



RedFlag Accelerator meets TAHub Analysts



28th August 2020

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We help financial institutions **compete for the future**
by **bringing clarity out of fog**



Strategic Change



Payments



Data Analytics



Financial Crime



Future of Payments



Payments Transformation
Implementation



Data Analytics &
Day 1 Readiness (D1R)



Financial Crime
Analytics and Detection

Delivering world-class projects, powered by data

Delivered

+200
projects

Project durations

3 to 60
months

Managed projects value

Up to
£20m

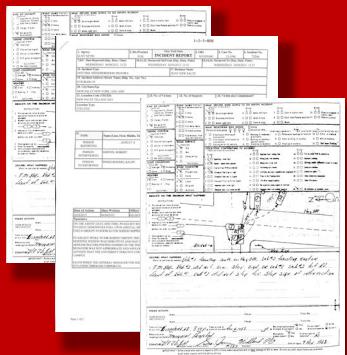
Key:

- Payments/Core banking
- Financial Crime
- Strategic Change



RedFlag Accelerator





Trafficking Analysis Hub x Traffik Analysis Hub - RedFlag Accelerator x +

← → C ⌂ 🔒 tah.traffikanalysis.org/map

 Traffik Analysis Hub

MAP ANALYSIS ANALYSIS REGISTER NEWS EXPLORER REDFLAG ACCELERATOR

Map showing trafficking analysis across Europe and the North Atlantic. Key locations include Iceland (3), Norway (10), Sweden (10), Finland (Helsinki), Russia (2), and the Sargasso Sea (6959, 1737). A red dotted oval highlights the "REDFLAG ACCELERATOR" tab.

Trafficking Analysis Hub x Traffik Analysis Hub - RedFlag Accelerator x +

← → C ⌂ 🔒 redflagaccelerator.com/tahub

RedFlag Accelerator

About How it works

Traffik Analysis Hub

Thank you for your interest in finding out more about RedFlag Accelerator. Due to the nature of the Data File, RedCompass would like to verify your identity before making the data available to you. As pleased if you would [complete the subscription form](#) so that we can make contact with you to program

If you would like any more information before subscribing, please email rfa@redflagaccelerator.com

Sign Up

Thank you for your interest in subscribing to RedFlag Accelerator. We look forward to working with you to understand your requirements and to see how we can help you understand how your data can help in the fight against human trafficking and modern slavery.

E-mail* _____

First Name* _____

Surname* _____

Company* _____

Role* _____

Phone* _____

Traffik Analysis Hub Participant?

Password* _____

Confirm password* _____

• Password requirements: minimum 8 characters and not entirely numeric

Please agree to [terms and conditions](#)

Sign Up »

RedFlag Accelerator

TYPOLOGIES



60+

source
documents

600+

indicators

90+

case studies



Adoption Barriers

Insufficient Regulations

Lack of Awareness

Scale & Complexity

Enhanced Enriched Decoded

8 source documents 170 indicators 18 scenarios

| | |
|---------------|--------------|
| Metadata | Variables |
| Criteria | Attributes |
| Categories | Descriptions |
| Regulations | Location |
| Jurisdictions | Clients |



RedFlag ➤
Accelerator

RFA Data File

RFA Data File



RedFlag Accelerator Data File CONTENTS

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SECTION 2
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05

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HIGH RISK BUSINESS TYPES

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03 | SECTION 1: RED FLAGS

| Unique ID | Category Type | Description | Strength | Customer Type Retail | Customer Type Business | Behavior Indicator | Customer Indicator | TEN Indicator | Victim Indicator | Trafficker Indicator | ML Indicator | Related Regulation | Automatic Rating | Data Location | Generic Data Fields | Generic Logics | Generic Factors |
|-----------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|------------------------|--------------------|--------------------|---------------|------------------|----------------------|--------------|--------------------|------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Behaviour | An individual shows signs of physical abuse: physical signs of attack on the body such as scars and bruising, carrying other injuries, or appears malnourished, that may manifest MSHF. | 1 | Y | | Y | | Y | | | | | 2 | Account Information Data from the Application (CRM, Teller or similar) where observations are recorded | Customer ID Branch ID Account Owner Nationality Account Owner Occupation Event Type Event Date/Time Manual Tag: Signs of Physical Abuse | Flag Identified and recorded during the interaction event | Aggravating factors: 1) an individual from High MSHF risk country as evident from the nationality 2) stated occupation in high-risk industry 3) bruises or injuries cannot be explained by customer's stated occupation |
| | | An individual appears helpless, ashamed, nervous, anxious, depressed, unable or afraid to make eye contact. | 2 | Y | | Y | | Y | | | | | 2 | Account Information Data from the Application (CRM, Teller or similar) where observations are recorded | Customer ID Branch ID Account Owner Gender Account Owner Nationality Account Owner Occupation Event Type Event Date/Time Manual Tag: Signs of Psychological Abuse | Flag Identified and recorded during the interaction event | Aggravating factors: 1) an individual from High MSHF risk country as evident from the nationality 2) stated occupation in high-risk industry 3) an individual is a female |
| | | An individual displays poor standards of dress and / or personal hygiene | 1 | Y | | Y | | Y | | | | | 2 | Account Information Data from the Application (CRM, Teller or similar) where observations are recorded | Customer ID Branch ID Account Owner Nationality Account Owner Occupation Event Type Event Date/Time Manual Tag: Poor Personal Appearance Standard | Flag Identified and recorded during the interaction event | Aggravating factors: 1) an individual from High MSHF risk country as evident from the nationality 2) stated occupation in high-risk industry |
| | | A female individual appears scantily dressed | 1 | Y | | Y | | Y | | | | | 2 | Account Information Data from the Application (CRM, Teller or similar) where observations are recorded | Customer ID Branch ID Account Owner Age Account Owner Gender Account Owner Nationality Account Owner Occupation Event Type Event Date/Time Manual Tag: Poor Personal Appearance Standard | Flag Identified and recorded during the interaction event | Aggravating factors: 1) an individual from High MSHF risk country as evident from the nationality 2) stated occupation in high-risk industry 3) young age |
| | | An individual female is accompanied by a much older male individual who appears to be controlling her | 1 | Y | | Y | | Y | Y | | | | 2 | Account Information Data from the Application (CRM, Teller or similar) where observations are recorded | Customer ID Branch ID Account Owner Age Account Owner Gender Account Owner Nationality Event Type Event Date/Time | Flag Identified and recorded during the interaction event | Aggravating factors: 1) an individual from High MSHF risk country as evident from the nationality 2) a third party individual is not related to the customer 3) a third party individual displays acts of physical aggression |

04 | SECTION 2: SCENARIOS

| Scenarios | | | | | | | | | |
|-----------|-----------------------------------------------------|-------|--------------------------------------------------------|-------|-------------------------------------------------|--|--|--|--|
| 11901 | Identifying Key Sexual Exploitation Pattern | 11907 | Identifying Account Activity On Behalf Of Someone Else | 21803 | Identifying Suspicious Behaviour Changes | | | | |
| 11902 | Identifying Key Forced Labour Pattern | 11908 | Identifying Suspicious Cash Activity | 21804 | Identifying Suspicious Rapid Transfers Activity | | | | |
| 11903 | Identifying Exploited Victims - Sexual Exploitation | 11909 | Identifying Suspicious Cheque Activity | 51702 | Identifying Sexual Exploitation Network | | | | |
| 11904 | Identifying Exploited Victims - Forced Labour | 11911 | Identifying Commercial Sexual Activity | 51703 | Identifying Trafficking Network | | | | |
| 11905 | Identifying Suspicious Businesses Facilitating HTMS | 21801 | Identifying Potential Funnel Accounts Activity | 51704 | Identifying Multi-Victim Housing - Victims | | | | |
| 11906 | Identifying Third Party Control | 21802 | Identifying Potential Träfficker's Expenditure | 51705 | Identifying Multi-Victim Housing - Perpetrators | | | | |

| ID | Strength | ID | Strength | ID | Strength | ID | Strength | ID | Strength | ID | Strength | ID | Strength | ID | Strength | ID | Strength |
|----|----------|----|----------|-----|----------|----|----------|-----|----------|----|----------|----|----------|----|----------|----|----------|
| 8 | 3 | 1 | 1 | 40 | 2 | 1 | 1 | 26 | 2 | 5 | 1 | 6 | 2 | 19 | 1 | 49 | 1 |
| 11 | 1 | 28 | 3 | 57 | 1 | 8 | 3 | 34 | 3 | 9 | 3 | 9 | 3 | 20 | 2 | 48 | 1 |
| 27 | 2 | 34 | 3 | 65 | 2 | 12 | 3 | 42 | 2 | 10 | 2 | 11 | 1 | 21 | 2 | 50 | 2 |
| 36 | 3 | 36 | 3 | 86 | 3 | 14 | 3 | 82 | 2 | 11 | 1 | 14 | 3 | 22 | 1 | 51 | 2 |
| 59 | 3 | 45 | 3 | 107 | 1 | 20 | 2 | 92 | 2 | 12 | 3 | 15 | 2 | 23 | 2 | 52 | 1 |
| 62 | 3 | 81 | 3 | 122 | 3 | 23 | 2 | 104 | 2 | 13 | 2 | 19 | 1 | 53 | 2 | | |

| | | | | | | | | | | | | | | | | | |
|----|---|----|---|-----|---|----|---|-----|---|----|---|----|---|----|---|----|---|
| 65 | 3 | 81 | 3 | 155 | 3 | 53 | 3 | 101 | 3 | 13 | 3 | 12 | 1 | 23 | 3 | | |
| 29 | 3 | 12 | 3 | 703 | 1 | 50 | 3 | 85 | 3 | 15 | 3 | 12 | 3 | 53 | 1 | 23 | 3 |
| 38 | 3 | 38 | 3 | 88 | 3 | 14 | 3 | 83 | 3 | 11 | 3 | 14 | 3 | 35 | 1 | 23 | 3 |
| 53 | 3 | 34 | 3 | 62 | 3 | 15 | 3 | 95 | 3 | 10 | 3 | 11 | 1 | 51 | 3 | 20 | 3 |
| 77 | 1 | 58 | 3 | 23 | 1 | 9 | 3 | 91 | 3 | 9 | 3 | 9 | 3 | 50 | 2 | 19 | 1 |
| 9 | 1 | 1 | 1 | 10 | 1 | 1 | 1 | 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

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RFA Scenarios to identify

| | | | |
|--------------|--------------------------------------------|--------------|-------------------------------------|
| 11901 | Key Sexual Exploitation Pattern | 11911 | Commercial Sexual Activity |
| 11902 | Key Forced Labour Pattern | 21801 | Potential Funnel Accounts Activity |
| 11903 | Exploited Victims - Sexual Exploitation | 21802 | Potential Trafficker's Expenditure |
| 11904 | Exploited Victims - Forced Labour | 21803 | Suspicious Behaviour Changes |
| 11905 | Suspicious Businesses Facilitating MSHT | 21804 | Suspicious Rapid Transfers Activity |
| 11906 | Third Party Control | 51702 | Sexual Exploitation Network |
| 11907 | Account Activity On Behalf Of Someone Else | 51703 | Potential Trafficking Network |
| 11908 | Suspicious Cash Activity | 51704 | Multi-Victim Housing - Victims |
| 11909 | Suspicious Cheque Activity | 51705 | Multi-Victim Housing - Perpetrators |

RFA Indicator #56 deep dive

Customer is making **frequent** cash withdrawals from **multiple** ATMs in different locations with no apparent logical business purpose or legitimate reason

Aggravating factors can add **weight** to the indicator:
high-risk customers, locations, behaviours, patterns..

| Unique ID | Category Type | Description | Strength | Customer Type: Retail | Customer Type: Business | Behaviour Indicator | Customer Indicator | TXN Indicator | Victim Indicator | Trafficker Indicator | ML Indicator | Related Regulation | Data Location | Generic Data Fields | Generic Logics | Generic Factors |
|-----------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------|-------------------------|---------------------|--------------------|---------------|------------------|----------------------|--------------|--------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 56 | Transaction | Customer is making frequent cash withdrawals from multiple ATMs in different locations with no apparent logical business purpose or other legitimate reason | 1 | Y | Y | | | Y | | Y | Y | AML KYC CDD [EDD] | Account Information Transaction History Transaction Monitoring | Customer ID Account ID Account Owner Name Account Owner Occupation Account Owner Business Type Payment Instrument Type Payment Instrument ID ATM ID ATM Location ATM Transaction Type ATM Transaction ID ATM Transaction DateTime | Number of ATM cash withdrawals in [x] period of time <i>and</i> Number of ATM locations | Aggravating factors: 1) high-risk customer 2) locations are within driving distance 3) same pattern (same time and locations) evident for other unrelated customer cards with common demographic details (such as address, phone number, employment etc.) Pre-requisite factor: only include outliers - define the maximum threshold for 'frequent' if feasible, all occurrences below this number exclude from the alert |

Pre-requisites to improve **accuracy** and reduce false positives

RFA Data File Roadmap



RFA Version 1.0:

- Original RFA version (1.0) was published on 24 April 2020 and is currently available on our website
- We have committed to keep the RFA up to date and issue new version every quarter
-

RFA Version 1.1:

- New typologies, patterns and risk factors
- Errata, cosmetics, redundant data
- Minor structural changes
- Extended guidance

RFA Version 2.0:

- New typologies, patterns and risk factors
- Errata, cosmetics, redundant data
- Major structural changes
- New section on technical approach



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DATA ANALYTICS



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[External]



Traffik Analysis Hub



OPEN ACCESS
(Free to use model)

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MSHT Typologies



1

ENTERPRISE
(Value added model)

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→ DATA FEED
→ ANALYTICS

2

2a

2c

RedCompass
Data Science
Workbench

3

**RedCompass Data
Science Product**



Firm's List of
Typologies



Firm's Data
Analytics

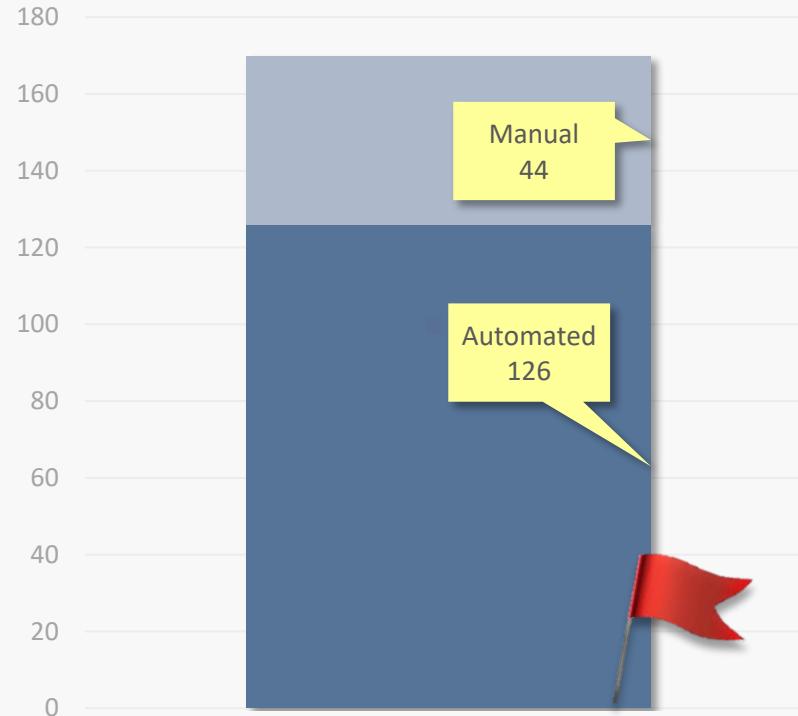
Firms'
Resources

Firm's Data
Lake

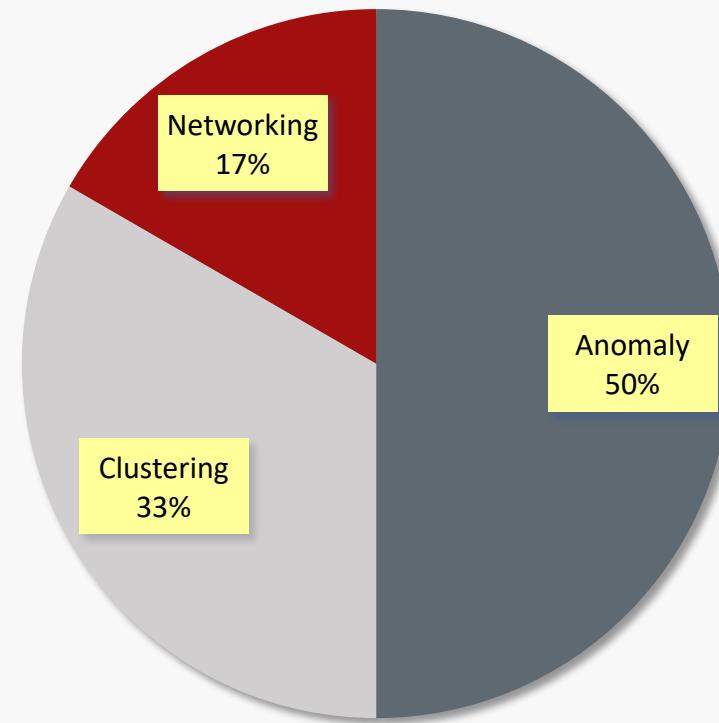
3rd party
Resources

RFA Indicator Types: Breakdown

Out of 170 RFA Indicators



126 can be Automated



Technology

→ Python

- PyOD
Python Toolkit for Outliers Detection
- Keras
Python Deep Learning API
Convolutional (CNN) and
Recurrent (RNN) Neural Network models

→ Jupyter Notebooks

- Web application for data analysis presentation
- Mix of live code, narrative text and visualisations

Methodology

Advanced investigation
(big data / high-dimensionality)

AI
Machine
Learning

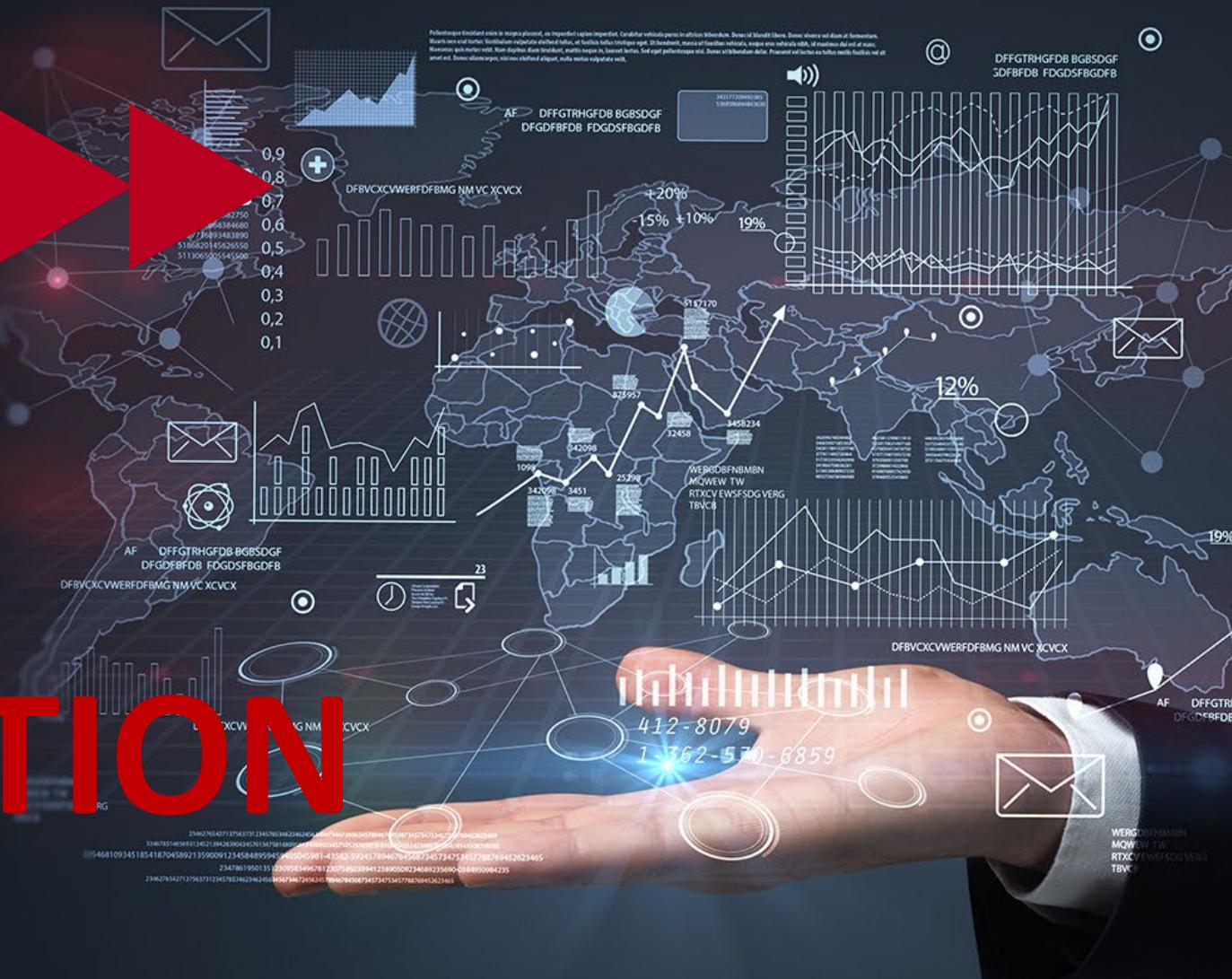
Baseline investigation
(benchmark)

Traditional
programmatic
techniques

Financial datasets
(public / synthetic)

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ACCREDITATION



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RFA Accreditation Course

3 x 1 hour interactive classrooms, tailored for your needs:
→ RFA explained in depth
→ practical application

Online Training Sessions

Up to **2 hours** of overall coursework:

- questionnaire
- reading materials

Individual Coursework

30-minute online assessment:
→ multiple-choice test

Post-training Assessment



MSHT Analyst Certificate



Join us!



Thank you for your attention

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