



"REDESIGNING THE AUDIT IN AN AGE OF DIGITIZATION"

drs. Angelique J.M. Koopman RE RA



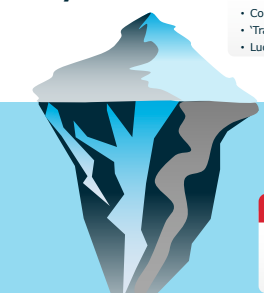
**BAKER TILLY
BERK**
An independent member of Baker Tilly International



TILBURG UNIVERSITY



Why?



What we can see and know

- Knowledge and Experience
- Common sense
- 'Traditional' (audit) techniques
- Luck?

Use of (Process) Data analytics

- Analytical procedures, reperformance, reconciliations, data visualization
- Process mining
- Data discovery

What we can't see and don't know


- Use of Statistical methods, 'Artificial intelligence'; algorithms (e.g. process mining), machine learning, deep learning ...

Data Analytics in the Audit: Doing, Experimenting and Learning

2 examples:

Applying
Process mining
in the audit

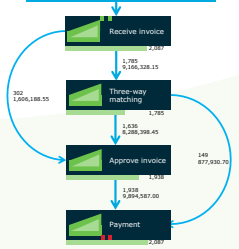
Using
Artificial
intelligence in
combination
with ..






What is Process Mining?

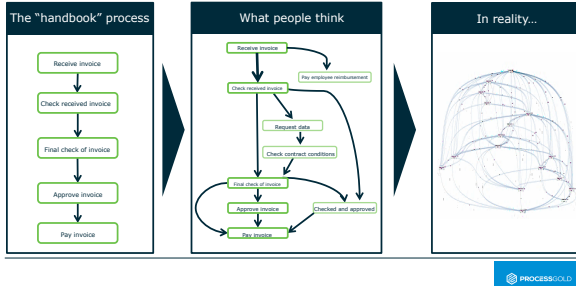
The process in reality, based on what the data tells us



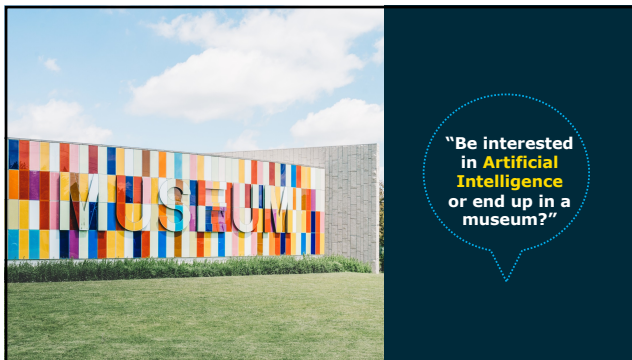
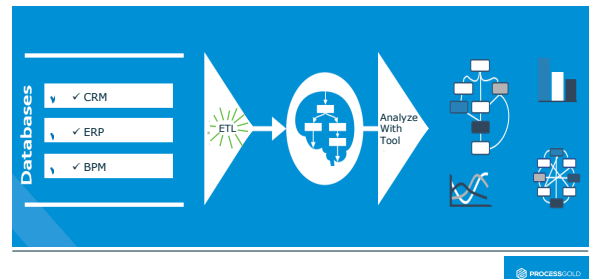
Like London Tube Map: 'an abstraction of reality'



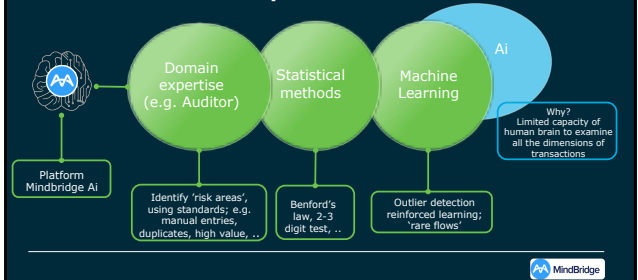
Why use Process Mining?



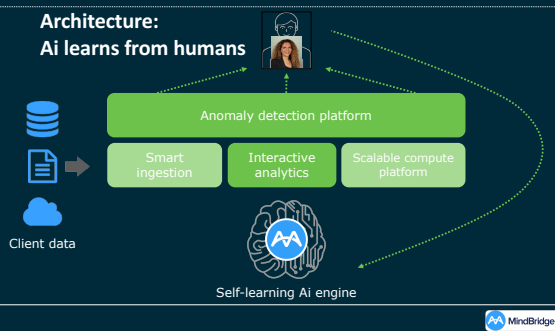
How does it work?



Automated insights powered by Artificial intelligence Best of breed techniques



Architecture: Ai learns from humans



"Intelligently Guides Humans"

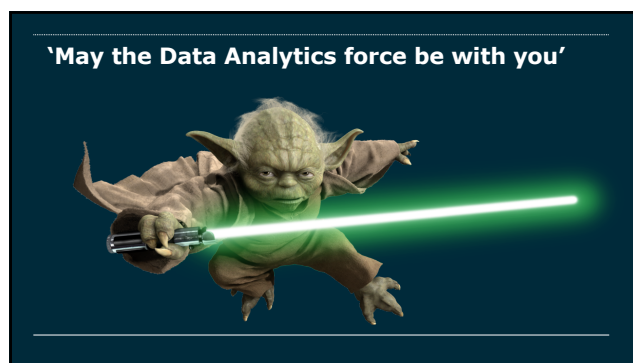
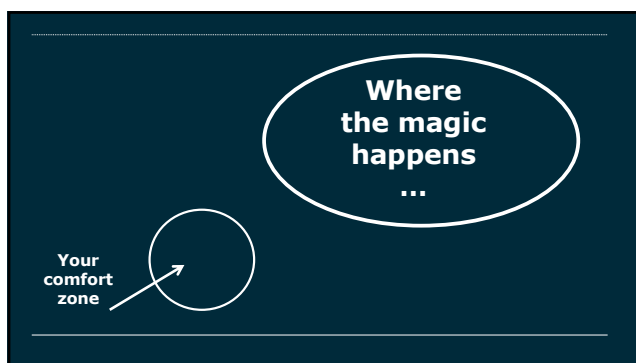
Control Points

Home / Clients / Examine / Which Construction Company Ledger Ltd / Control Points

Entry	2016	Weekend Posts	\$0 Entry
Account	57900	Status: Passed Total failures: 126 entries	Status: Passed Total failures: 126 entries
Account name	140800		
Branch	152		
Date period	2016-01-01 to 4:42 PM		
Transaction date	2016-10-27 8:05 PM		
Balance	191079.62		
Debit	51		
Credit	81,181.7		

Related Information

- 5 other journal entries have the same amount and also fail Weekend Transaction
- 10 other journal entries were entered on the same day by this user
- 25 other journal entries form a regular repeating cycle related to this entry



Your presenter today



drs. Angelique J.M. Koopman RE RA
 Partner Audit Innovation
 @BakerTillyBerk
 Lecturer & PhD in progress
 @Tilburg University

Contact details:
 a.j.m.koopman@uvt.nl
 a.koopman@bakertillyberk.nl
 M: +31 (0)6 12 83 38 97



PhD research in progress:
 Redesigning the Audit
 in an Age of Digitization:
 A Breakthrough in Auditability?

Supervisors:
 Prof. dr. E.H.J. Vaassen RA
 Prof. dr. J.P.J. Verkruijsse RE RA