The Road To Operational Excellence: Common barriers and how to remove them

Fraud
Background

FICO has a wide and diverse experience in dealing with all kinds of financial, decisioning and operational issues. Between them, our consultants have hundreds of years of project experience. As part of our Operational Excellence Programme we wished to exploit that experience to benefit all our existing customers. To that end we asked our consultants to identify those difficulties which are the most common across our client base and define a set of services to manage and mitigate them.

In this document, common barriers to operational excellence are addressed by specific services, all of which are short engagements designed to achieve high return on investment. Each service is flexible and may be tailored to the needs of the customer. Whether provided directly by FICO or through one of our network of international partners, the service will be delivered by a specialist consultant certified by FICO.

The latest version of this document has introduced Analytic offerings F23 and F24.

As a valued customer we wanted to share these ideas with you to provide food for thought and an opportunity for further collaboration. If you wish to discuss a specific service, please contact the FICO consultant shown on that service’s description; for a more general discussion about the Operational Excellence Programme, please contact:

Dave Woods or Dennis Witkins at OperationalExcellence@fico.com

📞 +44 (0)7930 113051
BARRIERS TO OPERATIONAL EXCELLENCE IN FRAUD (FALCON FRAUD MANAGER)

Some common barriers experienced by customers striving to achieve optimum performance of their fraud detection systems are addressed by services described on the following pages:

Business
- ‘Flash Fraud’ attacks, 9
- Customers dissatisfied with current card protection, 9
- Comprehensive Fraud detection coverage currently lacking, 10
- Fraud losses on high risk transactions, 8
- Frauds with time based signifiers are not being detected, 16
- Holistic Fraud picture lacking, 12
- Identifying High Target Merchants, 17
- Merchant business, Identifying Points of Compromise, 11
- Online CNP Fraud POC, 11
- Queues not balancing case load across analysts, 221
- Difficult to know how cases are being worked, 221
- Fraud behaviour experienced by one client is different to that seen at another client, 24
- ‘Suspect’ cards causing authorisation referrals can continue to transact, 15

Customers dissatisfied with card protection, 9
Fraud detection best practice not understood, 10
High losses due to fraud are being experienced, 9
Reaction times to Fraud attacks impaired, 14
Unable to make contact with customer, 20
Low contact rate of customers, 20
Merchant Fraud, management of, 17
Testing not possible using historic data,19
Too many cases are worked late or lost, 221
Fraud detection capability limited by lack of available data,27

Resource
- Delays to real time scoring, 8
- Inexperienced Falcon Administrators, 7
- New projects lack Falcon experience, 7
- Shortage of resource leads to delays in moving to Falcon real time scoring, 8
- Identifying analyst training needs can be challenging, 14
- Re-deploying analyst resources to high-volume queues, 14
- Inexperienced FAI Administrators, 23

System Performance
- Data list rule performance slow, 13
- System Performance Issues, 6,19

Technical
- Future enhancements uncertainty, 6
- Unable to generate bespoke reports, 12
- Inflexible data list rules, 13
- Unable to quickly bulk load a Hotlist in response to flash fraud, 22
- Transaction scores are slow to adapt to changing fraud patterns, 24
- Referral setting of FFM block in Falcon not reflected on the card management system (CMS), 15
- Gaps in MI impacting Fraud Operation Optimisation, 12
- Unable to reference large data lists, 13
- Data list rule performance slow, 13
- It is not possible to view all Hotlist entries, 22

Analytics and Business Consulting
- Struggling fraud strategies,28,29
- Attrition of Key Assets,28,29

We offer a comprehensive set of services which are aimed specifically at addressing these barriers: see our “Index of Services” on page 4.
Fraud (Falcon FM™)

Index of Services

F01: Technical Health Check ................................................................. 6
F02: System Administration Training .................................................... 7
F03: Real Time Interface ........................................................................ 8
F04: Upgrade To Real-time Processing .................................................. 9
F05: Migration Of A New Card Portfolio To Falcon Fraud Manager .... 10
F06: Common Point Of Purchase Solution ............................................ 11
F07: Additional Reporting and Fraud Database .................................... 12
F08: Falcon Authorisation Interface Resident Hotlists ......................... 13
F09: Real-Time Operational Dashboard ............................................... 14
F10: Sticky Referral .............................................................................. 15
F11: Falcon Authorisation Interface Rolling Time Variables ............... 16
F12: Merchant Monitoring Solution .................................................... 17
F13: Product Training ........................................................................... 18
F14: Rule Analytics ............................................................................... 19
F15: SMS / Dialler Services Enhancement .......................................... 20
F16: Case Analytics ............................................................................. 21
F17: Hotlist Online Editor ................................................................... 22
F18: FAI System Administration and Diagnostics .................................. 23
F19: Adaptive Model .......................................................................... 24
<table>
<thead>
<tr>
<th>F20: Project Management Services</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>F21: Authorisation Rule Analytics</td>
<td>26</td>
</tr>
<tr>
<td>F22: Expanded API Upgrade</td>
<td>27</td>
</tr>
<tr>
<td>F23: Fraud Health Check</td>
<td>28</td>
</tr>
<tr>
<td>F24: Fraud Assessment</td>
<td>29</td>
</tr>
</tbody>
</table>
F01: Technical Health Check

The provision of a detailed technical review of a Falcon installation to ensure optimum system performance and adherence to best industry practice

There are Best Practice methods of managing the Falcon installation that improve system performance and improve fraud detection. Experience gathered by FICO across many clients is offered to increase the effectiveness and usage of Falcon in detecting potential fraud.

In addition, a review of current and past issues raised with FICO Support is carried out. This is to identify possible recurring problems and any patches or fixes that can be applied. If additional help or liaison with Support is needed, this can be done during the health check.

<table>
<thead>
<tr>
<th>Client Pain Points</th>
<th>FICO Services</th>
<th>Business Benefits</th>
</tr>
</thead>
</table>
| Poor System Performance | The Health Check covers the following key areas:  
  - Architecture  
  - Transaction processing environment  
  - Falcon server analysis  
  - Database performance  
  - Server elements  
  - FICO additional services (FAI etc)  
  - The Health Check covers the following key areas:  
    - Architecture  
    - Transaction processing environment  
    - Falcon server analysis  
    - Database performance  
    - Server elements  
    - FICO additional services (FAI etc)  
  - At the end of the Health Check a detailed report is produced setting out the findings from the analysis process, and any recommendations are made for potential system configuration changes | Improved System performance reduces operational and support costs  
  - Reduction of timeouts and lost transactions increases Fraud Detection capability  
  - Provides industry leading expertise to ensure that any future enhancements are completed to optimal design and delivery |
| Future enhancements | Scoring timeouts  
  Slow response to Auth messages  
  Poor case management  
  performance  
  Security issues  
  System outages  
  FAI receives frequent 'stop message' requests  
  Process core dumps  
  Moving or upgrading server architecture  
  Adding a new portfolio  
  Changing filter rules  
  Moving from Batch / Online to real-time processing  
  Dialler / SMS integration | FICO Services:  
  - Improved System performance reduces operational and support costs  
  - Reduction of timeouts and lost transactions increases Fraud Detection capability  
  - Provides industry leading expertise to ensure that any future enhancements are completed to optimal design and delivery |

Estimated Effort: To be confirmed  
FICO Contact: OperationalExcellenceFraud@fico.com
The provision of a training course in Falcon system administration for new or existing staff to build or refresh skills and knowledge for managing a Falcon installation

The Falcon system changes over time, with new functions and features added, patches applied, and upgrades to newer versions. To ensure that the full benefit is obtained from running Falcon, training is given by FICO Technical consultants in Falcon System Administration. This training can be given to staff new to Falcon, or as a refresher to existing staff whose experience needs updating. The training can be adapted to the specific client requirements, or particular client issues or concerns can be addressed as needed. A review of current and past issues raised with FICO Support is done to identify areas where additional knowledge would help in diagnosing problems at an early stage.

<table>
<thead>
<tr>
<th>Client Pain Points</th>
<th>FICO Services</th>
<th>Business Benefits</th>
</tr>
</thead>
</table>
| Inexperienced Falcon Administrators | On site delivery on site of a one day training course covering the following topics:  
- Falcon system overview  
- Scoring system  
- Falcon processes  
- Falcon Expert rules system  
- Case Management system  
- Statistics, Utilities and Aging functions  
- Hotlists  
- Falcon profile management  
- Falcon database administration  
- Diagnostics and troubleshooting  
- System documentation  
- Falcon Authorisation Interface (FAI) overview, administration, and diagnostics | • Improved internal management of your system leading to better Falcon operation and performance  
• Reduced impact to timescales and issues for any new Falcon initiatives whether internal or external  
• Reduction of issues raised with FICO Support |
| New projects lack Falcon experience | Any new initiatives (internal or external) involving Falcon where the team members have no experience of Falcon | |

Estimated Effort: 1 day

FICO Contact: OperationalExcellenceFraud@fico.com
F03: Real Time Interface

Provision of a Real Time Interface allowing the Falcon score and decision code to be used in the Authorisation process. This service is offered on all platforms that interact with Falcon Fraud Manager, including Base24, Unix / AIX, and zOS on mainframe.

There are great benefits to harnessing the power of Falcon scoring to improve fraud prevention. Using the Falcon score and decision code in the Authorisation process makes it possible to refer or decline suspect transactions, and prevent losses before they happen - a capability provided by the Falcon Real Time Interface. The service provides a robust means for the Authorisation system to communicate with Falcon Fraud Manager, and offers the following functions:

- The Authorisation system receives back the Falcon score and decision code in time to influence the transaction decision sent to the ATM or POS
- A Store and Forward (SAF) facility that is used if Falcon Fraud Manager is unavailable. The SAF will buffer up transactions until Falcon is restored and then send them into Falcon for scoring
- A Prior Action Database (PAD) that contains the last Falcon score and decision code returned. This is the best information that can be returned when Falcon is not available, or the interface is in an operating mode where a real time response is not required
- A Filter Rule base to control which transactions are scored in real time. This allows the scoring load to be balanced and to use real time on transactions where there is greater potential risk, e.g. more than $50 value
- Monitors and collects statistics on the performance and throughput of the interface

Client Pain Points

<table>
<thead>
<tr>
<th>Fraud losses on high risk transactions</th>
<th>Fraud transactions with a high Falcon score that could be prevented by declining them at the ATM / POS are not being stopped.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortage of resource leads to delays in moving to Falcon real time scoring</td>
<td>The requirement to design, specify, code and test a full functional Falcon interface delays the implementation of Falcon real time authorisation processing</td>
</tr>
</tbody>
</table>

FICO Services

- Installation of the software package into your test environment
- Configuration and setup of your application
- Test support and help with resolving issues
- Best Practice advice on Real Time Interface configuration and usage within Falcon
- Support and training given to your in house staff to enable you to be self supporting on the application

Business Benefits

- Helps to prevent fraud losses by allowing the transaction response decision back to the ATM / POS to be influenced by the Falcon score and decision code
- Saves a large development effort on your part to build a real time interface for Falcon
- Delivered as source code allowing interface to be customised to your local requirements
- Operational control of real time filter rules allowing adjustments to be made with immediate effect

Estimated Effort: To be confirmed

FICO Contact: OperationalExcellenceFraud@fico.com

© 2010 Fair Isaac Corporation. All rights reserved.
**F04: Upgrade To Real-time Processing**

FICO’s Solutions Consulting group offers comprehensive support to clients performing an upgrade of an existing instance of FFM to Real-Time processing.

As part of the migration to Real-Time, an effective interface between clients’ authorisation systems and Falcon will need to be developed, and FICO can provide a number of solutions to this requirement (see detail in FICO Services).

Whilst clients will have experience of mapping data to the API from the original implementation, FICO provides a service to work with them to ensure that the mapping through the new interface has not been compromised in any way and maintains the performance levels of the Falcon Model.

If there are any changes to the provision of the API data, then even if there is no change to the source data, then FICO will firmly recommend the API data is revalidated by its Technical Experts; this will ensure that the changes have been implemented correctly and that the Falcon model is operating in an optimal way based on the data available.

From the collective experience of many years working with various “fraud shops”, and in many cases actually managing these, the FICO Business Consultants will work closely with clients’ operational teams to assist in the review of existing fraud strategies and the determination of new strategies which will maximise the benefits from introducing Real-Time fraud detection.

<table>
<thead>
<tr>
<th>Client Pain Points</th>
<th>FICO Services</th>
<th>Business Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High losses due to fraud are experienced</td>
<td>• Integration of the pre-built FICO FAI interface</td>
<td>Real-Time is the most effective way to reduce fraud losses because a potentially fraudulent transaction can be stopped by returning a suitable response to the POS. Upgrading to Real-Time can support the development of more effective rule strategies to prevent fraud losses, and maintain staff levels, or reduce staff levels but not reduce existing losses. By adopting Industry Best Practice, the risks associated with a Real-Time upgrade are minimised and the benefits maximised. Reduced project timescales to upgrade result in cost savings for the upgrade process and a quicker realisation of benefits</td>
</tr>
<tr>
<td>'Flash Fraud' attacks prevalent</td>
<td>• Development of a bespoke Real time interface</td>
<td></td>
</tr>
<tr>
<td>Customers dissatisfied with current card protection</td>
<td>• Support and best practice for Client development of interface</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Project Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Design review</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• API Mapping validation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Installation support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Testing Support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Review and update of Fraud Strategies</td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Effort:** To be confirmed

**FICO Contact:** OperationalExcellenceFraud@fico.com
FICO’s Solutions Consulting group offers clients the security of achieving comprehensive protection of their entire card portfolio, through an existing instance of Falcon Fraud Manager.

Whilst clients will have experience of mapping data to the API from the original implementation, FICO provides a value-add service to work with them to ensure the mapping of the new portfolio, which may be operated under a different scheme to the existing portfolio with a different message format for both Authorisation Requests and Posting Batch files.

FICO can recommend the best model for a new portfolio and if multiple models are required within one instance of Falcon, it can also advise on how best to set this up.

As with the API data, it is critical the Consortium data meets the FICO specifications for field content and format; for any significant change to clients’ systems, then there may be a requirement for mapping new data relating to a new portfolio to the Consortium Specification, and there will almost certainly be a requirement to revalidate the Consortium data feed as part of the change initiative. This re-validation is to ensure that the data received is in the correct format to allow its use in future model build exercises. The data are almost worthless if key fields as received by FICO are not as expected.

### Client Pain Points

<table>
<thead>
<tr>
<th>Comprehensive Fraud detection coverage currently lacking</th>
<th>You do not have all your portfolios protected by Falcon, leaving yourself potentially exposed to targeted attacks on those portfolios</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraud Detection best practice not understood</td>
<td>Lack of understanding of industry best practice in Fraud detection and prevention that is applicable to each individual portfolio</td>
</tr>
</tbody>
</table>

### FICO Services

- API Mapping and validation
- Model Selection
- Consortium Data Mapping and validation
- Operational Case Management best practice

### Business Benefits

- Where new portfolios have been introduced savings can be made by all cards being run from common systems
- Changing scheme affiliation for card portfolios allows savings through improved interchange rates and better customer service, and therefore card use, through improved card acceptance
- You could have Falcon operating across all or part of an existing card portfolio. Significant benefits can be achieved via new or existing portfolio to be afforded the protection offered by Falcon

### Estimated Effort

To be confirmed

### FICO Contact

OperationalExcellenceFraud@fico.com
F06: Common Point Of Purchase Solution

This functionality will provide Clients with a list of Common Points of Purchase (CPP) where cards have had subsequent fraud exercised on them, but have all performed transactions at that same merchant.

Once the CPP has been identified then a list of cards which have performed transactions during the duration of the compromise can be produced. This list is then utilised to determine a strategy to counter the compromise, such as adding the compromised cards to a hotlist for monitoring in Expert Rules, or blocking and re-issuing the cards.

Development of a single dedicated nearline information store which interrogates subset of transactional data for the CPP identification process

Information stored within the CPP solution for a rolling 18 month period

Identified Fraud cases must be closed from within the Falcon Case Manager, and with the explicit case disposition of ‘Confirmed Fraud – Counterfeit’ to qualify for application into the CPP solution for determination

As a function of the CPP solution a list of CPPs, and of compromised cards can be made available via on-screen reporting, or in a data export format for further analysis.

<table>
<thead>
<tr>
<th>Client Pain Points</th>
<th>FICO Services</th>
<th>Business Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchant business, Identifying Points of Compromise</td>
<td>• Deployment of CPP database</td>
<td>• Faster detection and prevention of CPP fraud, directly reducing Fraud losses and lowering Risk exposure within this area. This directly reduces your Risk profile</td>
</tr>
<tr>
<td>Online CNP Fraud POC</td>
<td>• Support interfacing to existing Falcon systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Testing support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Rule definition support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Data extract development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Business Consultancy Best Practice</td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Effort:** To be confirmed

**FICO Contact:** OperationalExcellenceFraud@fico.com
F07: Additional Reporting and Fraud Database

The provision of an additional reporting database specifically designed to provide a repository of all Fraud data, as well as enabling clients to generate bespoke Management Information reporting.

FICO has developed a database that interfaces directly with any version of Falcon, storing targeted data updated from the Falcon installation itself. This comes with a pre-built set of ‘Best practice’ SQL queries designed to support the optimisation of any Fraud Operation. In addition, this provides the capability for Clients to create their own bespoke reports. All reports can be exported into external analytics. The database also incorporates a Fraud Database which will record each instance of fraud, as it is identified, along with other key data. Fraud is recorded at an account and transactional level, for both Authorisation and Posting data. The fraud included in the database should be total fraud experienced across all portfolios and channels.

**Client Pain Points**

Unable to generate bespoke reports

Gaps in MI impacting Fraud Operation Optimisation

Lack of a holistic Fraud picture

**FICO Services**

- Deployment of Reporting and Fraud database
- Installation and interfacing to existing Falcon systems
- Testing support
- Report definition support
- Frauds analysis
- Development of data extracts
- Business Consultancy Best Practice

**Business Benefits**

- Improved flexibility in reporting
- Increased Fraud Detection due to improved strategies, based on comprehensive and historical Fraud data retained in the Database
- Reduction in Fraud losses
- Increased Fraud operational efficiency
- Interfacing to your existing Falcon system means reduced timeframes and project costs

**Estimated Effort:** To be confirmed

**FICO Contact:** OperationalExcellenceFraud@fico.com
**F08: Falcon Authorisation Interface Resident Hotlists**

*Providing the capability to maintain lists of data, e.g. suspect account numbers, which can be used in authorisation decisions. This service is offered to clients who do not have Falcon Hotlists, but do have the Falcon Authorisation Interface (FAI)*

In existing Falcon rules it is difficult to maintain lists of data (e.g. to test if an account appears on a suspect accounts list). A Hotlist can store this data and provide a simple Present / Not Present test for a rule. The Hotlist service provides functions allowing easy viewing and editing of each list entry, and enabling bulk loading, e.g. for a mass compromise of account numbers. The functionality to use Hotlists is added to the FAI and includes the following components:

- **Hotlist database.** Hotlists are stored and maintained within the FAI environment
- **Hotlist evaluation.** For each transaction, a Present / Not Present marker is set if a match is found for each list held

### Client Pain Points

| Unable to reference large data lists | Mass compromise account number lists cannot be handled in standard Falcon rules |
| Data list rule performance slow | Performance may be degraded when data lists are coded in Falcon rules |
| Inflexible data list rules | The coding of data lists in rules requires time consuming manual maintenance |

### FICO Services

- Installation of the software package into your test environment
- Configuration and setup of your application
- Test support and assistance with problem resolution
- Best Practice advice on the definition of Hotlists and their usage within Falcon rules

### Business Benefits

- The ability to identify lists of data against which rules can be written. This improves the responsiveness of your fraud strategies to threats such as mass compromise
- Optimisation of rule performance using Present / Not Present markers in place of coded list conditions
- Operational control of Hotlist maintenance within your Fraud department

**Estimated Effort:** To be confirmed

**FICO Contact:** OperationalExcellenceFraud@fico.com
**F09: Real-Time Operational Dashboard**

An additional Operational reporting solution, integrated to existing Falcon, providing real-time ‘at a glance’ information to clients’ Fraud Team Managers

The solution provides real-time operational information, via a graphical dashboard, to Fraud Team Leaders / Operations Managers, allowing them to see ‘at a glance’ any key data critical to optimising the Fraud Team Business Model. The data displayed can include Queue Volumes across queues, Frauds caught, cases created / closed per hour, case volumes by score-band High/Med/Low, false positive ratio etc.

The solution is configurable to meet clients’ data display requirements, and delivers a direct enhancement to the existing snapshot reports already provided by Falcon.

<table>
<thead>
<tr>
<th>Client Pain Points</th>
<th>FICO Services</th>
<th>Business Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction times to Fraud attacks impaired</td>
<td>• Deployment of Dashboard solution</td>
<td>• Your Fraud Team Leaders can see the activity within their fraud team clearly and immediately</td>
</tr>
<tr>
<td>Identifying analyst training needs can be challenging</td>
<td>• Installation and interfacing to your existing Falcon system</td>
<td>• Queues can be adjusted and better allocation made of resources to work cases / queues</td>
</tr>
<tr>
<td>Re-deploying analyst resources to high-volume queues</td>
<td>• Configuration of Dashboard</td>
<td>• Performance of queues / rules can be monitored in real time</td>
</tr>
<tr>
<td></td>
<td>• Testing support</td>
<td>• Your team’s effectiveness is improved by highlighting cases not being worked, or low priority cases being worked at the expense of high priority cases</td>
</tr>
<tr>
<td></td>
<td>• Business Consultancy Best Practice</td>
<td>• Reaction times to Fraud attacks are decreased, allowing for fast response strategies to be put in place to reduce fraud losses</td>
</tr>
</tbody>
</table>

**Estimated Effort:** To be confirmed

**FICO Contact:** OperationalExcellenceFraud@fico.com
**F10: Sticky Referral**

Provision of a facility to make an authorisation referral ‘stick’ to an account so that after a first referral, subsequent authorisations will be referred until the case is resolved. This service is offered to clients who have the Falcon Authorisation Interface (FAI).

If an authorisation is referred by Falcon, there is a risk that this transaction is fraud, and it is good practice to contact the card holder to confirm that the transaction was genuine. To prevent possible further fraud, referral of subsequent authorisations ‘sticks’ to this account until the transaction is confirmed as not fraud. If the card holder cannot be contacted within a fixed time period (say, seven days) the ‘sticky’ referral would expire allowing authorisations to be approved against the account again.

The capability to manually apply a ‘sticky’ referral to an account for a configurable period of time is also provided. This is done when a case is updated with the related block code, e.g. referral block.

The functionality to use ‘sticky’ referral is added to the FAI. This includes the following functional components:

- Apply a ‘sticky’ referral on first referred authorisation
- On each subsequent authorisation, return a refer decision to the Authorisation system
- When a case has the status closed confirmed not fraud applied, remove the sticky referral

### Client Pain Points

- **‘Suspect’ cards causing referrals can continue to transact**
- **Setting a Referral block in Falcon does not alter the card management system (CMS)**

### FICO Services

- Installation of the software package into your test environment
- Configuration and setup of your application
- Test support and assistance with problem resolution
- Best Practice advice on Sticky Referral configuration and usage within Falcon

### Business Benefits

- Reduces risk of fraud occurring after an initial referral of an authorisation
- Allows block status to be applied to an account within Falcon ensuring that all subsequent authorisations will immediately be affected, thus reducing possible fraud

**Estimated Effort:** To be confirmed

**FICO Contact:** OperationalExcellenceFraud@fico.com
To provide the capability to write Falcon rules incorporating user variables based not on fixed time intervals but on rolling time intervals. This service is offered to clients who have the Falcon Authorisation Interface (FAI)

Some types of fraud follow patterns that can only be detected using time based calculations, such as three keyed authorisations in thirty minutes. In standard rules, these patterns are difficult to detect because the time window does not move with each transaction. With rolling time variables, the time window (e.g. a 30-minute period) is checked for each transaction as it is processed, greatly enhancing the capability to detect this type of fraud behaviour.

The functions to create and maintain rolling time interval user variables are an enhancement to the FAI. The variables can be used in Falcon rules to set authorisation decisions or create cases, and thus are part of the real time authorisation process. This includes the following components:

- Rule base to define rolling time interval variables - The rules define the type of transaction that will update the variable, e.g. a keyed authorisation
- User Variable database - For each account on the system, a set of rolling time variables are stored and maintained
- Rule execution and variable evaluation - For each transaction, the user variable rules are evaluated. If a rule fires, the variable is updated and the value is then placed into one of the user fields within the Falcon API, before being sent to Falcon for scoring

Client Pain Points

<table>
<thead>
<tr>
<th>Possible un-detected frauds:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3+ keyed authorisations in 30 minutes</td>
</tr>
<tr>
<td>Total &gt; $1500 high risk country transaction amount in 12 hours</td>
</tr>
<tr>
<td>2+ out-of-country ATM withdrawals in 12 hours</td>
</tr>
<tr>
<td>2+ or total transaction amount &gt; $300 of internet airline ticket purchases in 30 minutes</td>
</tr>
</tbody>
</table>

FICO Services

- Installation of the software package into your test environment
- Configuration and setup of your application
- Test support and assistance with problem resolution
- Best Practice advice on Time variable definition and usage within Falcon rules

Business Benefits

- The enhanced ability to identify fraud that is dependent on time interval counting
- Reduced need for user defined variables with Falcon for time based rules, allowing these to be used for other purposes

Estimated Effort: To be confirmed

FICO Contact: OperationalExcellenceFraud@fico.com
An integrated solution to enhance the standard Falcon Fraud Manager product suite in order to provide a Merchant Monitoring capability, thereby leveraging the existing investment in Falcon Fraud Manager.

The solution uses a common platform, allows for re-use of existing interfaces and hence requires minimal additional user training. It provides real-time monitoring of Merchants using Scheme Rules, Client Written Rules and Cases that are created at Merchant Level which can be applied to multiple transaction types. Utilisation of an additional 'nearline' database is used for more data intensive rule execution, allowing transactions to be monitored over a longer period of time, and with more complex relationships which are not possible within the generic Falcon Product. The Falcon architecture allows the components of the solution, i.e. the FFM for Issuing and the FFM for Merchant Monitoring, to co-operate, and to share data which will improve the detection performance of each individual component.

<table>
<thead>
<tr>
<th>Client Pain Points</th>
<th>FICO Services</th>
<th>Business Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of Merchant fraud</td>
<td>• Deployment of Merchant Monitoring Database</td>
<td>• Identification of fraudulent transactions performed by your Merchants</td>
</tr>
<tr>
<td>Identifying high target Merchants</td>
<td>• Installation and interfacing to your existing Falcon systems</td>
<td>• Process for more Merchants</td>
</tr>
<tr>
<td>Acquiring bank complicit in Fraud</td>
<td>• Testing support</td>
<td>• Keep high risk Merchants under control</td>
</tr>
<tr>
<td>Certain Merchants constantly targeted by Fraudsters</td>
<td>• Rule definition support</td>
<td>• Key tracking and analytics</td>
</tr>
<tr>
<td></td>
<td>• Data extract development</td>
<td>• Compliance with Scheme Rules</td>
</tr>
<tr>
<td></td>
<td>• Assessment of existing Scheme Rules</td>
<td>• A minimum cost solution</td>
</tr>
<tr>
<td></td>
<td>• Business Consultancy Best Practice</td>
<td></td>
</tr>
</tbody>
</table>

Estimated Effort: To be confirmed

FICO Contact: OperationalExcellenceFraud@fico.com
F13: Product Training

The provision of a range of product specific training for the Falcon software

FICO offers the following range of product-specific training:

- FFM Case Manager for Analysts: ½ day
- FFM Case Manager Workstation for Supervisors: 3 days
- FFM Configuration Workstation: 1½ days
- FFM Advanced Rule Authoring: 2 days
- Rule Editor 5.5 Fundamentals: 2 days
- Falcon ID Case Manager for Analysts: ½ day
- Analytics for Telecom Case Manager for Analysts: ½ day
- Revenue/Network Assurance Case Manager (Analysts): ½ day
- eFalcon Policy Management Workstation (PMW): 2 days
- FFM Case Manager for Supervisors: 1½ days
- Fraud / Risk Analytics: ½ day
- FFM Rule Authoring Fundamentals: 3 days
- FFM Rules Fundamentals and Advanced Rules Accelerated: 4 days
- Falcon ID Rule Authoring Fundamentals: ½ day
- Falcon ID Case Manager for Supervisors: 1½ days
- Analytics for Telecom Case Manager for Supervisors: 1½ days
- Revenue/Network Assurance Case Manager (Supervisors): 1½ days

Client Pain Points

- Lack of understanding of how the product works at a technical level
- You understand the concept of the software at a business level but not at the more detailed technical level

FICO Services

- A full range of training courses as detailed above from beginner through to advanced level

Business Benefits

- A greater understanding of the underlying product providing the skills in-house

Estimated Effort: Varies dependent on training requirement

FICO Contact: OperationalExcellenceFraud@fico.com
F14: Rule Analytics

The provision of a facility that can analyse the performance of Falcon rules in identifying possible fraud, and to offer optimisation of rules against known frauds. This service is offered to clients who have the Reporting Database – see service F07: Additional Reporting and Fraud Database

If a complete record of known fraud can be gathered, then analysis of the data will reveal which rules are most effective at identifying the fraud experienced. Using the Reporting DB to hold fraud detected via a case and fraud identified by later investigation, a complete record of all known fraud is built up over time.

This service uses the Reporting DB which holds the most accurate picture of known fraud detected. This information is analysed by the Rule Analytic function in the following ways:

- Check which rules fired for each fraud to identify the highest performing rules
- Check which rules produced the highest number of false positive cases
- Test new rule scenarios against the Reporting DB to see how many of the known frauds the new rules would catch
- Generate an optimised ruleset that will identify the maximum number of frauds for the minimum false positives

This information can then be used to tune the rules in place in Falcon to improve fraud detection.

### Client Pain Points

<table>
<thead>
<tr>
<th>Unknown comparative rule performance</th>
<th>It is difficult accurately quantify rule effectiveness for detecting fraud over time, or to compare one rule against another</th>
</tr>
</thead>
<tbody>
<tr>
<td>No way to test new rules against historic data</td>
<td>Designing new rules is based on guesswork, but testing new rules against historic data would give an indication of fraud the rule would detect and the number of false positives generated</td>
</tr>
</tbody>
</table>

### FICO Services

| Installation of the software package into your test environment |
| Configuration and setup of the application |
| Test support and assistance with problem resolution |
| Best Practice advice on Rule Analytics configuration and usage within Falcon |

### Business Benefits

- Identification of best and worst rules, allowing improved rules to be developed
- Ability to predict the impact and benefits of new rules by prior testing and modelling of rule scenarios against real historic data before moving rules to live
- Improved detection of fraudulent transactions within Falcon using higher performing rules
- Ability to quantify known fraud more accurately

**Estimated Effort:** To be confirmed

**FICO Contact:** OperationalExcellenceFraud@fico.com

© 2010 Fair Isaac Corporation. All rights reserved.
**F15: SMS / Dialler Services Enhancement**

*FICO’s Solutions Consulting group offers clients an outbound dialling interface to a third party dialler to provide automated case management for all or selected cases, through an existing instance of Falcon Fraud Manager*

The Falcon Outbound Dialler solution can greatly improve the way in which Falcon cases are reviewed. Currently Falcon presents cases to the users via the Falcon Case Review screen using prioritised queues. Cases are reviewed by calling the cardholder using the phone numbers displayed on that screen, to determine whether a case is genuine or fraud.

The contact rate with cardholders is poor, typically 20%, so much time is spent handling failed calls. The introduction of the Outbound Dialler changes this approach by working through prioritised lists of cases and either sends the customer an SMS for the customer to then make contact, or for a more automated solution the dialler can attempt to make contact with the cardholder. If contact is made the dialler will connect the call through to a Falcon fraud analyst and display the case on the analyst’s workstation.

Better use is made of the fraud analysts’ time and thus more cases can be worked by the same number of analysts, so Falcon can create cases at a lower server threshold (i.e. higher false-positive ratios) and therefore increase fraud savings.

The Outbound Dialler interface will further increase efficiency by automatically setting the status of cases where the dialler failed to make contact with the cardholder. The interface will allow cases to be automatically blocked and letters to be sent. The action transfer process within Falcon can then be used to forward these actions to the cardholder system.

<table>
<thead>
<tr>
<th><strong>Client Pain Points</strong></th>
<th><strong>FICO Services</strong></th>
<th><strong>Business Benefits</strong></th>
</tr>
</thead>
</table>
| Low contact rate of customers | • Installation of the outbound dialler interface software  
• Delivery of Best Practice expertise in the creation of queues for case selection  
• Provision of Consultancy to aid your business in creation of no-contact strategies  
• Liaison with third party provider of dialler to integrate solution | • Increased contact rate with customers, with cases being actioned in a more dynamic timeframe  
• Increased Fraud protection, due to greater efficiency  
• As your users’ time is used more efficiently, fewer agents are required to work the same number of cases |
| Unable to contact higher volume of customers due to resourcing or technical constraints | | |
| Unable to make contact with customer | When unable to contact customer no further action is taken (either manually or automatically) to prevent potential fraud | |

**Estimated Effort:** To be confirmed  

**FICO Contact:** OperationalExcellenceFraud@fico.com
The provision of a facility to analyse the way cases are worked by Fraud Analysts, and to offer advice on optimal strategies for case working practices. This service is offered to clients who have the Reporting Database – see service F07: Additional Reporting and Fraud Database

The way Falcon cases are worked varies widely across the industry, indicating that many Fraud departments are not following best practice in managing cases. Gaining detailed knowledge of the way fraud analysts handle cases can provide a basis for moving toward best practice operations within a Fraud department and this will have significant benefits in identifying fraud and preventing losses.

This service uses the Reporting DB which holds complete history information on each case within Falcon - by whom and when cases were worked, actions taken, and how long and often the case was worked. This information is analysed by the Case Analytic function in the following ways:

- Check how many times and for how long a case is accessed over the full case work cycle
- Check the volumes and throughput of case handling within the department and by the fraud analysts
- Identify the cycle of case actions over time
- Identify lost or late worked cases where cases are either lost and have not been worked at all or left too long after being created
- Examine the functioning of queues to identify those that are performing well or poorly

### Client Pain Points

<table>
<thead>
<tr>
<th>Unable to know how cases are being worked.</th>
<th>It is difficult to monitor working practices over time, or to identify if those methods produce the best results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queues not balancing case load to analysts</td>
<td>Poorly designed queues mean that cases are not worked in the right priority or are lost in the system</td>
</tr>
<tr>
<td>Too many cases are worked late or lost</td>
<td>Cases are being worked a long time after creation, reducing the effectiveness of fraud detection</td>
</tr>
</tbody>
</table>

### FICO Services

- Installation of software into your test environment
- Configuration and setup of the application
- Test support and assistance with problem resolution
- Best Practice advice on Case Analytics configuration and usage within Falcon
- Support and training given to staff to enable you to be self supporting on the application

### Business Benefits

- Improve the working of cases to increase productivity
- Identify more fraud by better handling of cases and reduced lost or late worked cases
- Ensure adherence to best practice in working methods over time

### Estimated Effort

To be confirmed

### FICO Contact

OperationalExcellenceFraud@fico.com
F17: Hotlist Online Editor

The provision of a facility to create, view and update Falcon Hotlist data that gives access to all hotlist entries held on the database

Hotlists are a very useful tool for preventing some types of fraud, and ensuring that the Hotlist data is always up to date greatly improves their effectiveness. The standard Falcon Hotlist editor only allows access to the first 300 entries in each Hotlist, even though a Hotlist may contain up to 1,600 entries. Beyond the 300th entry in the list it is not possible to add, view or amend entries in a given Hotlist using the online facility. In addition, there is no facility to bulk load data, e.g. account numbers, in response to a mass compromise or flash fraud.

The enhanced Hotlist editor provides an online application giving access to all entries in a Hotlist, allowing users to:

- Create Hotlist entries
- View a complete Hotlist by paging through all entries
- Edit or delete entries in the Hotlist with changes being saved to the database
- Bulk load a Hotlist by importing data from an external source, e.g. a spreadsheet or flat file
- Reload an amended Hotlist back into memory

Client Pain Points

<table>
<thead>
<tr>
<th>It is not possible to view all Hotlist entries</th>
<th>There is no way to review or update Hotlist entries after number 300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unable to quickly bulk load a Hotlist in response to flash fraud</td>
<td>Rapid bulk load of data, e.g. account numbers, in response to flash fraud or mass compromise cannot be done with the existing Hotlist editor</td>
</tr>
</tbody>
</table>

Business Benefits

- Greatly increased ease of maintenance of your Hotlist data via desktop interface
- Operational control of Hotlist maintenance within your Fraud department

FICO Services

- Installation of the software package into your test environment.
- Configuration and setup of the application
- Test support and assistance with problem resolution
- Best Practice advice on Hotlist definition and usage within Falcon rules

Estimated Effort: To be confirmed  

FICO Contact: OperationalExcellenceFraud@fico.com
The provision of a training course in Falcon Authorisation Interface (FAI) System Administration and Diagnostics for new or existing staff to build or refresh skills and knowledge

The FAI system contains complex interactions between programs, files and interfaces. In order to ensure that your in-house staff has a full understanding of the FAI and to enable the best internal technical support to be given, training in FAI System Administration and Diagnostics is delivered by FICO Technical Consultants. This training can be given to staff new to the FAI, or as a refresher to existing staff whose experience needs updating.

The diagnostics training uses real world examples to solve technical issues that may arise when running the FAI system and can be adapted to specific client requirements, or particular client issues or concerns can be addressed as needed.

A review of current and past issues raised with FICO Professional Services is carried out to identify areas where additional knowledge would help in diagnosing problems at an early stage.

<table>
<thead>
<tr>
<th>Client Pain Points</th>
<th>FICO Services</th>
<th>Business Benefits</th>
</tr>
</thead>
</table>
| Inexperienced FAI Administrators | New Administrators may be unable to support the FAI internally leading to delays and poor performance | On site delivery on site of a one day training course covering the following topics:  
  - FAI system overview  
  - FAI processes  
  - Configuration settings and administration screens  
  - Real time filter rules  
  - SAF and PAD file maintenance  
  - Statistics and Alerting functions  
  - Diagnostics and troubleshooting  
  - System documentation |  
  - Improved internal management of your systems leading to better FAI operation and performance.  
  - Reduced impact to timescales and issues for any new FAI initiatives, whether internal or external  
  - Reduction of issues raised with FICO Professional Services |
| New FAI projects about to start | Any new initiatives (internal or external) involving the FAI where the team members have no experience of the FAI | | |

Estimated Effort: 1 day  
FICO Contact: OperationalExcellenceFraud@fico.com
The provision of a facility that can analyse recent historic transactions, adapt to changing fraud patterns, and provide a score based on this adaptive model. This service is offered to clients who have the Reporting Database – see service F07: Additional Reporting and Fraud Database

Patterns of fraud change over time with new behaviours appearing to test fraud detection policies. For this reason it is important to keep rule strategies under review and have systems that can adapt to the changing environment. Having a model that can adapt its scoring responses to changing fraud patterns enhances the ability to detect and prevent losses.

Using the Reporting database to hold fraud detected via a case and fraud identified by later investigation, a complete record of all known fraud is built up over time. This information is analysed to identify the particular patterns of fraud experienced by clients, and this feeds back into the adaptive model to adjust its scoring framework. This provides something similar to a customised model fraud score for each site using the service. When transactions are passed into Falcon for scoring, this adaptive model score is added to the API so that it can be used alongside the Falcon consortium model score for authorisation decisions and case creation.

<table>
<thead>
<tr>
<th>Client Pain Points</th>
<th>FICO Services</th>
<th>Business Benefits</th>
</tr>
</thead>
</table>
| Transaction scores are slow to adapt to changing fraud patterns | • Installation of the software package into your test environment  
• Configuration and setup of the application  
• Test support and assistance with problem resolution  
• Best Practice advice on using the Adaptive Model configuration and usage within Falcon | • Client specific fraud patterns can be detected using custom like model  
• Changes to fraud behaviour are picked up quickly and built into adaptive fraud scores, enabling more rapid response to fraud and preventing losses  
• Less requirement for complicated rule strategies to detect client specific fraud patterns |
| Fraud behaviour experienced by one client is different to that seen at another | Lead times on upgrades to the consortium model means that it can take 12 – 18 months before new fraud patterns are included in the Falcon score  
A client with specific sets of fraud patterns will find these are not sufficiently weighted in the consortium model | |

**Estimated Effort:** To be confirmed  
**FICO Contact:** OperationalExcellenceFraud@fico.com
F20: Project Management Services

*Provision of experienced Project Management resources to support client resource shortfalls. Extension of FICO Delivery Management resources’ activities to include management of the whole project rather than just the FICO elements*

Our successful delivery of projects is based on the following principles:

- The provision of expert advice from “day one” – our Delivery Management team has a combined total of over 150 years’ Project Management experience, with industry-recognised qualifications (PRINCE2™)
- We set clear objectives, define scope and use a structured process to manage risk – we have a proven project methodology
- The project is delivered on time, on budget – we have a successful track record of delivery for global blue chip customers

<table>
<thead>
<tr>
<th>Client Pain Points</th>
<th>FICO Services</th>
<th>Business Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head count restrictions</td>
<td>Experienced Project and Programme Management covering your whole project lifecycle, or any part or parts of it (e.g. implementation, testing)</td>
<td>The service provides a pool of experienced and professional resources that can be made available to bridge your in-house resource gap</td>
</tr>
<tr>
<td>You have insufficient skilled resources in-house to deliver your portfolio of projects</td>
<td>You can take advantage of your existing relationships and contractual agreements with FICO</td>
<td>The project management service is fully backed up by FICO in terms of continuity, service levels and warranties</td>
</tr>
<tr>
<td></td>
<td>Provision of specific resources to suit your needs:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Project Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Programme Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Leadership of work streams</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Testing Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Implementation Management</td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Effort:** 5 days – 18 months, dependent on the nature of the engagement  
**FICO Contact:** OperationalExcellenceFraud@fico.com
F21: Authorisation Rule Analytics

To provide a facility that can analyse the performance of Falcon authorisation rules in identifying possible fraud, and to offer optimisation of rules against known frauds. This service is offered to clients who have the Reporting Database – see service F07 Additional Reporting and Fraud’s Database.

If a complete record of known fraud can be gathered, then analysis of the data will reveal which rules are most effective at identifying the fraud experienced. Using the Reporting DB to hold fraud detected via a case and fraud identified by later investigation, a complete record of all known fraud is built up over time. This service uses the Reporting DB which holds the most accurate picture of known fraud detected. This information is analysed by the Authorisation Rule Analytic function to check which rules fired for each fraud to identify the highest performing rules, check which rules produced the highest number of refer/declines for non-fraud transactions, test new rule scenarios against the Reporting DB to see how many of the known frauds the new rules would refer/decline, to generate an optimised ruleset that will identify the maximum number of frauds for the minimum false positives.

### Client Pain Points

| Difficult to compare rule performance. | It is difficult accurately quantify rule effectiveness for detecting fraud over time, or to compare one rule against another. |
| Difficult to compare rule performance. | No way to test new rules against historic data. |
| Difficult to compare rule performance. | Designing new rules is based on guesswork, but testing new rules against historic data would give an indication of fraud the rule would detect and the number of false positives generated. |

### FICO Services

- Installation of the software package into a test environment.
- Configuration and setup of the application.
- Test support and help with resolving issues.
- Best Practice advice on Rule Analytics configuration and usage within Falcon.

### Business Benefits

- Identification of best and worst rules, allowing improved rules to be developed.
- Ability to predict the impact and benefits of new rules by prior testing and modelling of rule scenarios against real historic data before moving rules to live.
- Improved detection of fraudulent transactions within Falcon using higher performing rules.
- Ability to quantify known fraud more accurately.

**Estimated Effort:** Varies dependent on the nature of the engagement

**FICO Contact:** OperationalExcellenceFraud@fico.com
FICO’s Solutions Consulting group offers comprehensive support to clients performing an upgrade of an existing instance of FFM to Expanded API (XPI).

As part of the migration to the Expanded API (XPI) the interface between clients’ authorisation systems and Falcon will need to be upgraded. If a client runs the Falcon Authorisation Interface (FAI) FICO can provide a detailed solution to this requirement. Whilst clients will have experience of mapping data to the API from the original implementation, FICO provides a data mapping service of the XPI data to add to the current Standard API, and ensure the best performance levels of the Falcon Model. FICO firmly recommend the full API data is revalidated by its Technical Experts; this will ensure that the changes have been implemented correctly and that the Falcon model is operating in an optimal way based on the data available.

### Client Pain Points

| Fraud detection capability limited by lack of available data | Chip and PIN data is available in the Authorisation system, but is not passed to Falcon, so model score and rules are not able to use this data to improve fraud detection. |

### FICO Services

- Upgrade specification to the FICO FAI
- Support and best practice for Client upgrade to the interface
- Project Management
- Design review
- API Mapping validation
- Model Installation support
- Testing Support
- Review and update of Fraud Strategies

### Business Benefits

Upgrading to Expanded API can support the development of more effective rule strategies to prevent fraud losses, and maintain staff levels, or reduce staff levels but not reduce existing losses. By adopting Industry Best Practice, the risks associated with an Expanded API upgrade are minimised and the benefits maximised. Reduced project timescales to upgrade result in cost savings for the upgrade process and a quicker realisation of benefits.

Collection of XPI data in the consortium data will provide improved Falcon Models in the future.

---

**Estimated Effort:**

**FICO Contact:** [OperationalExcellenceFraud@fico.com](mailto:OperationalExcellenceFraud@fico.com)
**F23: Fraud Health Check**

A Fraud Healthcheck provides a comparison of the client's current activities and performance against industry averages and best practices.

Healthchecks are short in duration and aimed to undertake a high level review of the key areas supporting fraud management (strategies, operations, investigations, recoveries etc.)

- Used by existing customers (direct or through processors) to fine-tune their use of Falcon
- Used by potential customers to provide feedback on current fraud performance
- Used in advisory capacity to review a wide variety of different fraud types, product types and stages in the customer lifecycle.

Healthchecks are also for Annual Consulting Programs to review the progress on comprehensive consulting engagements, and after Falcon Go-Live.

<table>
<thead>
<tr>
<th><strong>Client Pain Points</strong></th>
<th><strong>FICO Services</strong></th>
<th><strong>Business Benefits</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing fraud losses.</td>
<td>Typically performed by one fraud consultant over a 1 week period onsite with the client.</td>
<td>• Comparison against best in class.</td>
</tr>
<tr>
<td>Struggling fraud strategies</td>
<td>With a management presentation delivered at the end of the week outlining the key findings, recommendations, and benchmarks</td>
<td>• Access to industry experts</td>
</tr>
<tr>
<td>Attrition of Key Assets</td>
<td></td>
<td>• Actionable Recommendations that mean real money saved!</td>
</tr>
<tr>
<td>Inexperienced team</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Effort:** up to 100 hours

**FICO Contact:** Adam Davies (adamdavies@fico.com)
F24: Fraud Assessment

An assessment is a tailored offering, customized in scope to suit each client’s needs. It is a thorough review of a specific area or areas of fraud, focused on delivering a comprehensive fraud reduction framework. Some pre-defined Assessments typically are a Strategy Assessment, an Operations Assessment, or combined.

Assessments are a very detailed review of these topics of interest-
- A fraud type (e.g. Card Fraud, First Party Fraud, Application Fraud, Internal Fraud, Acquiring Fraud, Retail Banking etc.)
- A Fraud function (e.g. Operations, Strategy, Investigations etc.)
- Or a particular product (Credit / Debit Cards, Loans, Retail Banking, Wires, Checks Mortgages etc.)
- A particular Channel (Branches, Online Banking, Mobile Banking etc.)
- Compliance Requirements (e.g. Red Flag act, KYC, Faster Payments, etc.)

Assessments are frequently taken by existing Falcon customers who are looking to achieve Best in Class fraud performance.

<table>
<thead>
<tr>
<th>Client Pain Points</th>
<th>FICO Services</th>
<th>Business Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing fraud losses.</td>
<td>Typically performed by one fraud consultant over a 1 week period onsite with the client.</td>
<td>• Comprehensive Fraud Reduction Plan</td>
</tr>
<tr>
<td>Struggling fraud strategies</td>
<td>With a management presentation delivered at the end of the week outlining the key findings, recommendations, and benchmarks.</td>
<td>• Delivers short term tactical response recommendations</td>
</tr>
<tr>
<td>Attrition of Key Assets</td>
<td></td>
<td>• Provides longer term strategic initiative recommendations as well, for clients strategic planning</td>
</tr>
<tr>
<td>Inexperienced team</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Service being impacted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased uncollectable debt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Fraud types being experienced</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulatory pressure</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Estimated Effort: Up to 500 hours

FICO Contact: Adam Davies (adamdavies@fico.com)