

Output Results Field Names

Company Code

PO Line Material Number

PO Material Description

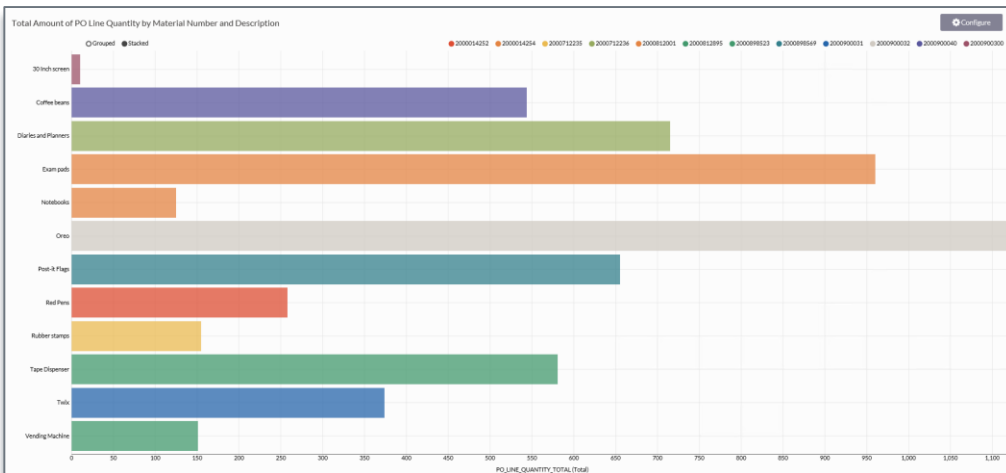
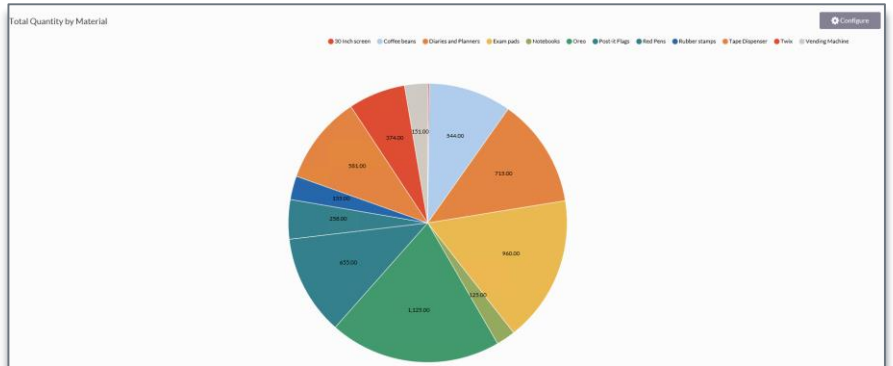
PO Line Quantity by Month

Output Visualization Examples

PO_LINE_MATERIAL_NUMBER	PO_MATERIAL_DESCRIPTION	PO_LINE_QUANTITY_06_JUNE_2015	PO_LINE_QUANTITY_07_JULY_2015	PO_LINE_QUANTITY_08_AUGUST_2015	PO_LINE_QUANTITY_09_SEPTEMBER_2015	PO_LINE_QUANTITY_10_OCTOBER_2015	PO_LINE_QUANTITY_11_NOVEMBER_2015	PO_LINE_QUANTITY_12_DECEMBER_2015	PO_LINE_QUANTITY_TOTAL
2000014252	Red Pens	196	0	40	0	0	0	22	238
2000014254	Exam pads	366	364	50	0	0	180	0	960
2000712235	Rubber stamps	0	0	10	88	0	0	57	155
2000712236	Diaries and Planners	0	0	15	0	700	0	0	715
2000812001	Notebooks	0	115	0	0	0	5	5	125
2000812095	Vending Machine	0	1	0	150	0	0	0	151
2000898523	Face Dispenser	0	0	3	0	490	0	0	581
2000898549	Post-it Flags	15	190	0	0	0	400	0	605
2000900021	Tels	0	0	280	0	0	0	24	274
2000900022	Ones	0	906	0	225	0	0	0	1123
2000900040	Coffee beans	122	0	0	0	186	225	11	544
2000900300	30 inch screen	0	0	10	0	0	0	0	10

Summary table of PO quantity by material and month

Total quantity by material



Total amount of PO line quantity by material number and description



Split Purchase Requisitions

PO_ANALYTIC_09_PMCS611

Identifies split purchase requisitions where the same material is requested by the same creator within a configurable number of days

Context

Identifies possible incorrect or fictitious purchase transactions that should be investigated.

Risk

Incorrect or fraudulent purchase transactions resulting in a possible financial loss.

Procedure

Identifies split purchase requisitions where the same material is requested by the same creator within a configurable number of days.

Analytic Logic


Extracts all approved purchased requisitions for the period under review to determine potential split purchase requisitions where the requisition is for the same material by the same creator within a determinable number of days of each requisition. The quantity may differ between requisitions.

Variables

Number of days.

Example

Grouping	PR Number	PR Line Number	Line Description	Quantity	Date
Group 1	78569	01	Exam pads	2	21/04/2018
Group 1	78575	01	Exam pads	3	24/04/2018
Group 1	78582	01	Exam pads	6	25/04/2018

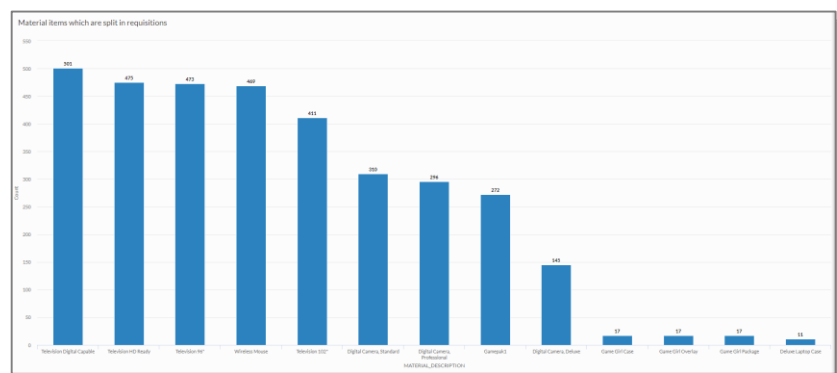
 Fields used for analytics logic

Output Results Field Names

Company Code	Company Name	Purchase Requisition Plant Code	Purchase Requisition Plant Name	
Purchase Requisition Number	Purchase Requisition Date	PR Line Item Number	Material Item Number	
Material Description	Material Quantity	Material Unit Price	Unit of Measure	Results Grouping
Recommended Vendor ID	Recommended Vendor Name	Requisitioner User ID	Purchase Requisition Approver Name	

Output Visualization Example

Material items which are split in requisitions





Compare Purchase Orders To Purchase Requisitions

[PO_ANALYTIC_10_PMCS612](#)

Identifies any purchase orders where there are differences between the purchase order and purchase requisition quantities and items

Compare Purchase Orders To Purchase Requisitions

Context

Orders that are placed by procurement should be based on the item and quantities requested by end users from the purchase requisition submitted.

Risk

Incorrect items or quantities ordered resulting in possible over stocking.

Procedure

Identifies where there are differences between the purchase order and purchase requisition material item and quantity.

Analytic Logic

Extracts all purchase order and purchase requisition information where the purchase requisition material item description and quantity differs from the purchase order material item and description.

Example

PO Number	PO Line Description	PO Qty	PR Number	PR Line Description	PR Qty
25698	Red pens	10	17854	Red pens	8
25369	Exam pads	20	17853	Exam pads	12
25487	Post It Flags	5	17652	Post It Flags	2

Fields used for analytics logic

Output Results Field Names

Company Code

Company Name

PO Vendor ID

Vendor Name

PO Document Date

PO Number

PO Material Number

PO Material Description

PO Line Quantity

Purchase Requisition Number

Purchase Requisition Material Quantity

Purchase Requisition Date

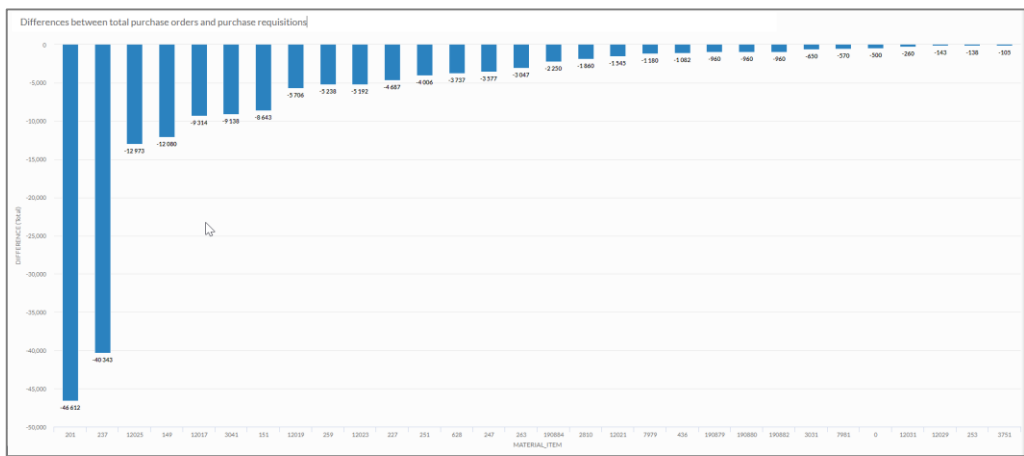
Difference

PO Creator Name

Purchase Requisition Approver Name

Output Visualization Example

Differences between total purchase orders and purchase requisitions





Purchase Orders With No Purchase Requisitions

[PO_ANALYTIC_11_PMCS613](#)

Identifies those purchase orders that have been created without a purchase requisition

Purchase Orders With No Purchase Requisitions

Context

Before a purchase order for a particular item can be generated, the need for the item needs to be communicated to the procurement department. This is generally done by means of a purchase requisition.

Risk

Incorrect items or quantities ordered resulting in possible over stocking.

Procedure

Identifies any purchase orders that have been created without having a purchase requisition that initiated the order.

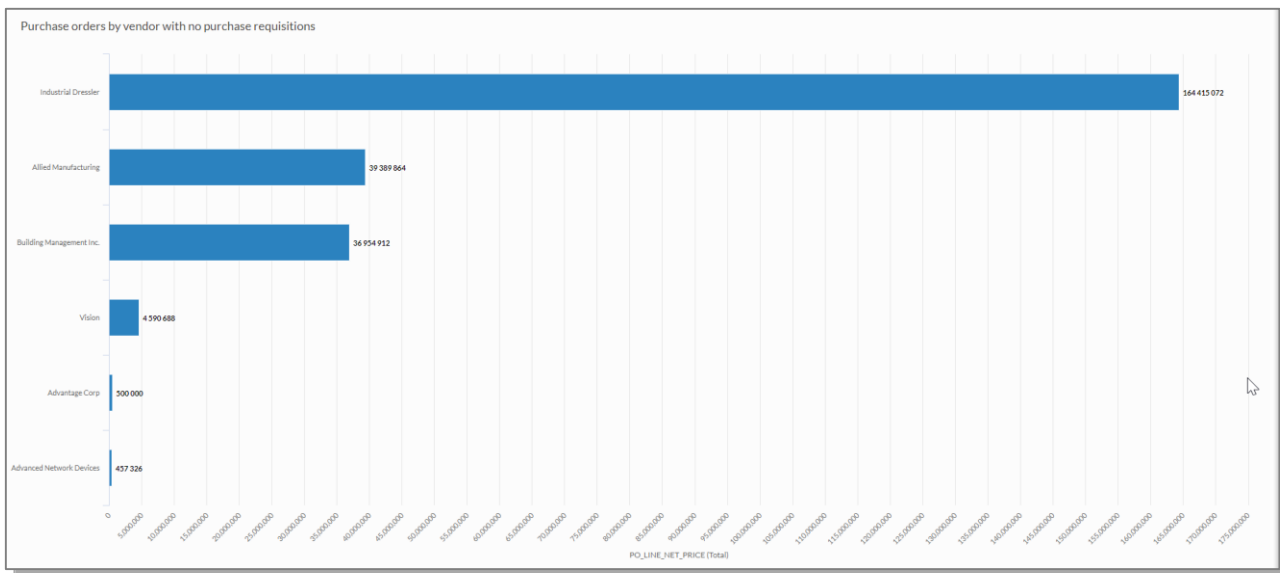
Analytic Logic

Extracts all purchase order information where there is no purchase requisition linked to that purchase order.

Output Results Field Names

Company Code	Company Name	PO Vendor ID	Vendor Name	PO Document Date	PO Number
PO Line Number	PO Line Material Number	PO Line Quantity	PO Material Description	PO Line Net Price	
PO Creator Name	PO Line Net Price Currency	PO Creator			

Output Visualization Examples



Purchase orders by vendor with no purchase requisitions