Process Mining for Internal Audit Departments

The Challenge
Auditors are responsible to assess processes in an independent manner to identify risks and prevent fraud. However, traditional auditing tools are not analyzing the data in a process oriented way.
Process mining is a complementary tool for auditors that allows them to directly analyze the processes with all their variations. This way, they can find out whether the internal controls are working. For example, it can be checked whether the segregation of duties (4-eyes principle) was adhered to, based on an exhaustive analysis of all the IT logs.

The Solution
Process Mining is a new business process management discipline that enables automatic, unbiased, and fact-based:
- Process Discovery,
- Conformance Checking,
- Performance analysis, and
- Process improvement.

The Benefits
- Discover a process model without prior knowledge about it.
- Identify and eliminate immediately process waste.
- Clearly view the bottlenecks, the variants, and the efficient practices.
- Understand the socialization patterns, how people interact.
- Balance the workforce to increase throughput.
- Be sure if compliance (legal, company rules) is being achieved.
- Understand what is necessary to change to eliminate performance gaps.
- System (ERP, SCM, CRM, BPMS) agnostic. No lock-in.
- Identify risk, fraud and control issues.
- Maximize the usage of data analytics tools such as ACL: instead of a sample, all events in a business process can be evaluated.
**How it Works**

Log data from IT systems can be directly used to analyze existing processes. This analysis is done in a “bottom-up” way: The *real* processes are reconstructed starting from the data to support fact-based process improvements.

Process mining answers questions such as: “How are our processes really executed?”, “Where are the bottlenecks?”, and “When and why do people deviate?”. No additional software needs to be installed to add this capability, because most IT systems already capture the historic information that is needed to perform process mining analysis.

**How to Get Started**

A process mining project follows these five phases:

1. Together with the auditor, we determine the process scope and the most important questions that should be answered in the analysis.
2. Together with your IT team, we extract the relevant data from the IT systems.
3. We analyze the data and share intermediate results with you for preliminary analysis.
4. Issues and recommendations are presented in the format most suitable for you (e.g., a presentation, report, or workshop).
5. Process Improvement opportunities are identified and implemented, in accordance with the clear and tangible analysis results.

**About the Technology**

Fluxicon ([http://fluxicon.com](http://fluxicon.com)) is a company for process mining software and services. The founders, Dr. Anne Rozinat and Dr. Christian W. Günther, have done their PhD research on process mining. Fluxicon have invented many of the relevant process mining techniques that are used today across all industries.

Additional info about Disco can be found here: [http://fluxicon.com/disco/](http://fluxicon.com/disco/)