

# Disclaimer

The information provided in this Presentation is owned by Reed Business Information Limited (“RBI”). The contents of this Presentation shall be treated as confidential and proprietary information and the Presentation should not be shown, read or used by any third party other than ‘You’ and your ‘employees’ on a need-to-know basis.

Ideas and concepts contained in this Presentation shall only be used with RBI’s written permission. All intellectual property rights in this Presentation remain vested in RBI and any references to third party trade names or trade marks in our Presentation, save where expressly provided, is neither an assertion of ownership or representation of an association with the owners of such trade names or trade marks.

The information contained in this Presentation may be obtained from public sources and information that our customers have provided to RBI. Any analysis, forecasts, projections and opinions are based on such information and RBI have not verified the accuracy and completeness of the information. In no event shall RBI be liable for any indirect, consequential, special or incidental damages which may arise from the use of the information, even if advised of such possibility.

This Presentation is subject to contract and all warranties whether express or implied by statute, law or otherwise are hereby disclaimed and excluded to the extent permitted at law. In the event that the scope of the services change, this Presentation may require corresponding amendments. Any rights and obligations that may arise under this Presentation shall be governed by the laws of England and Wales and the Courts of England and Wales shall have non-exclusive jurisdiction to adjudicate any disputes arising here under.

23 May 2019

# The Importance of Strength Index and Exposure Index – reduce your false positives

Daniel Skolnick  
VP Product Management, Accuity



[accuity.com](http://accuity.com)

# Fircosoft continuous commitment: Deliver on the balancing act in financial crime screening

Deliver screening solutions  
regulators trust



Flawless detection



Regulator  
readiness

Help control costs  
of compliance



High efficiency



Speed at scale

# Agenda

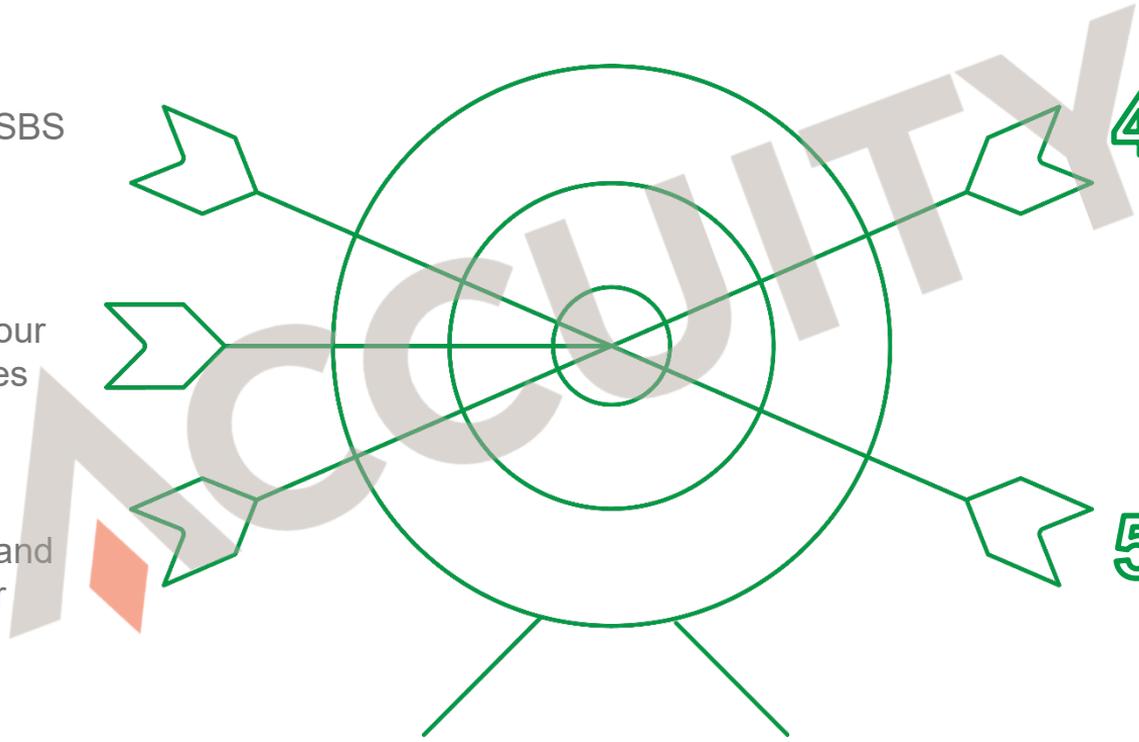
1 Introducing SBS

2 Introducing our AI capabilities

3 Why are EI and SI Regulator Ready

4 Proven Efficiency

5 AI technologies in practice



# Fircosoft Continuous Commitment : Deliver on the Balancing Act in Financial Crime Screening

Deliver screening solutions  
regulators trust



Help control costs  
of compliance



**Welcoming SBS Proven AI Technology in the mix**

# Introducing SBS



SAFE BANKING  
SYSTEMS

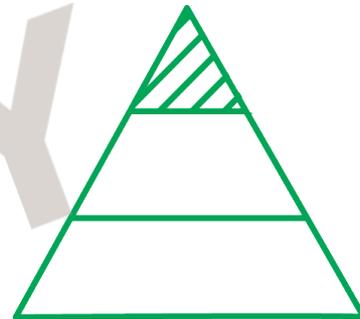
founded in 1999

Became the first **Fircosoft**  
distribution partner in

200

Developed  
an industry  
leading robust

**Tier 1**  
offering



To date SBS  
is a leader in

**North  
America**

in account screening



0

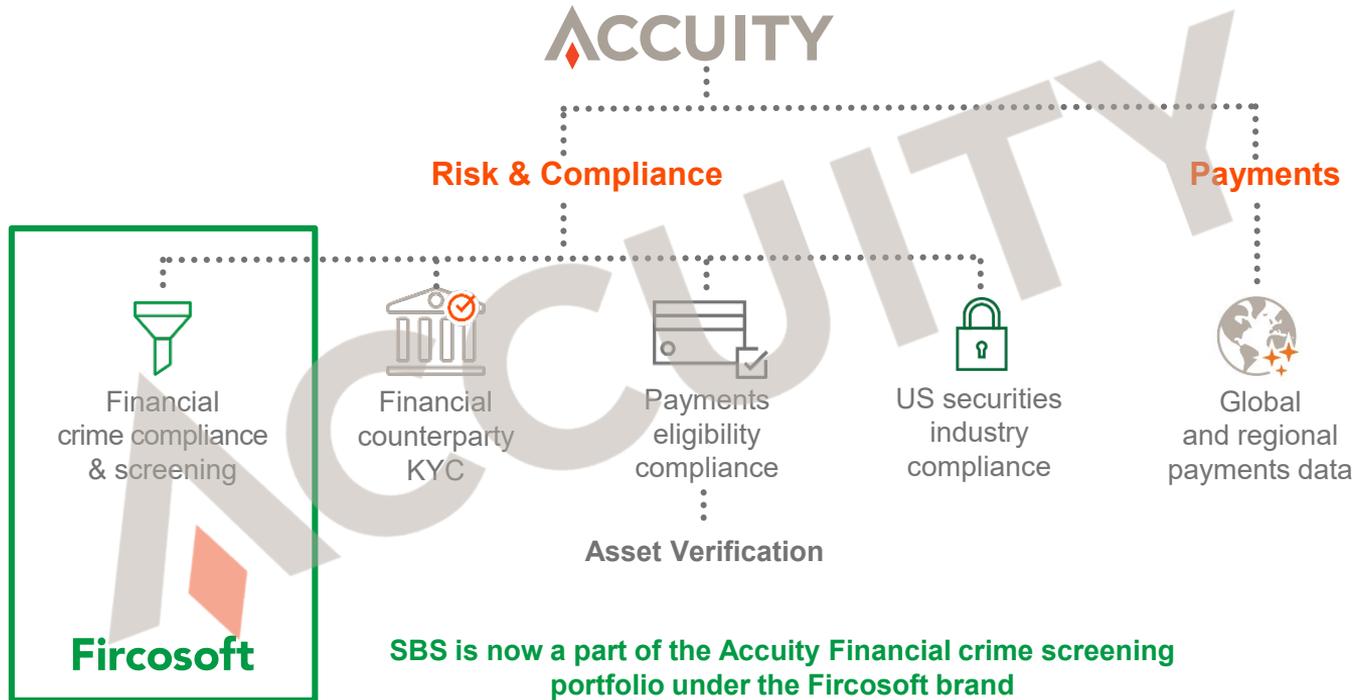
Proven  
**regulator-ready**  
solutions



73 of the **top**  
**100** Banks  
globally use  
**Fircosoft**



# Where SBS fits at Accuity

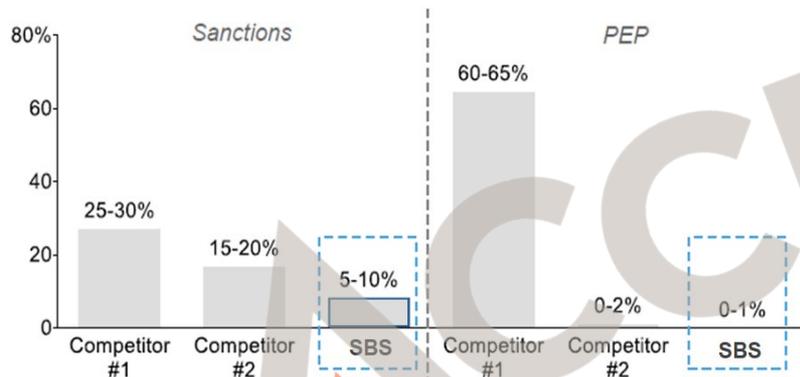


# SBS technology beats the false positive challenge on account screening

Accuity resolves the issues of alert volumes whilst maintaining regulatory effectiveness

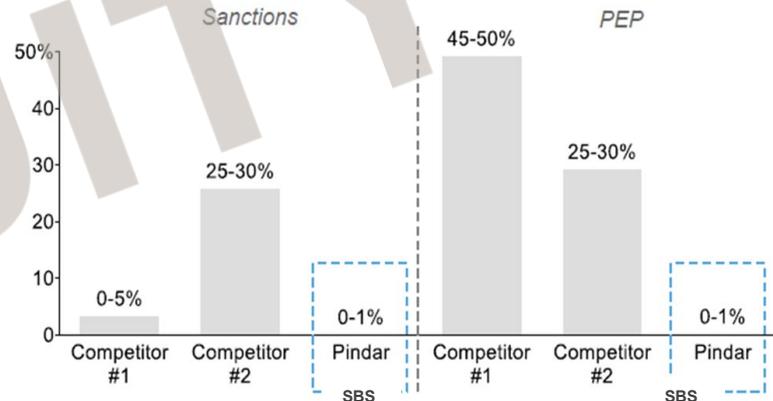
## False Positive Hit Rate, SBS vs Competitor

Corporate Relationships File (10K)



## False Positive Hit Rate, SBS vs Competitor

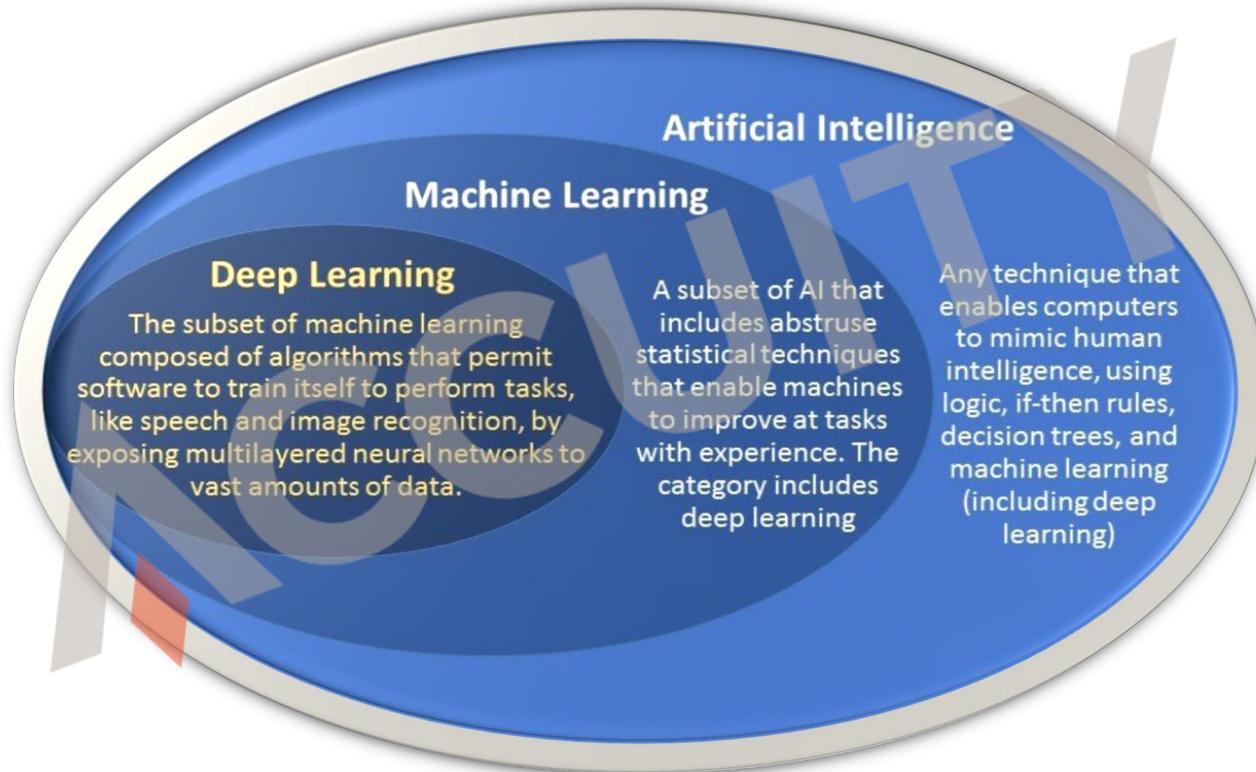
Customer Database File (1M)



Independent due diligence proved out that Accuity was addressing a key issue faced by this market

Source: Parthenon EY commercial due diligence 2018

# SBS Technology is based on Artificial Intelligence



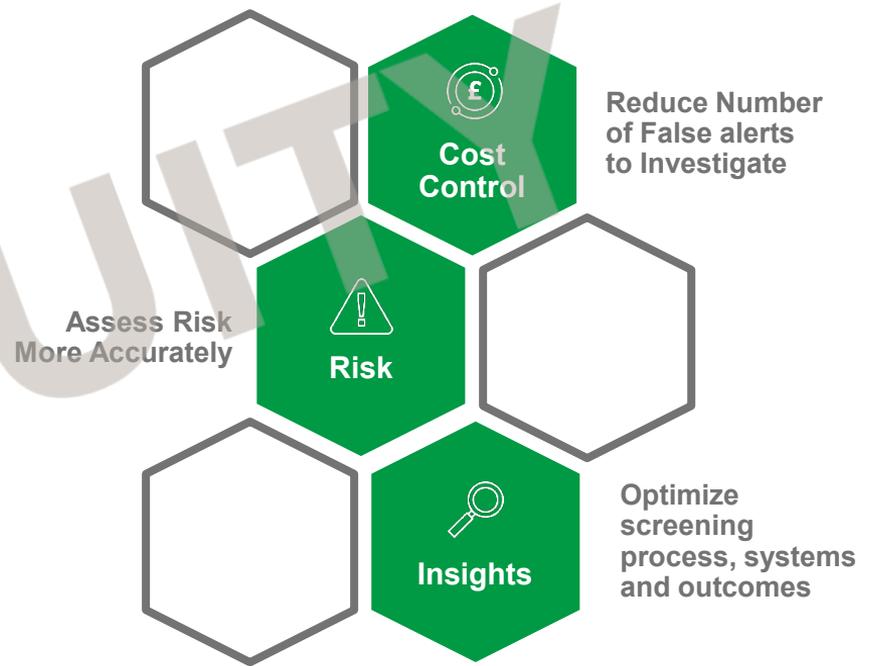
Source: <https://www.geospatialworld.net/blogs/difference-between-ai%EF%BB%BF-machine-learning-and-deep-learning/>

# AI Can Help Beat Compliance Challenges

## Artificial Intelligence helps

Increase quality of output of detection engines  
Accurately assess risk of counterparties  
Suggest improvements of screening operations

**FI's top management and operations expect AI to solve the cost & efficiency problem**



Source::

# But to be accepted by regulators, it needs to be explainable

## Explainability Drivers



Watchlist and alert resolution data are a moving target



Compliance does not go without proof of compliance



Model validation requires total control over inputs & outputs

Compliance, auditors & regulators are turned off by unexplainable 'magic' technology



# Introducing Fircosoft AI capabilities for screening

Bringing best of technology & compliance expertise

**ACCUITY**

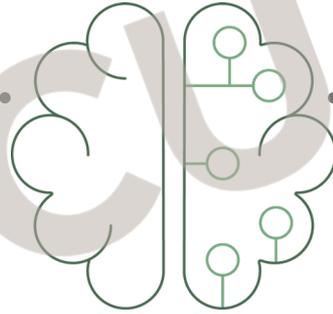
accuity.co  
m

**Fircosoft** **Bankers**  
ALMANAC

# The use of Artificial Intelligence & Machine Learning

## Our AI techniques assess:

**1** .....  
The probability of two records being a true hit based on the **Strength Index**

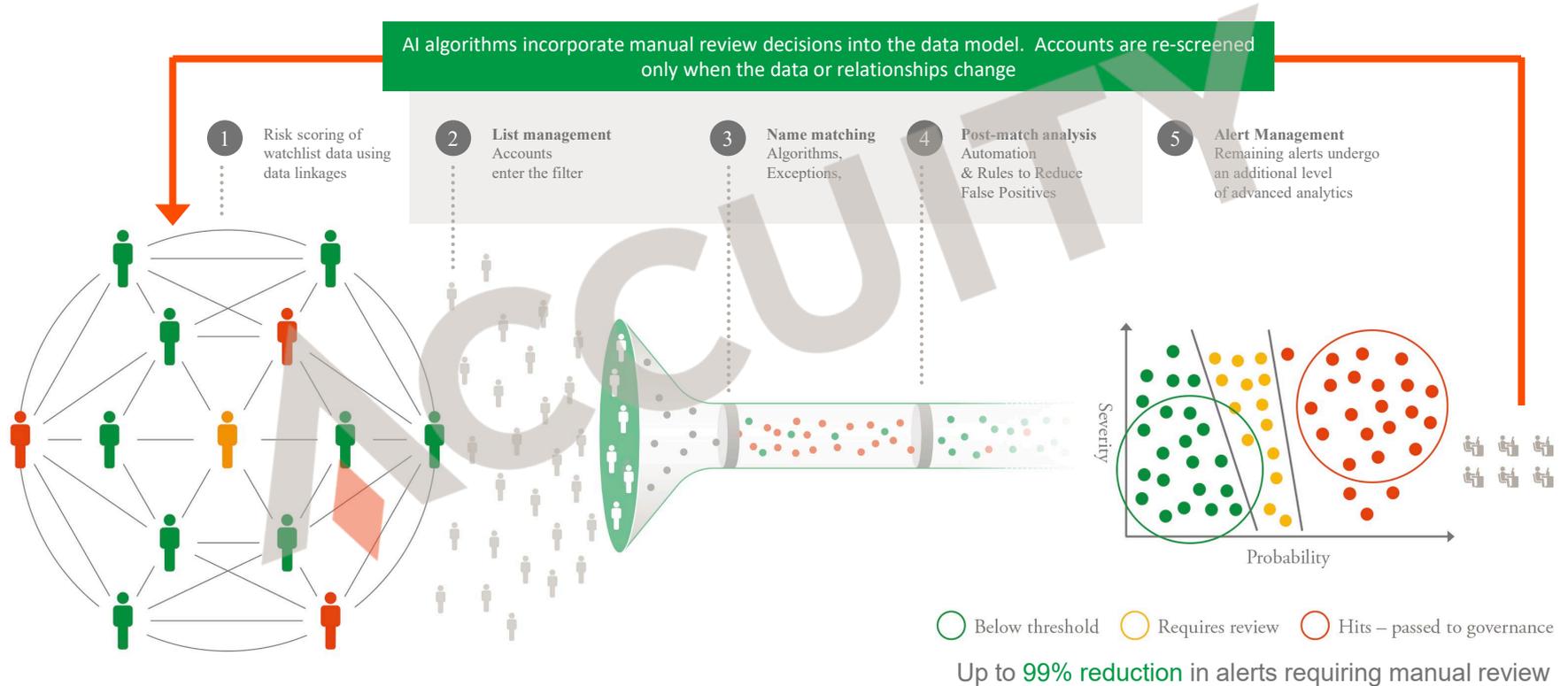


**2** .....  
The predicted level of interest based on the **Exposure Index** severity ranking

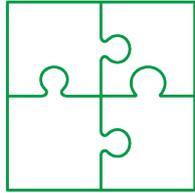
Machine Learning focuses on retention of analyst decisions on true hits. This ensures users are not receiving information the analyst is already aware of.

Live for Account Screening Sanctions, PEP & Negative News watchlists

# Thanks to SI and EI index, relevant alerts are easily surfaced



# Deep diving on SI and EI



## The Strength Index (SI):

A model that identifies the probability of true matches in large customer databases.

If this match is a customer, what does this mean?

The higher the SI score, the higher the potential risk.

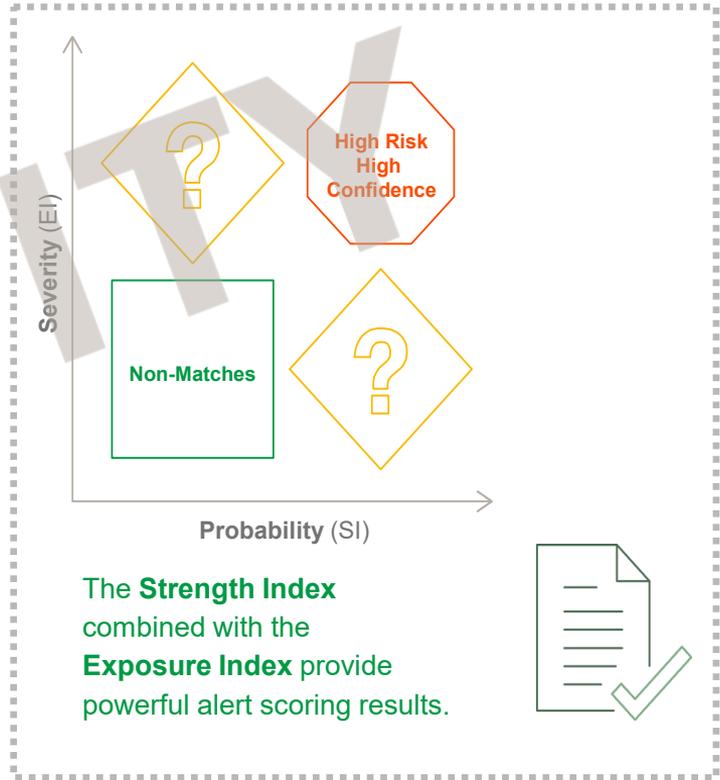


## The Exposure Index (EI):

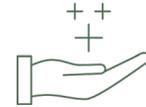
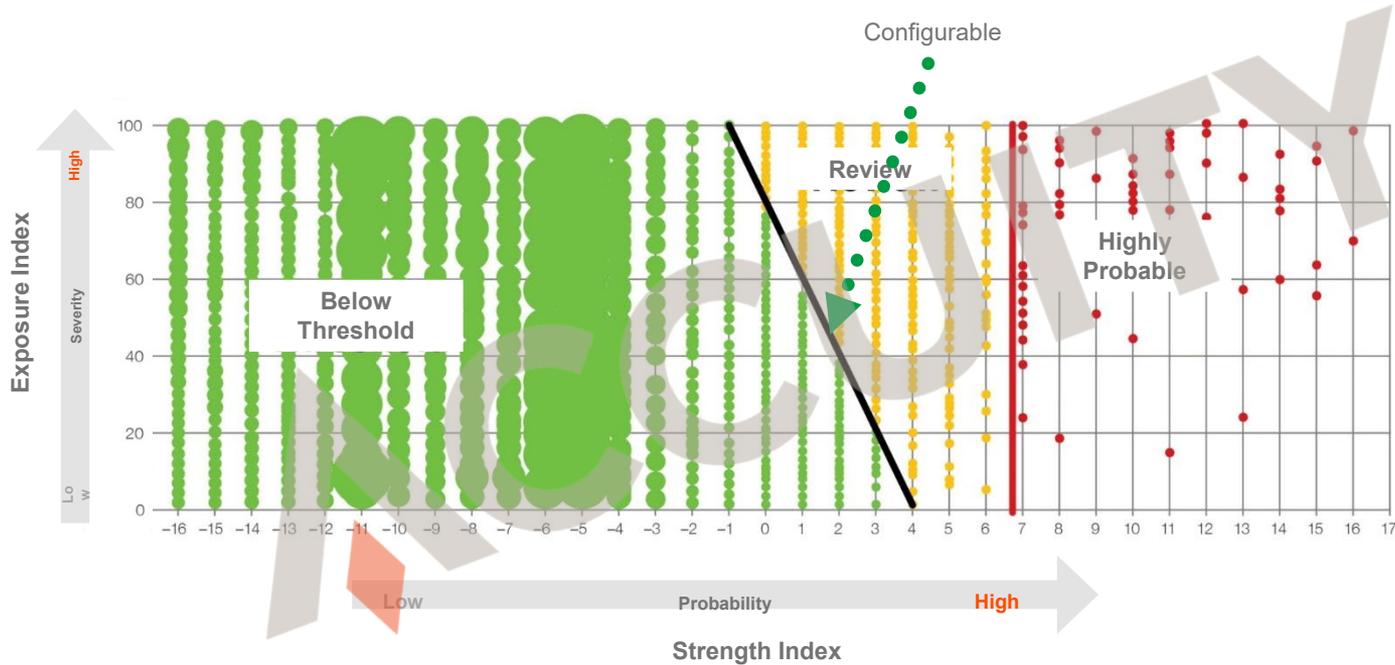
An automated exposure ranking of large, high-risk databases on a daily basis.

What is the probability that this is a true match?

The higher the EI score, the higher the probability of truth.



# Detecting relevant alerts is aligned with risk appetite of the bank



Generate relevant alerts based on a financial institutions risk appetite and historical applied procedures.  
Analysis to improve your organization's risk posture.

SI & EI index combination help reduce false positives AND false negatives



# How are EI and SI regulator ready

**ACCUITY**

accuity.co  
m

**Fircosoft** **Bankers**  
ALMANAC

# Exposure Index (EI) is a recognized, patented method

Patented method of ranking politically exposed persons and other heightened risk persons and entities.



Original inspiration from Google's ranking algorithm

$$x_i = \frac{1}{3} \left[ \sum_{j=1}^m \frac{w_{ij}}{a_j} + \sum_{j=1}^m \frac{w_{ji}}{b_j} + \sum_{j=1}^m \frac{w_{ij}}{c_j} \right]$$

$$y_j = \frac{1}{3} \left[ \sum_{i=1}^m \frac{w_{ij}}{a_i} + \sum_{i=1}^m \frac{w_{ji}}{b_i} + \sum_{i=1}^m \frac{w_{ij}}{c_i} \right]$$

$$z_k = \frac{1}{3} \left[ \sum_{i=1}^m \frac{w_{ik}}{a_i} + \sum_{i=1}^m \frac{w_{ki}}{b_i} + \sum_{i=1}^m \frac{w_{ik}}{c_i} \right]$$

Where:  
 $x_i$  is the EI of the  $i$ th profile in a set of  $m$  profiles  $x$ ;  
 $y_j$  is the EI of the  $j$ th profile in a set of  $m$  profiles  $y$ ;  
 $z_k$  is the EI of the  $k$ th country and  $k$ th category/position pair

(12) **United States Patent**  
**Schiffner**

(10) Patent No.: **US 8,069,126 B2**  
 (45) Date of Patent: **Nov. 29, 2011**

(54) **METHOD OF RANKING POLITICALLY EXPOSED PERSONS AND OTHER HEIGHTENED RISK PERSONS AND ENTITIES**

(75) Inventor: **Mark A. Schiffner**, Milledale, NY (US)

(73) Assignee: **Safe Ranking Systems, LLC**, Mineola, NY (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 156(b) by 763 days.

(21) Appl. No.: **12/917,239**

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,787,213 B2 7/2004 Finkelman

7,189,585 B1\* 6/2004 Lawrence et al 705/38

2005/0442017 A1\* 2/2005 Lawrence et al 705/38

2006/0218483 A1 11/2006 Cooper et al

\* cited by examiner

Primary Examiner — Michael B Holmes  
 (74) Attorney, Agent, or Firm — Levitz & Mandelbaum

(57) **ABSTRACT**



# Strength Index (SI) is explainable at a detailed level

Risk score criteria & sub-criteria are readily available

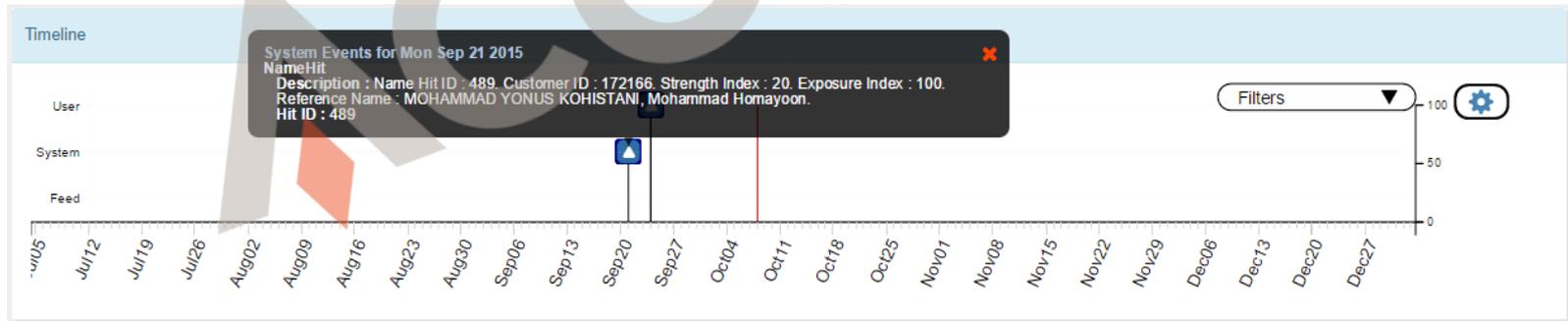
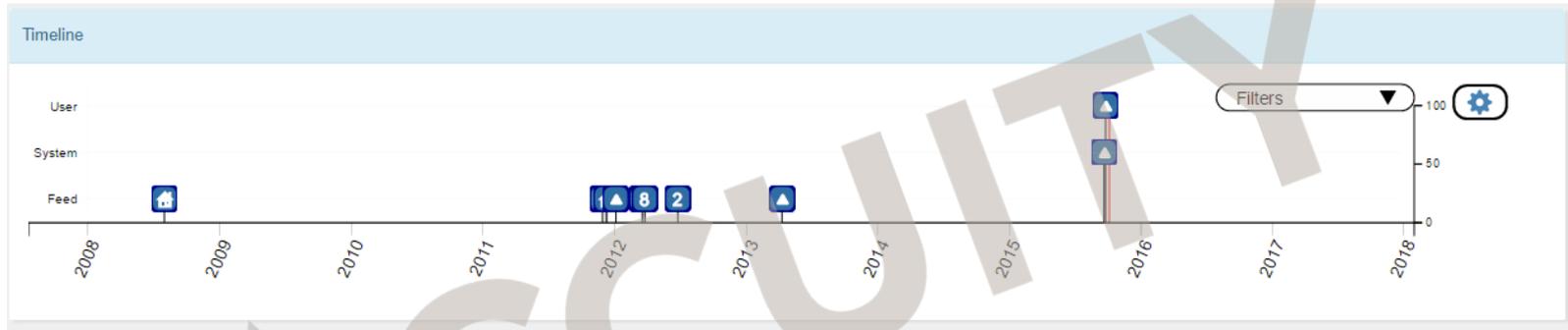


Below threshold matches are also stored for full explainability

Discussion with auditors & regulators is made easy

# Easily accessible archive timelines for full explainability of record changes\*

\* Firco Screening Insight for Accounts solution





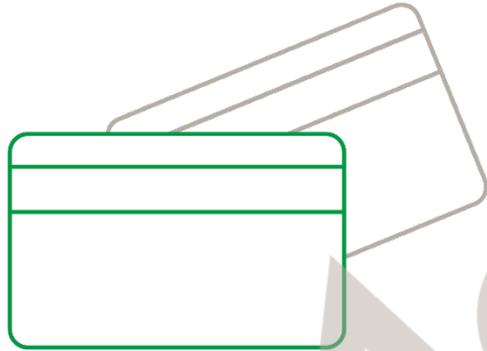
# Proven Efficiency

**ACCUITY**

accuity.co  
m

**Fircosoft** **Bankers**  
ALMANAC

# Case 1: High volume account screening for credit card issuer



**Top-5 Issuer of credit cards**  
in the US over 50 million  
customer records



Placed under Consent Order  
with multiple regulators due to  
overall lapses in KYC and  
customer screening



As a result, they spend  
considerable millions of  
dollars in an effort to  
“enhance” AML processes,  
including hiring over

**100**

temps to address  
alert volumes

Within 3 months of engaging  
with Accuity, the client goes “live”  
in Production, and is handling all  
ongoing alert remediations in-house

Within 2 more  
months, the client has  
gone into regular  
business as usual

**Sanctions + PEP + EDD Screening**

**18**

months  
into their

**36**

commitment  
for  
remediation,  
they have  
reviewed over

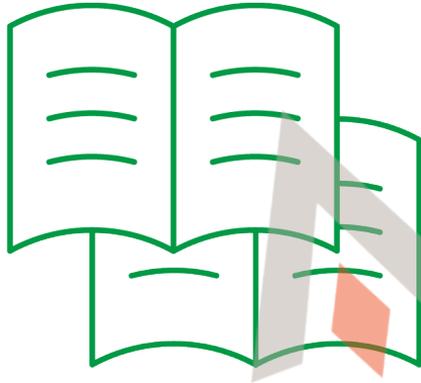
**2,000,000**

alerts and  
have very little  
to show for it  
(almost no  
true, material  
alerts)

# Case 2: High volume account screening for tier 1 global bank

## Top-tier global bank

Let the internal report speak for itself....



Following are samples of monthly alert rates from our ongoing use of our Firco Automated Alert reduction. Contrast that with the 43.4% hit rate we observed in using a 102,000 record sample in for "forward scanning" using the full PEPs list.

### Lookback scan

CIF	Hit	Records Scanned	Percentage
September	3,237	12,590,809	<b>0.03%</b>
October	1,798	12,600,074	0.01%

**Sanctions + PEP + EDD Screening**



# Accuity's Products Leveraging EI and SI

**ACCUITY**

accuity.co  
m

**Fircosoft** **Bankers**  
ALMANAC

# EI and SI index – Live for account screening via two offerings



## Financial Crime Screening

Installed Software



### Firco Trust (installed) Automated Alert Reduction advanced module

- **List Services** - automatic list updates, data optimization and application of the Exposure Index score to records.
- **Analytics Decision Engine** leverages AI techniques to resolve entities by combining the Exposure Index and Strength Index.
- **Archive View** investigative module for advanced link analysis and link monitoring.
- **Data Migration Kit** utilizing source, reference and historical data from legacy systems.
- **Model Validation Services** working directly financial institutions to demonstrate to regulators that the models are robust and effective.



### Financial Intelligence Unit Services (F.I.U.)



### Firco Screening Insight – for Accounts

# EI and SI index – Live for account screening via two offerings



# Our customers have had clear cost savings & RoI



In shifting from our legacy name screening system to SBS, we greatly reduced future hiring needs.

Our analysis showed something like \$10 million in cost-saving over the next few years, and north of \$100 million in the longer term”

**VP of Global AML Compliance, Tier 1 Bank**



The Accuity sales pitch to us revolved around their unique risk-based approach. After running thousands and thousands of test cases, we told them where we were comfortable on their exposure index and strength index, and they were able to fine tune accordingly”

**VP of Global AML Compliance, Tier 1 Bank**



The price isn't a huge issue for us. The value we get out of Accuity is above what I would expect”

**Customer Risk Scoring Product Manager, Tier 1 Bank**

# Come discover AI technology by SBS

- ✓ **Artificial intelligence can greatly help screening compliance** on efficiency & effectiveness
- ✓ To be trusted, AI technology needs to be designed using **deep domain expertise**
- ✓ **Explainability** of AI will be challenged by Compliance, auditors and regulators who do not care about cost reduction
- ✓ SBS have built **a unique AI technology** leveraging 20 years of expertise in screening compliance AND risk data analytics
- ✓ Now integral part of Fircosoft– **SBS AI technology is made available in an easy and flexible way** to all enterprise screening departments – starting with account screening
- ✓ **Strength Index and Exposure Index help surface relevant alerts**, according to risk appetite of the FI
- ✓ Fircosoft AI is **proven and explainable** out of the box

# Fircosoft Continuous Commitment: Excellence in Financial Crime Screening



Effectiveness



Efficiency



Explainability

# Fircosoft

Thank you for your attention

ACCUITY