HERUG 2016
Continuous monitoring with advanced data

Rob van den Wijngaard & Dirk Westra van Holthe

12-04-2016
Short introduction

Oldest university in the Netherlands (1575)

Key figures (2014):

- Employees: 4,496
- Students: 24,500
- PhD’s: 411
- Budget: 558 million €
Journey through our (digital) transformation

Financial Shared Service Centre (FSSC) Leiden University
Our strategy at Leiden University

“WE HAVE A ‘STRATEGIC PLAN.’ IT’S CALLED DOING THINGS.” — Herb Kelleher
Where do we come from?

How high can the piles get?
Fast close principles

Fast close is the reward for a well structured and organized finance organization.

The result of Fast close is a fast, accurate and reliable report process (with lower cost).

- Describe processes
- Segregation of duties (systems and processes)
- Create ownership
- Reliable report process
- Create work instructions
- Well-structured meetings
- Input for FSSC product catalog
- Periodic evaluation with accountant of decentralised departments
Closing process: steps already taken

**Focus on:**
- Structure
- Harmonization
- Digitization

**Implementation**
- Describe checks
- Design checks
- Assign responsibilities
- Automating
- Monitoring
Closing process: where are we now?

**Implemented Smart Close procedures**
- Scenario: all checks well described and organized

**Execute**
- Execute checks
- Digital documentation
- Audit trail
- Personal tasklist

**Monitor Processes**
- Status dashboard: Monitor if checks are executed

**Audit and optimized record process**
- Based on 'Exception principal': focus on real risk and issues

**Monthly maintenance & release of tasklists**

**Employee FSSC**

**Head of FSSC and heads of teams**

**Internal audit department and FSSC**

Big Data & Analytics: (even) more control
Continuous Monitoring: how did it start?
Testing ground framework

1. READINESS ASSESSMENT / BUSINESS CASE
   To determine the scope of a first CM pilot and the impact of CM on the current culture, technology, organization and processes

2. PILOT CCM
   First experience with continuous control monitoring of top 10 risks

3. ROLLOUT
   Expansion within the finance function and to other functions

Universiteit Leiden. Bij ons leer je de wereld kennen
Continuous Monitoring: pilot

Scope:

Risks in the purchase-to-pay (p2p) process

Top 10 controls phase 1 (pilot):

1) Inconsistent use of VAT codes
2) Safeguard segregation of duties based on SAP transactions
3) Ensure there are no double master data entries
4) Compliance and public (EU) tenders
5) Monitor for double payments/invoices
6) Safeguard coding of hiring temporary staff
7) Ensure correct use of expense allowance scheme, general ledger account
8) Monitoring of authorization approvals (guidelines on substitution)
9) Monitoring of (unauthorized) orders (incl. 3 way match)
10) Ensure proper use of general ledger accounts
Implemented controls after pilot

1. Duplicate invoices
2. Duplicate ‘fuzzy’ invoices
3. Violation of segregation of duties in master data record
4. Expired outgoing invoices
5. Incoming invoices in workflow older than 10 days
6. VAT checks (inconsequent combinations of records)
7. Violation segregation of duties in workflow
8. Zero balance checks on General Ledger
9. Infringement on password use
10. Human Capital: conflicts of interest (ancillary activities)
11. Infringement segregation of duties in SAP-roles
12. Monitor thresholds public (EU) tender
Continuous Monitoring

By checking all relevant data (semi) continuously, CM contributes to compliance of internal and external goals and structural improvement.

1. Improve compliance with external goals
   - Procurement
   - Additional activities
   - Horizontal supervision
   - Performance agreements

2. Improve compliance with internal goals
   - Performance optimization and achievement of the organizational strategy

3. Optimize processes

- Not only solving incidents but focusing on systemic and structural improvements

- Reduction of implementation and maintenance costs

- Integrated monitoring (total mass)

- Perform (semi)continuous checks
CM platform

Data-analytics
- Duplicates
- completeness of data
- Process analytics

Textmining
- Check for certain key words

anomaly detection
- Compare travel and expense transactions with other transactions

User profiling
- Determine the behavior of end-users by measuring the quality of travel and expense transactions

Business

Signal list
Exceptions

Correct errors
Analyze errors
Optimize

Reduction of errors / exceptions

Universiteit Leiden. Bij ons leer je de wereld kennen
FSSC organization
After CM implementation

Key processes
1. Purchase to pay
2. Order to cash
3. Payroll
4. Record to report
5. Cash & bank Management
6. Continuous improvement gets a boost

Teams
Accounts payable
Accounts Receivable
Payroll
Balance sheet (GL) Consolidation
Cash and resources
Continuous monitoring team

Universiteit Leiden. Bij ons leer je de wereld kennen
Continuous Auditing: the next step

Key Controls

Continuous Monitoring

General IT audit: determine that the control is working

- Significant risks
- Generate risk based reports
- Governance
- Control of change requests
- Authorizations

Universiteit Leiden. Bij ons leer je de wereld kennen
## Key controls (examples)

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Payroll             | - Segregation of duties  
                      | - Four eyes principle                                                   |
| Revenues from private research contracts | - Authorisation contract  
                      | - Internal project budgetting                                           |
|                     | - Monitoring progress                                                   |
|                     | - Internal control end of project reports                                |
| Procurement         | - Segregation of duties  
                      | - Four eyes principle                                                   |
|                     | - Payment procedure                                                     |
|                     | - Internal control on accounting policies                                |
| Other revenues      | - Contract registration                                                  |
|                     | - Margin analyses                                                        |
|                     | - Pricing (cost-based)                                                   |
| Real Estate projects | - Progress investment projects                                           |
|                     | - Authorisation changes                                                   |
|                     | - Accounting policies                                                     |
| IT                  | - SAP Changes (from request to live)                                     |
|                     | - User admissions                                                         |
|                     | - Back-up and recovery procedures                                         |
| Fiscal              | - VAT                                                                     |
|                     | - Temporary employment                                                    |
| Tuition fees        | - Interface with student information system                              |
|                     | - Refunds                                                                 |
CM: end-to-end process

- SAP (finance and procurement)
  - Manage transactions
  - (Semi)real-time data acquisition

- CM platform
  - Results
  - Mobile access ensures follow up on exceptions

- FSSC
  - Controls
  - Workflows / list of tasks
  - Transactional data form the basis of reports, root causes and further steps
  - Transfer to business
  - Determine if controls are picked up by business

The CM platform analyzes the data and audit the actions that follow.
Maturity levels Big Data:

1. The data describes what the current state is
2. Conclusions are made based on data
3. Data is translated to trends and predictive
4. Data is translated to advise for the business

Source: Gartner
The flywheel effect

- Vision 2020
- Results
- Flywheel effect (FI / Human Capital / IT)
- Continuous improvement
- Improved services/ in control
- Concretization of vision
Lessons learned

How does it affect the team?
- Gives you data to influence stakeholders
- With data you will be a proactive business partner
- Your team becomes really engaged in clearing exceptions
- It creates lots of ownership in teams

It’s not all easy sailing
- At the start it creates more workload for the teams
- You need to establish good governance around changes
- You need technical and analytical resources
- It takes time to embed

Universiteit Leiden. Bij ons leer je de wereld kennen
Lessons learned

The results make it worthwhile

- Zero duplicate payments since analytics introduces
- Extra drive for continuous process improvement
- Our thinking around controls have changed, we now build analytics into new projects
- More demonstrable ‘in control’ (also for external accountability)

Considerations for your business case

- Control is more effective and timely
- Reducing costs? At the start cost of control will rise
- Improved audit focus and efficiency
- Start small and grow with a lot of energy and perseverance

“Just do it!”
Timeline and ambition

2009
- Establish SSC and implement processes

2012
- From paper to digital: structure and harmonization

2014
- Innovate in user experience
  - More in control

2020
- Vision 2020
- University Leiden Digital
Vision 2020
Universiteit Leiden. Bij ons leer je de wereld kennen

rc.vandenwijngaard@bb.leidenuniv.nl
Rob van den Wijngaard

dwestravanholt@deloitte.nl
Dirk Westra van Holthe