Casestudy Audit firms: integration of Process Mining in your financial statement audit approach. Small steps forward.

DATA ANALYSIS

Analysis of data is a process of inspecting, cleaning, transforming, and modeling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making
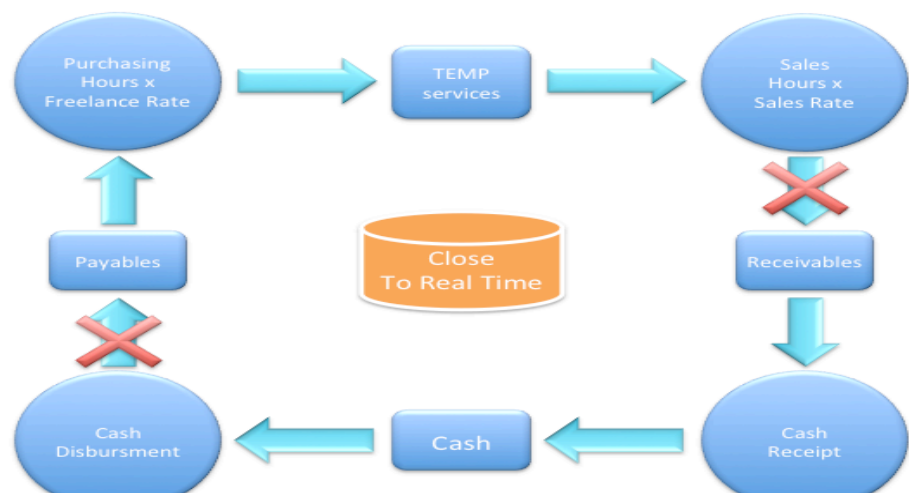
PROCESS MINING

is a technique that automatically analyzes your business processes, simply by extracting data from your event logs

CONTINUOUS AUDITING

is any method used by auditors to perform audit-related activities on a more continuous or continual basis.

A case study for all audit firms.

"When it comes to business success, it is all about trust as it is all about being in control".

With this case study we want to share with you our experience on how to improve your Continuous Audit Approach. This integration of process mining has been, and still is, a true adventure. **Our experience is our case study**.

As part of our overall reconsideration of our audit approach we recognized that traditional methods of testing controls relied on lengthy interviews and group meetings, miles of paperwork and wall-sized whiteboards. Even then, we were still struggling to understand how things are really working, as opposed to how people believe they're working. The end results of those controls were all too often subjective, and didn't provide for the required assurance. Therefore, during 2012 we decided to integrate process mining in our audit process. Step by step. Today we are able to test the design and operation of control frameworks based on *true events and business transactions*. But we only just started. Both data availability, data quality, resulting from poor general it controls, are hurdles we need to overcome.

We are a boutique audit firm, founded and licensed by the Dutch Oversight Authority, AFM, in 2006. Our audit approach was initially based on using data-analysis techniques only. We believe in data-driven audits. We believe in auditing the flow of transactions, connecting company's process cycles. This is called a **Top-Cycle Audit Approach**. Today we are combining both data-analytics and process mining resulting in robust, transactional-based, financial statement audits.

Process Mining is of course about data. It is about understanding the way processes and internal controls are operating. Having some experience with data-analytics or process mining, you will recognize the fact that the availability of adequate *event logs* is a challenge. Events log are the basis for all process-mining activities. However, the true challenge lies in adjusting your thinking process, your audit approach, your audit staff training program and communication of audit finding with your audit clients. Process Mining provides you with the opportunity not only telling what is going wrong, but advice your client how to improve his control framework.

Top Cycles Approach example

An audit example – Temporary Employment Agency

One of our audit clients is a Temporary Employment Agency, processing thousands of Temp hours on a four-weekly basis. The hours submitted by temps are verified on certain formal aspects during the processing before they are paid and subsequently invoiced to clients using the services rendered by the temps.

Our audit objectives included;

1. Timely authorization of all Temp hours charged in both Billing and Pay rolling System
2. Timely authorization of any adjustments to sales rates earlier agreed by Front Office, prior to Invoicing
3. Timely authorization of any adjustment to payroll settings (per Temp) in the Payroll system prior to Pay rolling

The time-line matters and Checks and balances need to be performed in a subsequent order. We have created an event log from the Billing and Payroll System and Time System to mine above sub-processes and to highlight casus / events which did not meet the intern control standards and/or time-line. Such events are visualized on Temp level, are automatically shared with clients Finance Director and are subject to further internal review. We designed these audit procedures at the end of 2013 and will run this mining for each subsequent quarter.

Audit Process based on Data-analytics and Process Mining – three main focus areas.

The integrating of process mining will require a redesign of your audit approach. In blue we have highlihted the audit steps in which we have integrated process mining. We are convinced that thousand of audit firms around the world can now benefit from an enhanced audit process by integrating process mining in key audit steps which are part of any Auditing Standard in the world:

1. Assess minimum level of Internal Controls – high level process mining of key processes
2. Assess design of Internal Controls, including IT General and Application controles – using detailed filter techniques
3. Test (IT) Controls; effectivess and efficiency – using detailed filter and visualisation techniques

www.coney.nl

Coney
Discover your data!
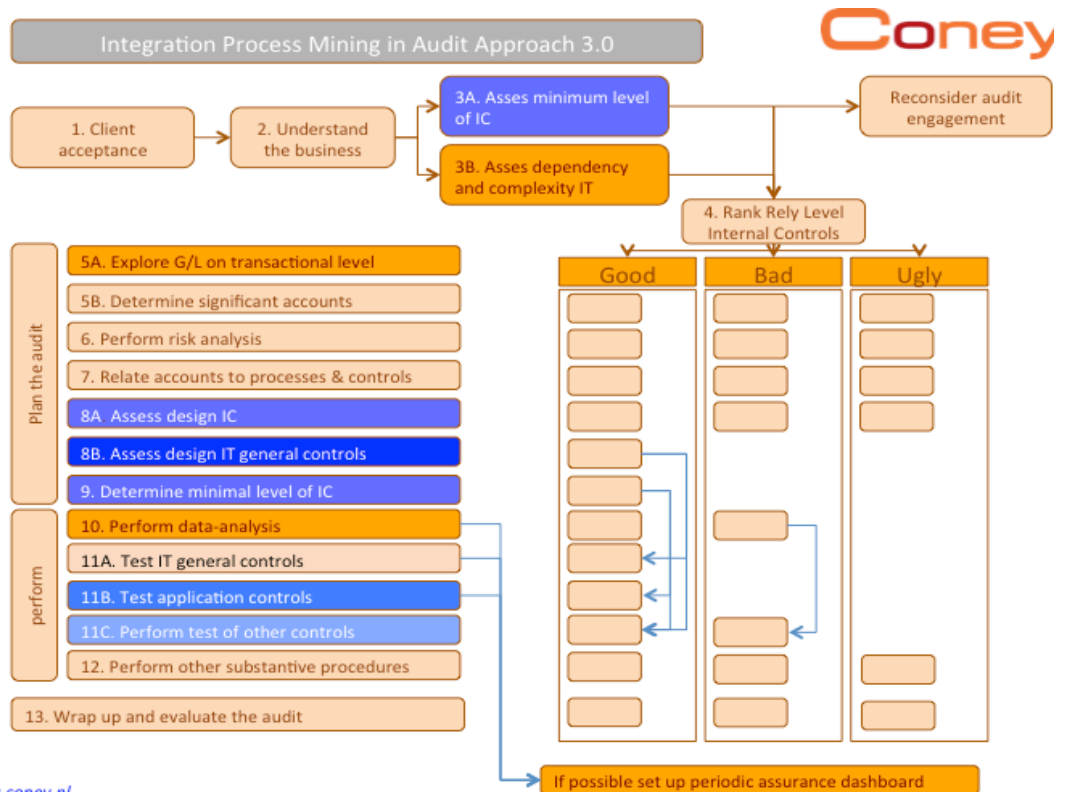
Top 5 Summary Financial Statement Audit objectives, which can be addressed by designing process mining audit procedures:

1. **Risk Assessment**. Process mining of key business processes provides immediate insight to your risk assessment. Key processes can be reviewed by comparing them to designed (SOLL) processes, where as deviations can be easily visualised and reported to client.

2. **Scoping**. Mining various key processes throughout a company (business unit per business unit, division by division) enables you to scope in higher risk areas into your audits.

3. **Testing design of company's control framework**. Each financial statement audit requires a minimum assessment of the design of the control framework. Having access to event logs per key process enables you to test the design.

4. **Testing controls**. Each key process includes a number of specific controls designed to mitigate risk. Using filters and mining techniques enables you to perform detailed test of controls using 100% of the underlying transactions / events.

5. **Segregation of duties**. Each framework is designed in a matter to ensure proper segregation in duties while processing transactions and carrying out activities. The Segregation of Duties filters included in process mining

Next step for auditors

Although we made significant steps forwards in improving our audit quality by integration of process mining in our audit approach, we still feel that a lot of steps are ahead of us. Yes, process mining-based-audits will enhance design and effectiveness control testing including areas such as Segregation of Duties. However, your clients, like ours, do expect more. It is also about Lean, Efficiency, Operational Excellence and Smart Process Information.

The success of many organizations sits in the way they manage and integrate risk, controls, processes and regulations in their daily business activities. This integration is always reflected by the use of data analysis and process mining techniques in their risk framework ("continuous risk"), in their internal control framework ("continuous control monitoring") and in their internal audit plan ("continuous auditing"). In other words, analytics should be a cross-functional area in your clients Governance, Risk and Compliance and Business Performance framework. Work together, share your vision! Creating a true integrated Business Assurance Framework.

We hope that his case study inspires you as colleague audit firm to explore the opportunities of process mining!