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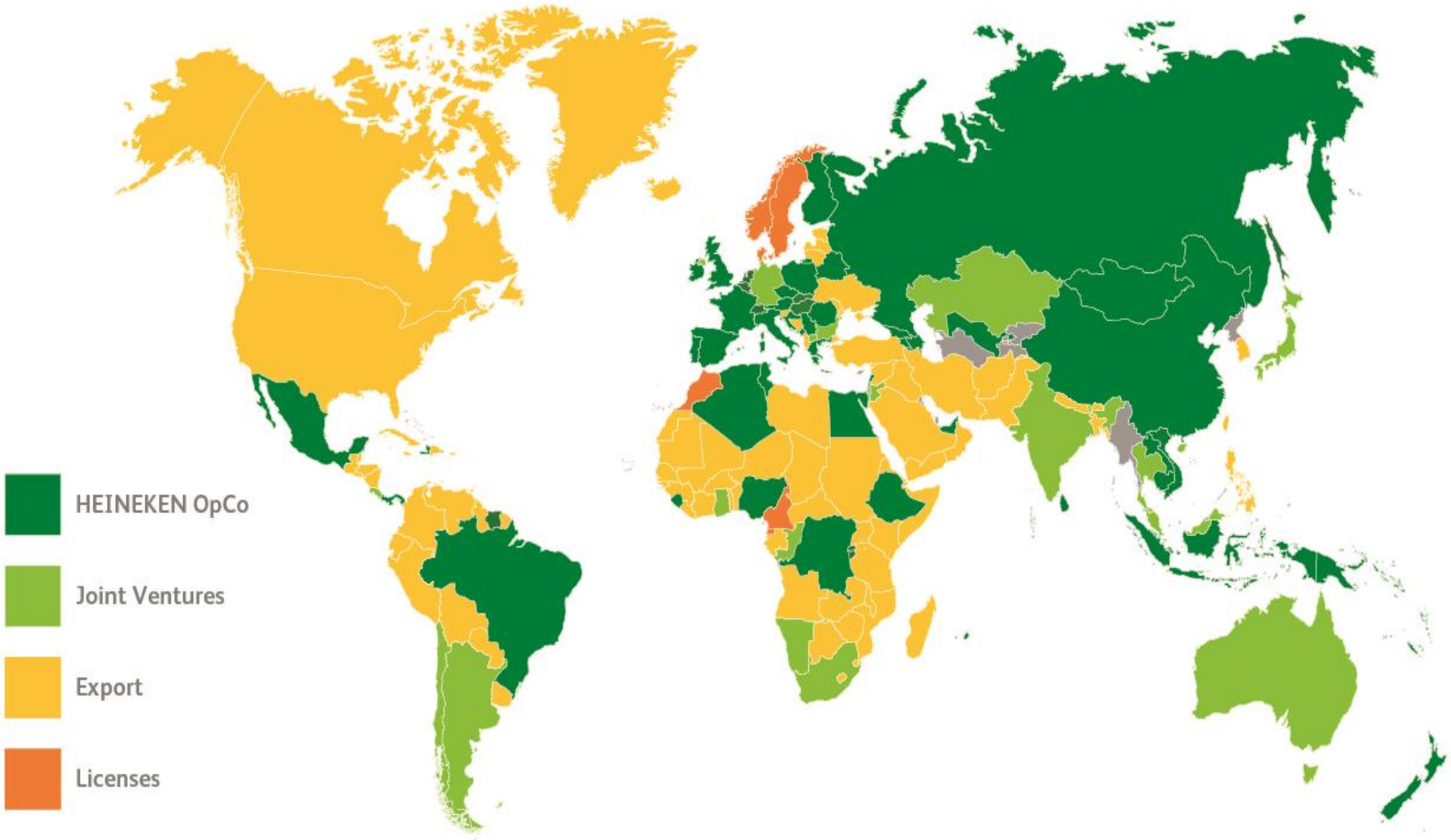
HEINEKEN International

Data analytics in the IAF

EXPLORE DISCOVER EXPERIENCE
IIA CONGRES 2016

Instituut van Internal Auditors Nederland

HEINEKEN Global Presence



HEINEKEN Key Numbers 2015

Revenue
(In millions of EUR)

€20,511m

2015	**20,511**
2014	19,257
2013	19,203
2012	18,383
2011	17,123

Consolidated beer volume
(In millions of hectolitres)

188.3mhl

2015	**188.3**
2014	181.3
2013	178.3
2012	171.7
2011	164.6

Heineken® volume in premium segment
(In millions of hectolitres)

30.5mhl

2015	**30.5**
2014	29.5
2013	28.1
2012	29.1
2011	27.4

Operating profit (beia)
(In millions of EUR)

€3,381m

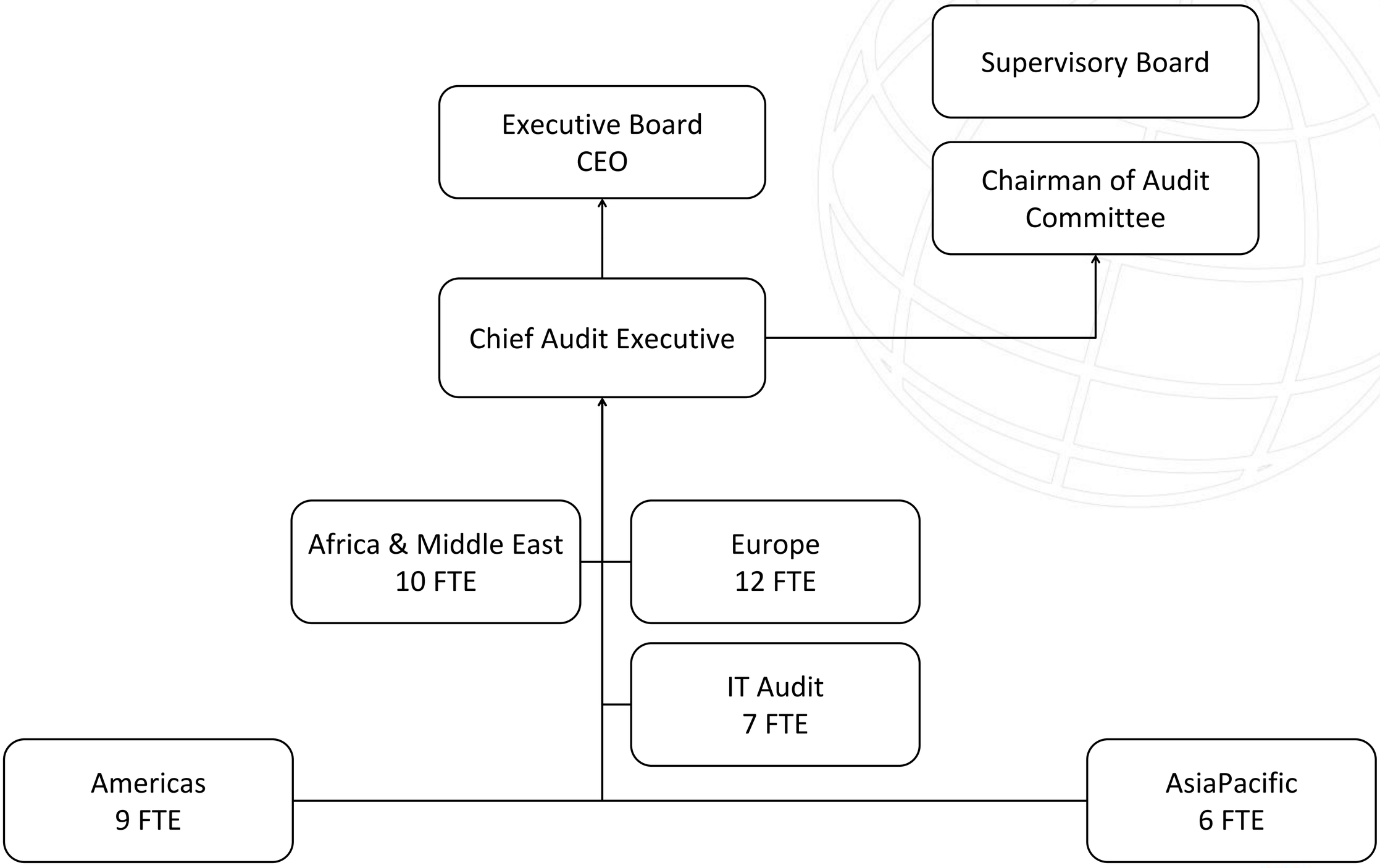
2015	**3,381**
2014	3,129
2013	2,941
2012	2,666
2011	2,456

Net profit (beia)
(In millions of EUR)

€2,048m

2015	**2,048**
2014	1,758
2013	1,585
2012	1,661
2011	1,584

Global Audit



The challenge

- 75 + Operating Companies across all regions in the world

- Highly diverse system landscape
  - SAP systems in Europe, Mexico, Brasil
  - Navision in most OpCos in Africa
  - JDE in most OpCos in AsiaPacific

  - Plus several others & many different versions in use

- Different maturity levels in the operating companies

- Diverse processes, data models and data quality

- Diverse skill sets and appetite within Global Audit

- Various Data Analytics initiatives ongoing in other functions, incl. IT

The Vision

Our 7 Guiding Principles for Data Analytics

- ✓ ***Provide central, independent, and easy access to key data fundamental to our audit work***
- ✓ ***Develop minimum required competences to auditors to understand, handle and interpret data***
- ✓ ***Free up auditors from the production of analytics so they can focus on analysing***
- ✓ ***Provide a basis for repeatable, efficient and consistent audits in the future***
- ✓ ***Avoid overlaps and inefficiences with other lines of defense but without compromising the work we do; and leverage on existing and future data platforms***
- ✓ ***Ensure the application of analytics in everything we do in sustainable manner***
- ✓ ***Drive shift towards a data driven mindset***

The Project

Identification → Production → Consumption

People & Capabilities

- ✓ DA Core Team
- ✓ Support KPMG, Synaxion
- ✓ Full time DA Manager
- ✓ Strong support GA MT
- ✓ Define min. competencies
- ✓ Training Excel, SAP, Navision
- ✓ Incl. in target setting

Process

- ✓ Engagement audit teams
- ✓ Audit scoping
- ✓ Definition of indicators
- ✓ Library tests / reports
- ✓ Sharepoint
- ✓ Descriptive vs diagnostic

Technology

- ✓ Access to data
- ✓ Data Extraction
- ✓ Data Cleansing
- ✓ Data Modelling
- ✓ License agreement
- ✓ IT infrastructure
- ✓ Deliver initial dashboards

The Pilot

Identified Indicators

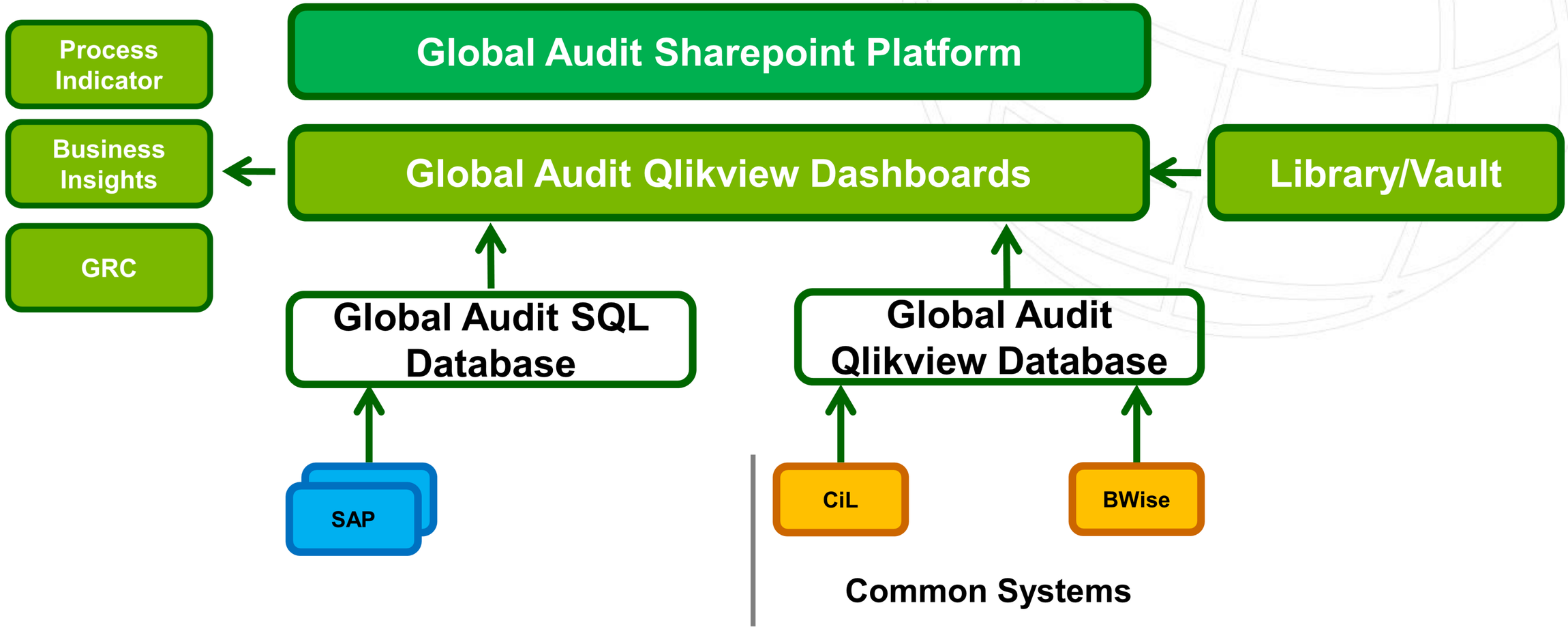
Prepared Qlikview Dashboards

Performed analytical procedures

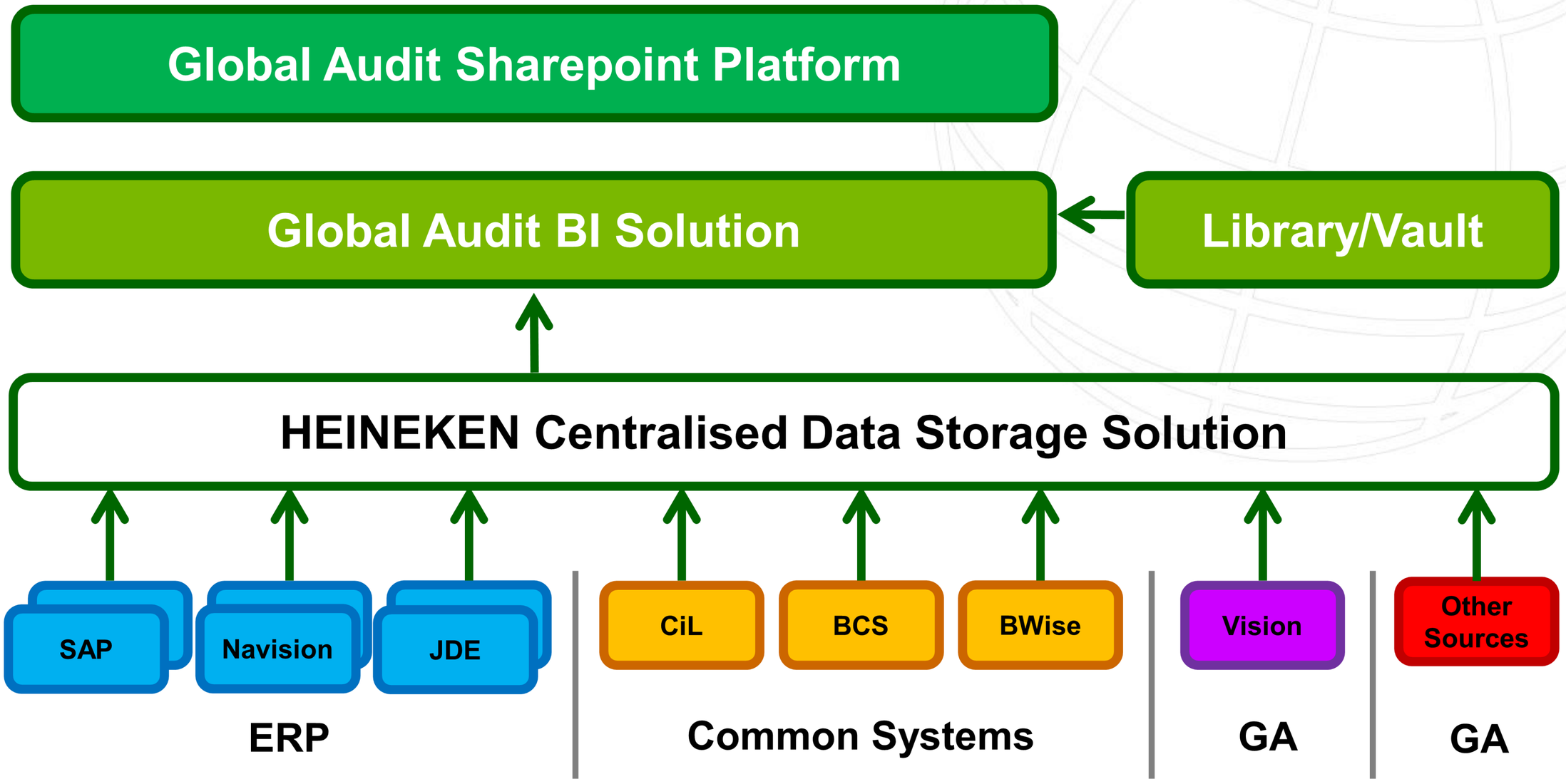
Follow up through interviews

- Backdated posting
- Parked documents
- Reversed documents
- Posting unusual times
- Manual posting bank accounts

Temporary solution architecture



End state solution architecture



Screen shots

Business insights Dashboard

Index | Sales Volume | Financials | Red Flags Analysis

HEINEKEN

Year: 2015 Month: Nov Region: EUR - Europe OpCo:

Sales Volume | Financials | Red Flags

2014 2015 2016

Jan Feb Mar Apr
May Jun Jul Aug
Sep Oct Nov Dec

Region / OpCo

Region: EUR – Europe

OpCo:

1 EUR = 1.000 Euro

Inflation rate: 51%

VAT rate: 20%

Market size: 19mln hl

30 liters

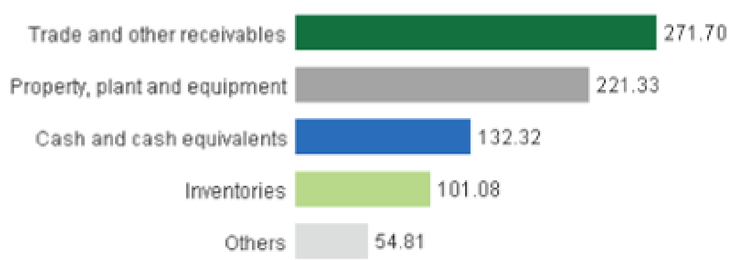
Balance Sheet - YTD (in mln EUR)

		Actual	Last Year	% vs. LY
Non current assets	Property, plant and equipment	221.33	225.51	–
	Intangible assets	26.36	25.14	–
	Other non current investments	9.76	10.11	–
	Deferred tax assets	6.74	7.10	–
Current assets	Inventories	101.08	92.91	–
	Investments held for trading	0.07	0.07	–
	Receivables from Group entities – non financing...	9.88	13.85	–
	Trade and other receivables	271.70	211.82	–
	Cash and cash equivalents	132.32	90.13	–
	Income tax receivables	2.00	1.32	–
Total		**781.24**	**677.95**	–
Equity	Equity attributable to equity holders of the comp...	(16.98)	(0.27)	–
	Minority interests	(0.09)	(0.09)	–
Liabilities	Non Current Liabilities	(228.22)	(211.42)	–
	Current liabilities	(535.95)	(466.18)	–
Total		**(781.24)**	**(677.95)**	–

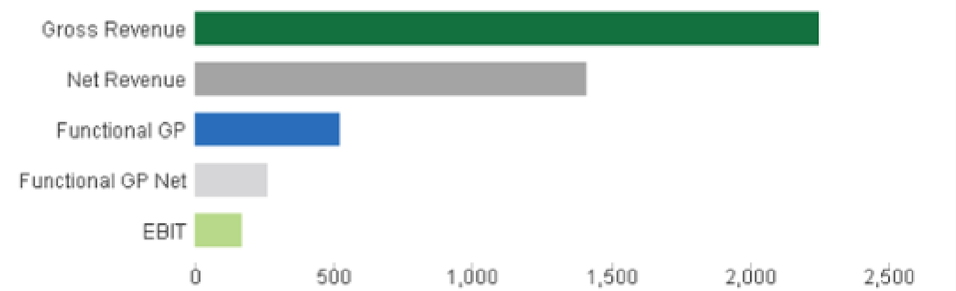
Income Statement - YTD (in mln EUR)

	Actual	% of Revenue	per HL
Volumes sold (excl. intra/inter)	**4.97**	–	**0.87**
Gross Revenue	**2,250.20**	**100%**	**395.59**
Gross revenue (excl. excise)	2,042.62	91%	359.10
Discounts to customers	-372.31	(0%)	(65.45)
Variable selling expenses	-268.80	(0%)	(47.26)
Net Revenue	**1,409.04**	**63%**	**247.71**
Cost of Goods Sold	-757.11	(0%)	(133.10)
Logistics Expenses	-129.66	(0%)	(22.79)
Functional GP	**522.27**	**23%**	**91.82**
ATL/BTL Expenses	-81.25	(0%)	(14.28)
Others Commercial Expenses	-179.14	(0%)	(31.49)
Functional GP Net	**261.88**	**12%**	**46.04**
Support Functions	-94.52	(0%)	(16.62)
EBIT	**167.36**	**7%**	**29.42**

Assets | Equity & Liabilities



Functional P&L – Relative | Functional P&L – Absolute



Business insights Dashboard

ıancials | **Red Flags Analysis**

Year: 2015 **Month: Nov** **Region: EUR - Europe** **OpCo:**

KPI	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Excise Duties Vs Gross Revenue									
Discounts Vs Gross Revenue									
Net Trade Receivables Vs Net Revenue									
Accrued Inc and Prepaid Exp Vs Net Revenue									
Accrued Liabilities Vs Net Revenue									
Stock Finished Goods Vs Gross Revenue									
Gross Profit Vs Net Revenue									
EBIT Vs Net Revenue									
Total Provision variation									
Other Liabilities Accrual Vs Net Revenue									
Employee Bonus Accrual Vs EBIT									
Liability Excise Duties Vs Cost of Excise									
Products in prod (Cumulative) / HectoLiter (HL)									
Revenue / HectoLiter (HL)									
EBIT / HectoLiter (HL)									
Current Assets / Current Liabilties									
Total Liabilties / Total Equity									
Total Receivables / Revenue x 365									

Under Construction

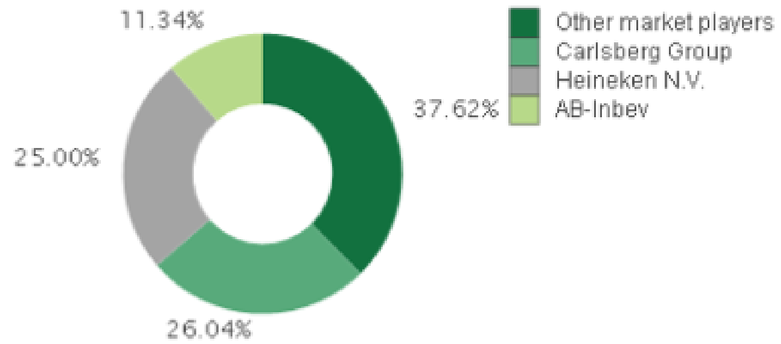
Business insights Dashboard

Year: 2015 Month: Nov Region: EUR - Europe OpCo:

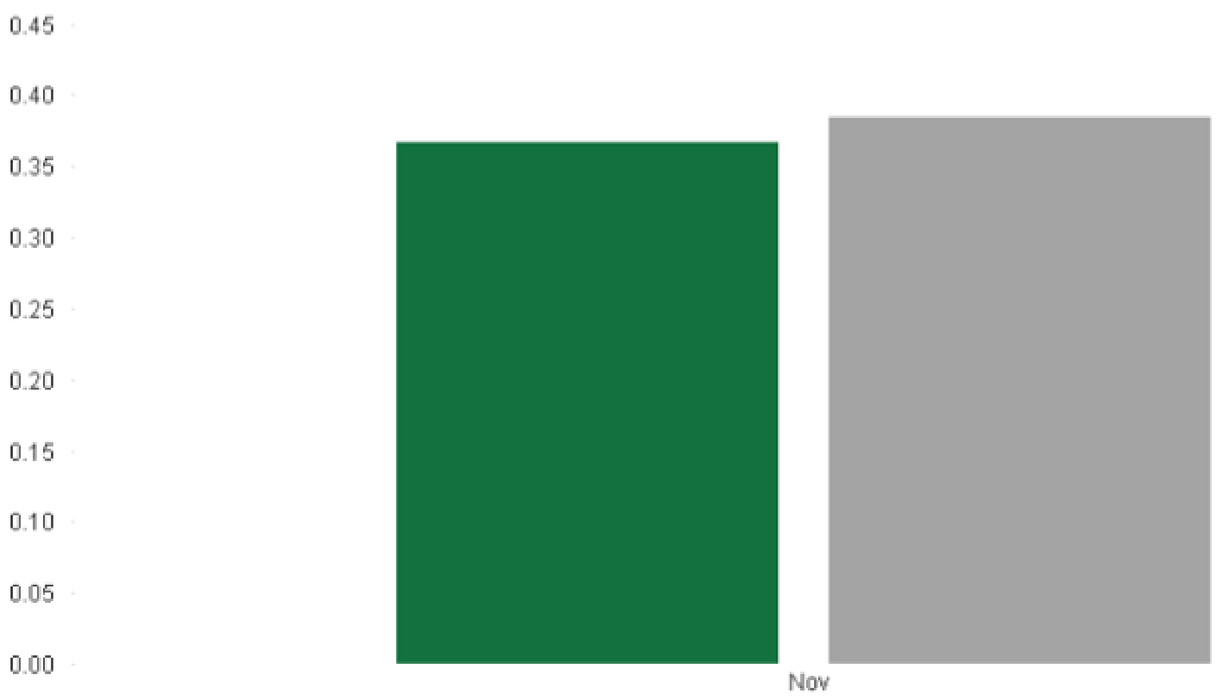
Beer Volumes - YTD (in mln hl.)

Top 5 Brands	Actual	Budget	vs. Budget		Last Year	vs. Last Year	
Heineken	2.89	2.74	5%	↑	2.85	1%	↑
Desperados	0.99	0.99	-0%	↓	0.95	4%	↑
Pelforth	0.74	0.74	0%	↑	0.75	(0%)	↓
Affligem	0.28	0.29	-3%	↓	0.25	12%	↑
33 Export	0.22	0.23	-4%	↓	0.26	(0%)	↓
Others	**0.57**	**0.55**	**4%**	↑	**0.57**	**(0%)**	↓
	5.69	**5.54**	**3%**		**5.64**	**1%**	↑

Market Share

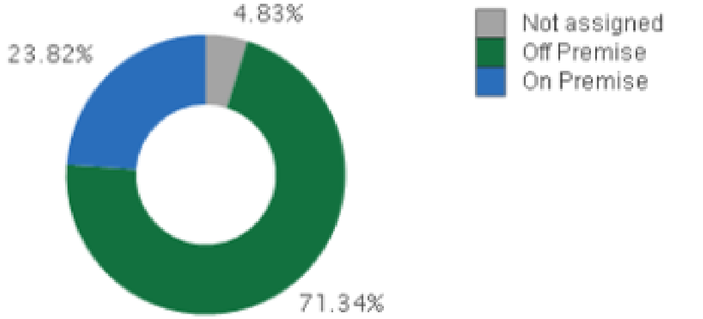


Actual vs. Budget (in mln hl.)

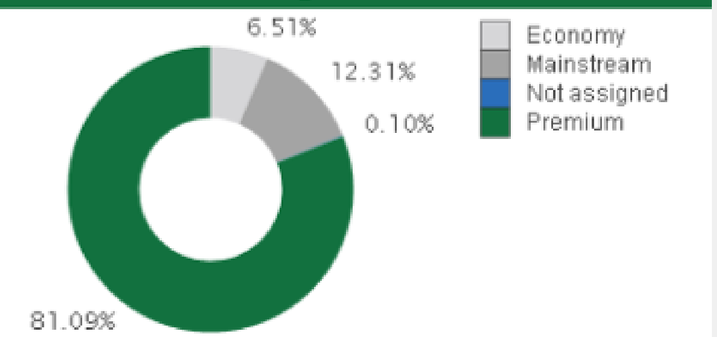


Switch to Volume by Brand

Volumes by...



Price Segmentation



GRC Dashboard

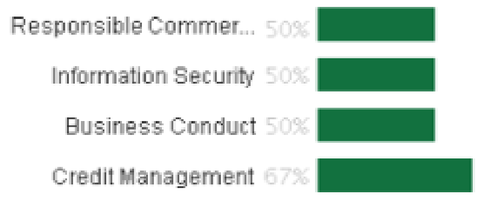
Year: 2015 **Region: EUR - Europe** **OpCo:**

HeiRules CSA

2015 / 2014

▼ 87% / 89%

Bottom 3 Rules

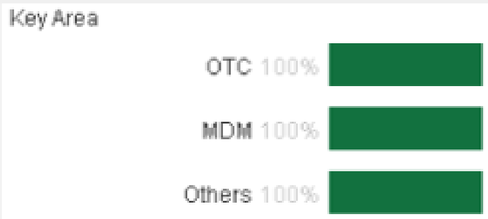


Internal Control over Financial Reporting (ICFR)

2015 / 2014

▲100% / -

Process Ranking Top 3

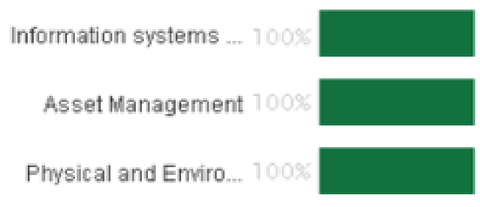


IT Risk Self Assessment (IRSA)

2015 / 2014

▲ 93% / -

Chapter Ranking Top 3



Ethics Points (# of cases reported & closed)

	2015	2014
	-	-

HTCF Self Assessment

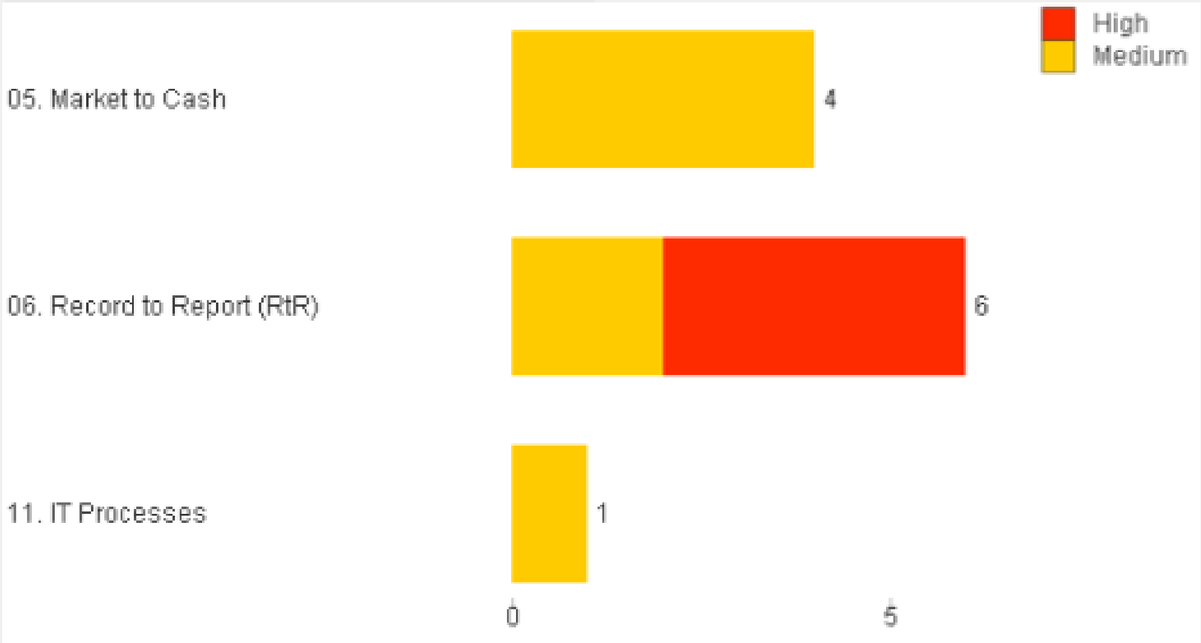
Risk Register

GRC Dashboard: Drill Down

Year: 2015 **Region: EUR - Europe** **OpCo:**

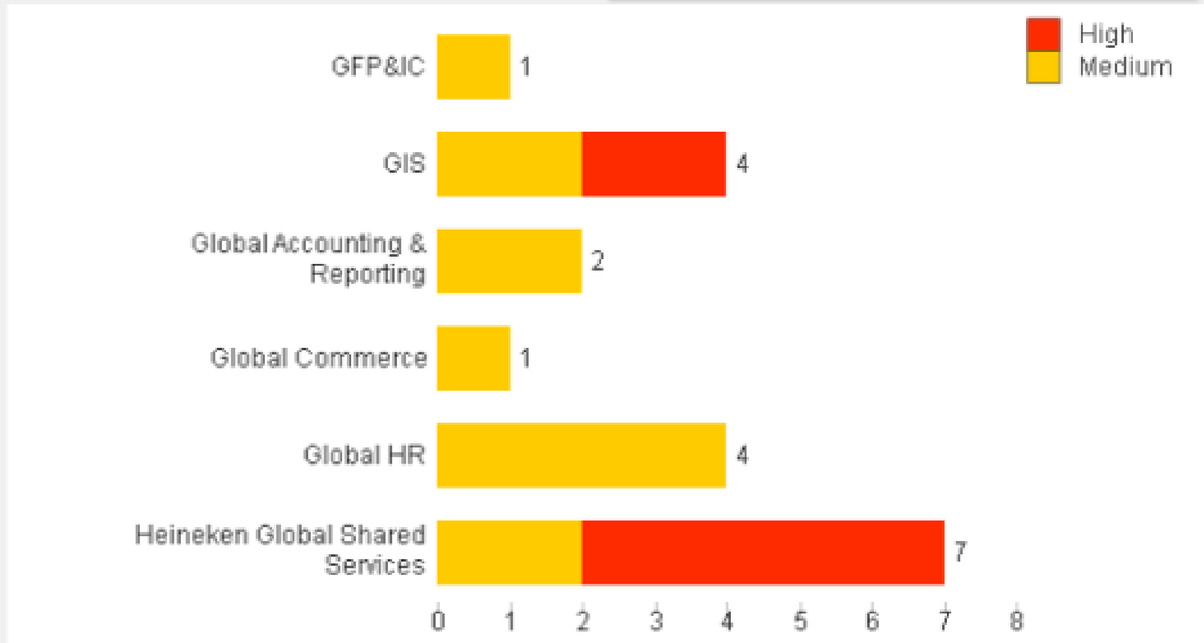
Audit Findings - by Core Process

Open Audit Findings - by Core Process | Closed Audit Findings - by Core Process



Audit Findings - by Function

Open Audit Findings - by Function | Closed Audit Findings - by Function



3rd Line - Global Audit Results

Year	Audit Name	Overall Rating
2015	MDM Control Effectiveness_2015_[EUR_IT001OC]	Requires Improvement
2015	Revenue Management Italy_2015_[EUR_IT001OC]	Requires Improvement

4th Line - Management Letter Points

Year	Issue Name	Risk Level

Process Indicator Dashboard: Q1 Close Audit

Manual Postings of Total

22.10%

Manual Postings of Total

3.00%

Backdated Postings of Total

0.01%

Postings at unusual times

26.22%

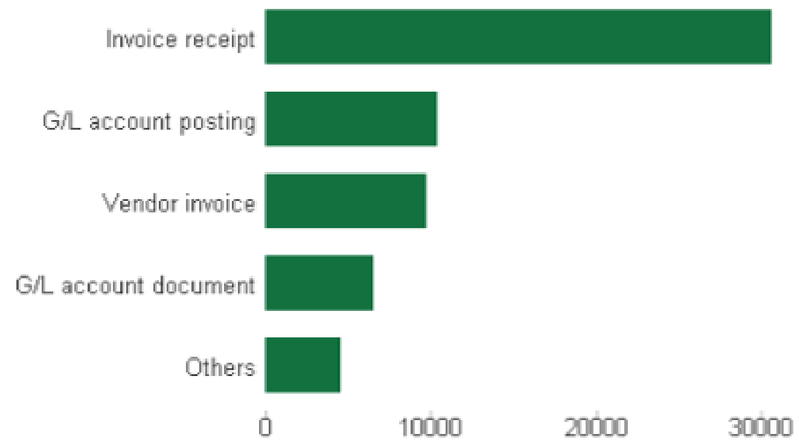
Parked Documents

0.00%

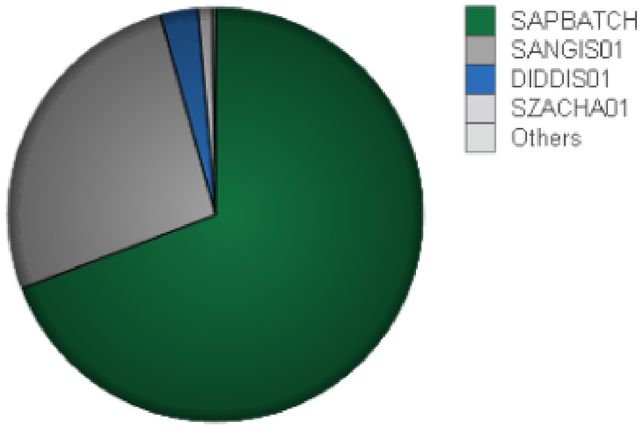
Reversed Documents

5.90%

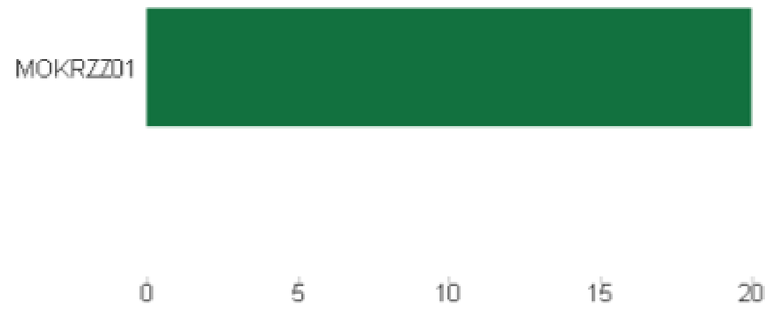
Top 5 Document Types of postings to Standard Accounts



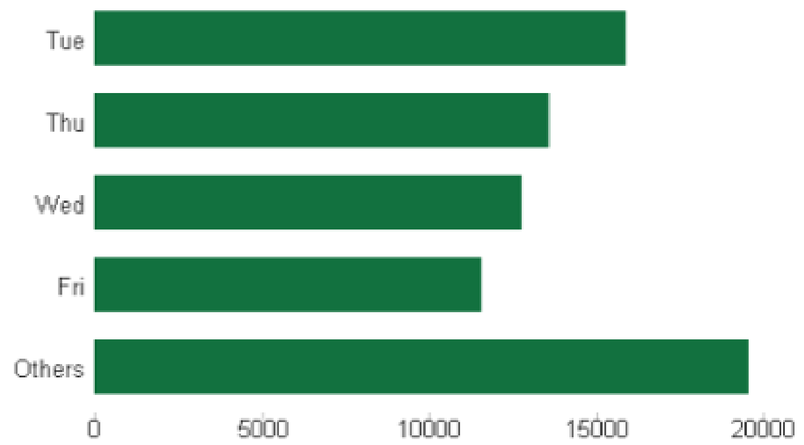
Top 5 creators of manual postings to Bank Accounts



Top 5 creators of Backdated Postings



Top 5 days of postings at unusual times



Top 5 creators of parked documents

No data to display

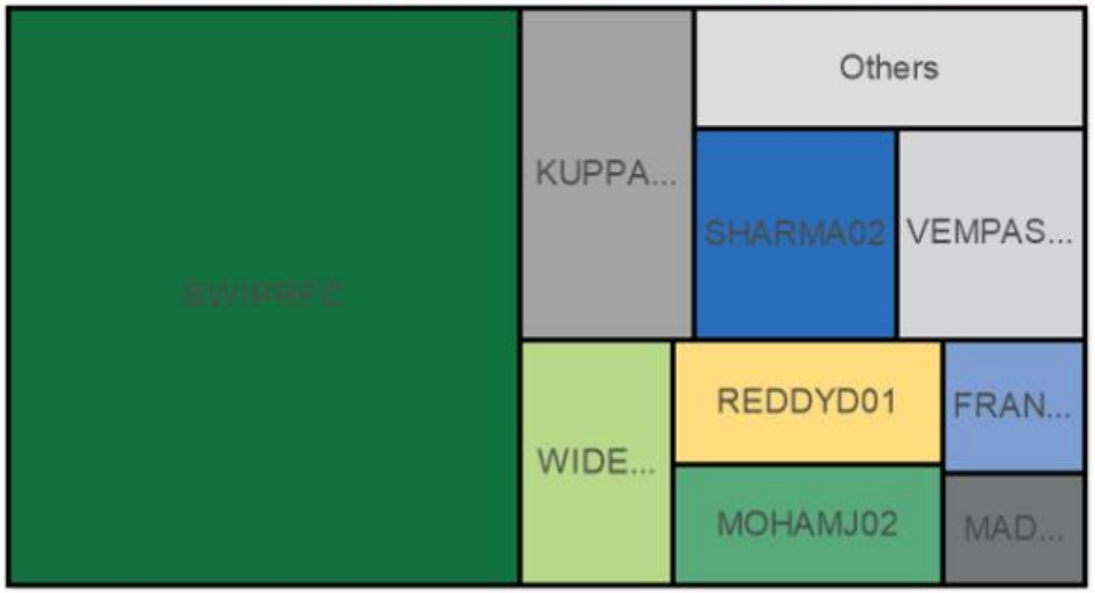
Top 5 periods of reversed document amounts

Process Indicator Dashboard: Manual Postings

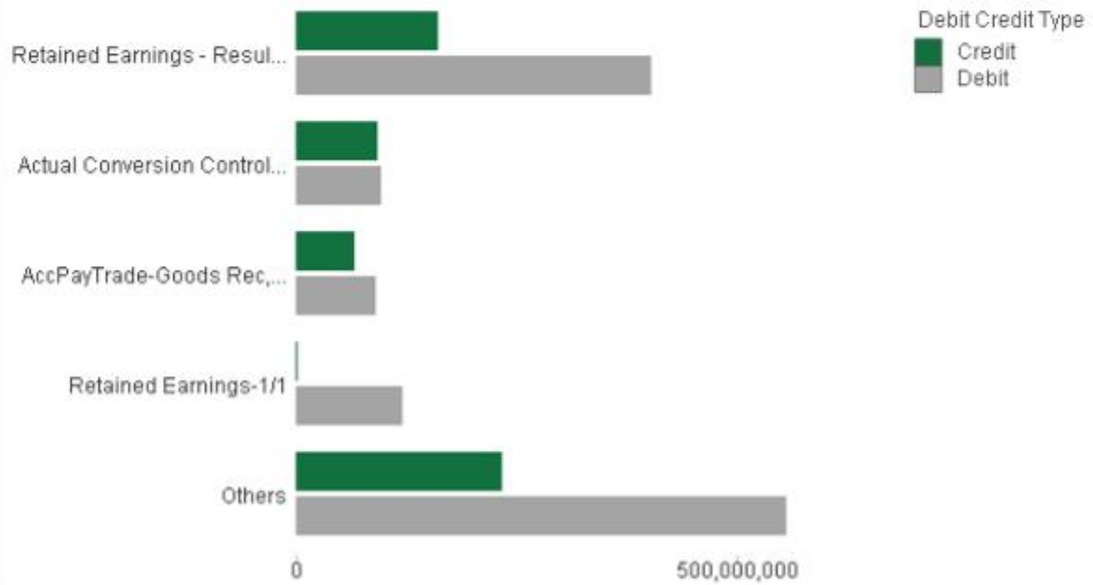
Manual postings to standard accounts Charts

Manual Postings to Standard Accounts Details

Manual postings to standard accounts per creator



Manual postings to standard accounts per account



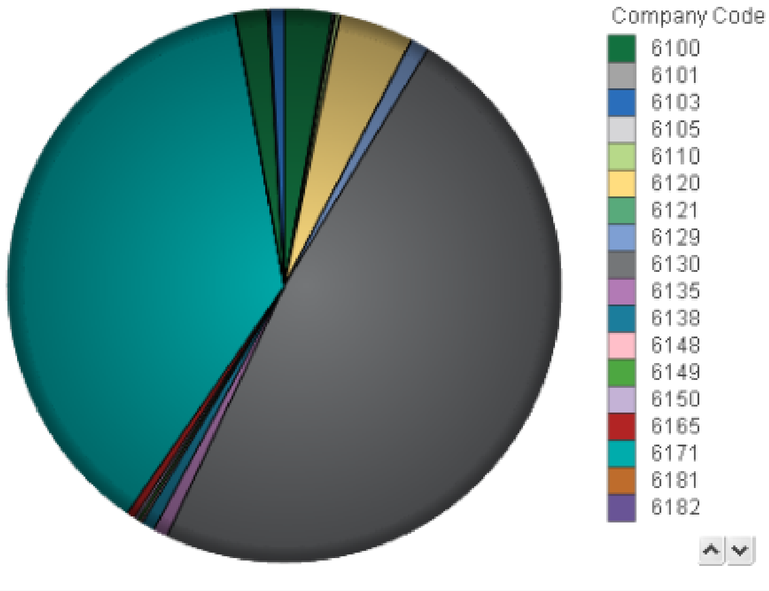
Creator	D. Debit	Credit
VOSSEW01	97,322.98	614,148.51
BWIPRFC	262,031,417.84	74,883,460.05
VOSSD01	6,908.11	9,428.49
VEMPAS01	590,226,230.84	206,669,453.52
REDDYD01	1,039,162.99	22,220.00
MOHAMJ02	944,908.46	19,100.00
HAQUET01	6,586,991.35	5,000,687.64
FRANAP01	423,588.03	13,359.70
DIDDIS01	37,367,973.42	7,301,030.92
LUNSHE02	484,723.65	460,415.02
SREEDS01	10,854,652.05	7,962,086.89
KRZYSK01	0.40	0.80
MALARA01	174,895.81	1,423,693.90
MADEJD01	10,633,397.63	13,680.68
LITAWJ01	998,156.79	0.00
GROCHJ01	2,873.87	5,141.09
RACZKA01	697.79	2,637.11
PLONKM01	3,930,119.49	4,054,275.76
SANGIS01	42,535,401.20	217,836.79
KUPPAN01	130,524,340.89	114,851,248.82
KACZMP02	75,055.86	75,162.45
VUTTIV01	42,981.31	860.00
GUPTAS03	0.00	0.40
BARTOK01	396.68	636,463.32
SZACHA01	64,584.96	18,359.38

G/L Account Description	D. Debit	Credit
Soc.Sec.& State Pens.Fs - WIA empl contr	249,493.12	0.00
Rep.& Maint.-Other Equipment-Materials	37,801.60	0.00
Bank Charges	34,718.74	3,213.85
Distribution-3 Party Warehousing Logistic Incentiv	17,425.48	0.00
AccPayTrade-Goods Rec,No Invoice-Goods rec.in ...	60,045,161.56	490,047.44
Price Var.-Pr.Bght in for Res.-Softdrinks(HS)	57,529.75	6,018.06
Write-off of Stock - Prod BFR - Non Beverages	0.00	186,128.62
Other Personnel Expenses - Other	1,232,159.68	1,123,417.25
Employment Transportation Benefits-WoonWerkver...	78,908.96	0.00
Cash Discounts Allowed-To Customers (quick paym.)	306,999.81	0.00
Other Operational Costs - Laboratory Costs	10,842.43	4,248.61
Other Employee Benefits - Telefone/Post Decl Gespr	29,155.68	0.00
Water consumption	1,057,762.09	375.63
Accounts Receivable - Trade debtors	29,441,904.63	31,037,878.93
Drft Beer Inst Maint-TobeActFiscal-Claims Paid-3P	149,474.59	3,220.63
Cost of Fin.Prod.Sold-Softdrinks	298,986.09	416,725.02
Company Clothing	200,319.98	72,691.68
Promotion Pack - Manufacturing and Packaging Costs	19,451.06	9,745.02
Rental2/Operating Leases-Motor Vehicles(Other)	337,372.66	36,563.13
Sponsorship - Other	377,000.61	59,767.99
Exchange Profit/Loss - Unrealised - Rev.AR USD	278,180.76	278,180.76
Other Operational Costs - Third Party Sub-contract	218,841.63	29,260.58
Taxes - Other Non-income Taxes - Other Taxes	19,334.65	167.00
Recruitment Expenses	44,887.95	58,011.79
Sponsorship - Culture	89,707.26	0.00

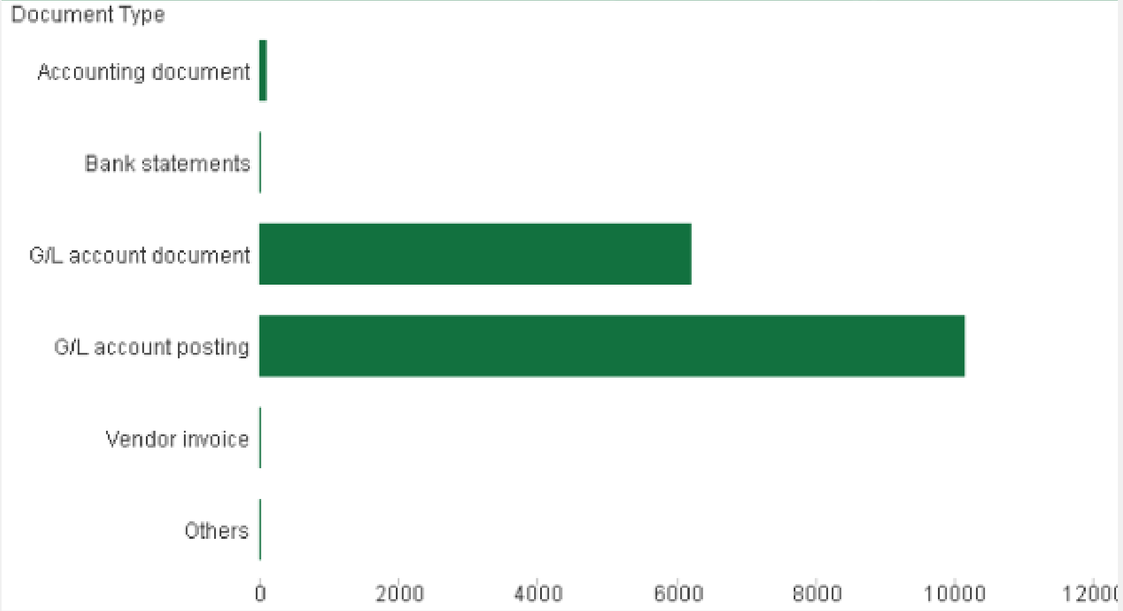
Process Indicator Dashboard: Reversed Documents

Reversed Documents Charts | Reversed Documents Details

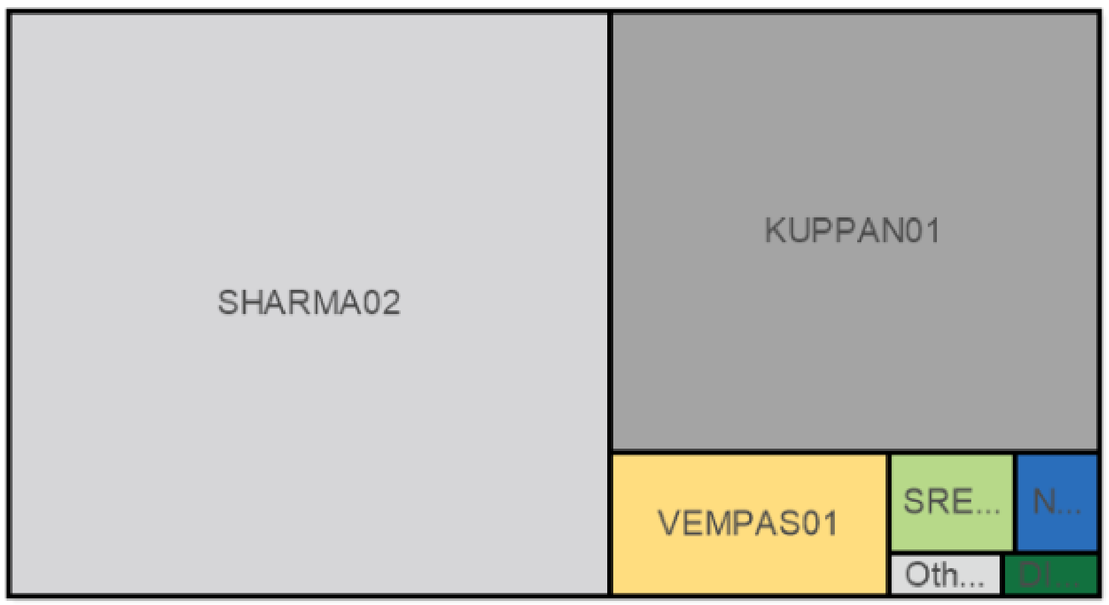
Reversed FI Documents per company



Reversed FI Documents per document type



Reversed FI Documents per creator



Document Type	Company Code	6100	6101	6103	6
Accounting document		16	-	-	-
Bank statements		-	-	-	-
Customer payment		-	-	-	-
G/L account document		261	25	-	-
G/L account posting		183	-	4	
Payment posting		-	-	-	-
Vendor credit memo		-	-	-	-
Vendor invoice		-	-	-	-
Total		**460**	**25**	**4**	