

Path to digitalization – NAOF's experiences and practise in digital auditing

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National Audit Office of Finland

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Content

Current situation in National Audit Office of Finland

- Financial audits
- Performance audits

Developing new ways to audit

- Change of a mindset in financial audit
- Increasing the use of quantitative data in performance audit
- Plans of new tools and better usage of existing data
 - Risk Detecting Tool
 - Auditors "Google" on our intranet

Where we are now?

Financial audits (1/2)

Kieku ACL Tietuekuvaus 2018.acl - Analytics

File Edit Import Data Analyze Sampling Applications Tools Server Window Help

NAVIGATOR

Kieku ACL Tietuekuvaus 2018

Kieku_ACL_Tietuekuvaus_2018

Kprivit_01_07_2018

Kprivit_01_07_2018

Ulkoiiset

	Kirjpv	TL Tos-laji	Tosno	LKP	Konsernitili	RAHRIVI Rahoitusrivi TAKP	TY Tulosityks Toimiyks	Proj	Toiminto	DEBET	KREDIT	NETTO	Selite_1
1	17.01.2018	ZC	2500000578	19200500	19200	.	1510000000		.	152,97	0,00	152,97	FI49500001
2	12.01.2018	ZC	2500000427	19930500	19930	.	1510000000		.	0,00	7.358.332,36	*****	FI49500001
3	14.01.2018	YA	1000000059	19980003	19980	.	1510142310		.	4.000,00	0,00	4.000,00	Lsra/kassat
4	30.01.2018	ZC	2500000980	19110501	19110	.	1510000000		.	0,00	65.790,15	-65.790,15	FI71500001
5	29.01.2018	ZC	2500000917	19110501	19110	.	1510000000		.	190,00	0,00	190,00	FI71500001
6	29.01.2018	ZC	2500000905	19110501	19110	.	1510000000		.	23,60	0,00	23,60	FI71500001
7	04.01.2018	ZC	2500000109	19110501	19110	.	1510000000		.	530,32	0,00	530,32	FI71500001

1510_2018_7_7_kp_rivit_20180818081642-... 19.8.2018 2.00

1510_2018_8_8_kp_rivit_20180918082040-... 19.9.2018 2.00

1510_2018_9_9_kp_rivit_20181018131800-... 19.10.2018 2.00

1510_2018_9_10_kp_rivit_20181118081223... 19.11.2018 2.00

1510_2018_10_10_kp_rivit_2018112110084... 22.11.2018 2.00

1510_2018_11_11_kp_rivit_2018121808094... 19.12.2018 2.00

1510_2018_12_12_kp_rivit_2019011808095... 19.1.2019 2.00

1510_2018_12_13_kp_rivit_2019020514174... 6.2.2019 2.00

1510_2018_12_13_kp_rivit_2019021115474... 12.2.2019 2.00

Käynnys
Kirjanpito
Talousarvion toteutumalaskelma - tuloarviotilit
Talousarvion toteutumalaskelma - määrärahatilit
Täilmoituksen tarkastusraportti
Täilmoituksen tarkastusraportti - TAKP
Rahaston rahoituslaskelma
Arviomäärärahojen toteutumat
Talousarvion seurantaraportti
Määrärahan tarkistusraportti
Täilpäätöksen lile 2: Nettotulot
Täilpäätöksen lile 2: Nettotulot meno
Valtuuksien hallinta
Talousarvion toteutumalaskelman valtuudet ja käyttö
Valtuuksien seurantaomitus

Financial audits (2/2)

Page 1
VTV/TL: T Riihilahti

TASETEKSTI

VASTAAVA

KANSAL

KÄYTTÖ

AINEET

Ennak

AINEET

Koneet

Kalust

Ennak

KÄYTTÖ

Käyttö

KÄYTTÖ

Askel 5 (sääntö 53) Hama käytännöt 3

Sääntö: LKP-tilien 43310000-43319999 ja 43320000-43329999 kanssa käytettävä Toimintoa 9999614000 (terveyshuolto) tai virhetoiminto 1510999999.

Sääntö ei koske maksupalkkoja.

Tehty työ: Luokitellaan aineisto toiminnon mukaan säännön mukaisin LKP-tiliehdoin. Tarkastetaan, ettei ole lettyjä toimintoja käytettynä.

As of: 04.01.2019 15:51:36

Command: SUMMARIZE ON Toiminto SUBTOTAL DEBIT KREDIT NETTO IF LKP >= "43310000" AND LKP <= "43319999" OR LKP >= "43320000" AND LKP <= "43329999" TO SCREEN YES

Tables: Kprvnt_01_11_2018

Condition: LKP >= "43310000" AND LKP <= "43319999" OR LKP >= "43320000" AND LKP <= "43329999" (2668 records matched)

Toiminto	DEBIT	KREDIT	NETTO	Count
9999614000	1.832.128,14	591.517,62	1.240.610,52	2.668
Totals	1.832.128,14	591.517,62	1.240.610,52	2.668

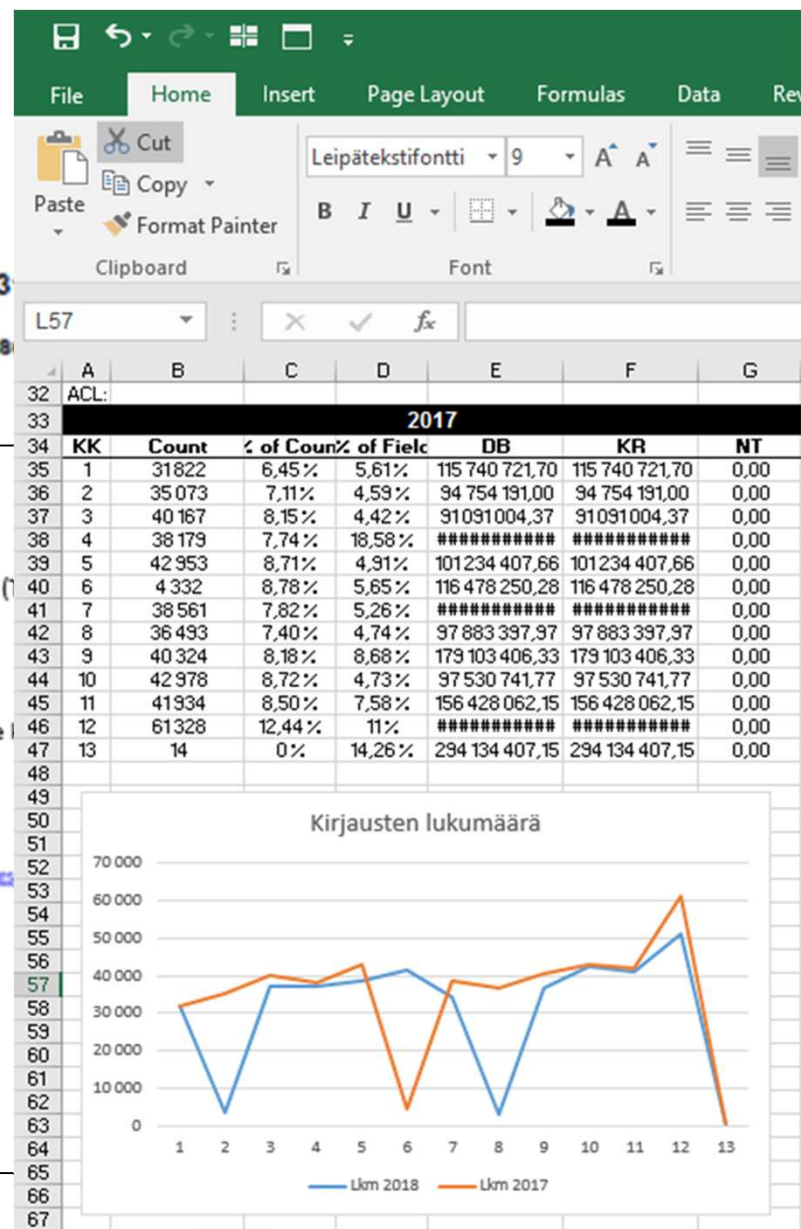
1 record produced

→ Ei havaittu kirjauksia, joilla olisi kielletty toiminto. **Sääntö tehokas.**

KIRJANPITOYKSIKÖN ACL TASE 3

Tase-erä

Tas



Performance audits

- More quantitative data & methods needed
- Traditionally strong focus on qualitative data & methods

Data collection method or <i>method of analysis</i> or approach	Percentage of all performance audits (30 reports*)
Documents etc. qualitative data	100%
Interviews	97%
Surveys	20%
Workshops	10%
Observation	0%
<i>Qualitative content analysis</i>	87%
<i>Descriptive quantitative methods</i>	53%
<i>Statistical/econometrical methods</i>	3%
Case study	10%

*All performance audit reports published in 2016–2017 (reviews excluded). The table's ratios are likely to be good estimates for 2018 as well.

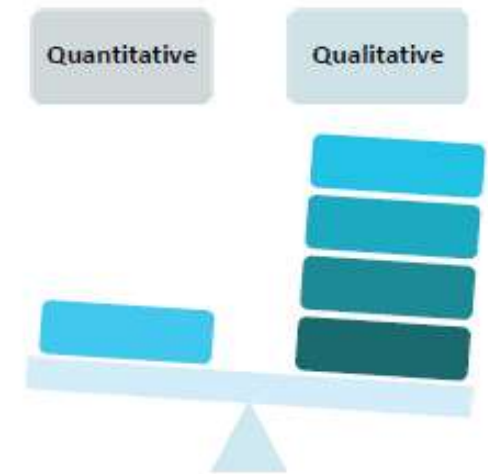
Where we want to go?

Financial audits

- From accounting unit focus to whole state focus, automatization of audit procedures
 - Ie. On budget accounting focus on the whole expenditure headings instead of just the part of expenditure heading an auditee has right on
 - Automated booking validation rules checking tool for all accounting units
 - New analyzing tool introductions, ie. Power BI
 - Usage of good quality data provided by new state widely used systems
- Multiple pursuits into easier documentation and same duplicable audit procedures internally, ie. new excel workbook for audit documentation introduced

Performance audits

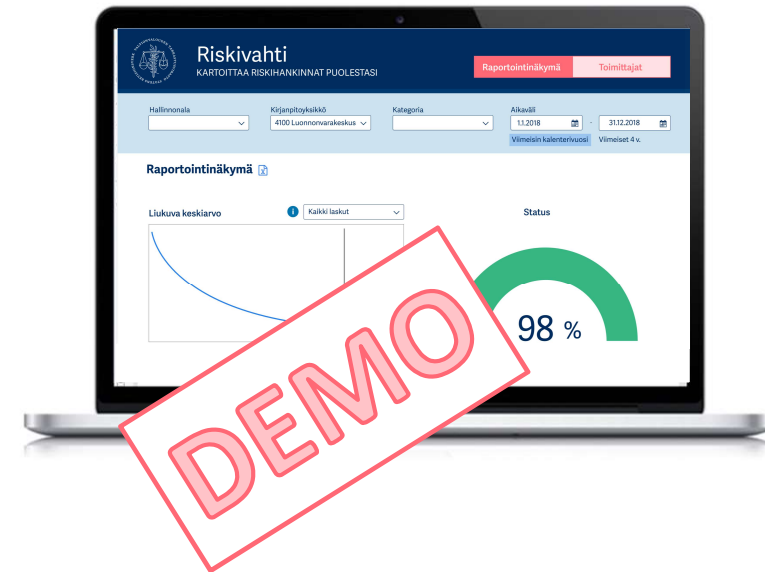
- How to find balance between quantitative and qualitative data?
- Our approach to achieve this balance:
Methods and Data Analytics Team
(MDA Team), which started in autumn 2018
- Aims at increasing the use of statistics, register data and statistical methods in performance audits
- Team provides help for example in finding data and analysing it.



What is under development?

Risk Detecting Tool: advising auditors on risky procurements

- The tool has been developed with finding know-how outside the office: we partened up with Bilot, a company that specializes in machine learning. The idea of the tool came from the auditors – there was a kick-off as a workshop where auditors and coders worked together
- The tool assists auditors in planning and targeting their work: helps identify potential risk cases and visualizes the data.
- It has also possibility to learn new patterns of chained procurements and identify procurements that should have been invited to tender.
- Data: only public datasets at the present. Intent to enrich data with actual event data from ERP



What is under development?

Auditors "Google"

- The development steps are still in early stage
- A text analysis demo-tool using RStudio and Elasticsearch (Thanks to inspirational Norway!)
- Open source data from the Parliament of Finland at this point
- The idea of the tool:
 - Helps the auditor to easily find information about the topic of an audit: what's been said about it in Parliament?
 - Shows the search term with its context - helps to choose the relevant search results

Thank you!

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We are also on LinkedIn! 😊

