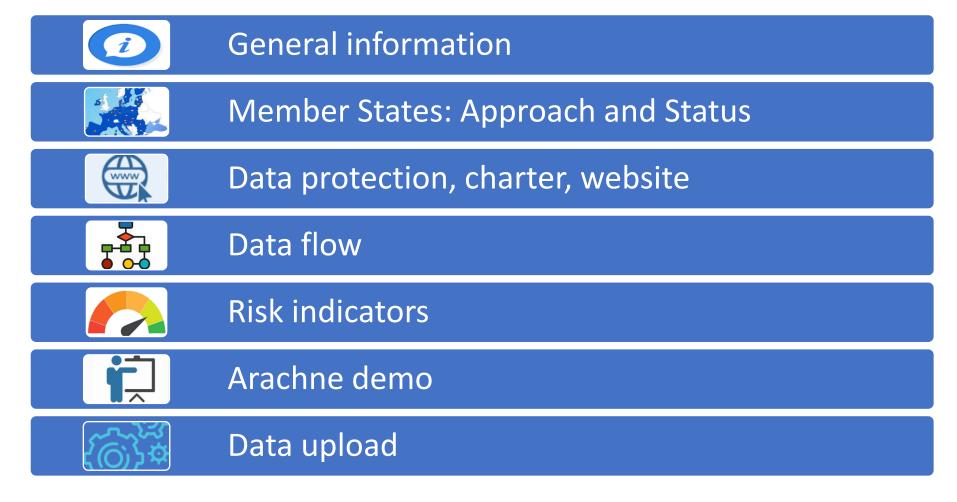


Arachne

Introduction and demo

October 2024
Wim Smets
DG EMPL - IT Strategy and Solutions
NTT Data

Agenda



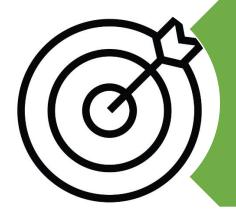


What is Arachne?





ARACHNE is an integrated IT tool for data mining and data enrichment



Objective:

- Provide the Member States' authorities with an operational tool to identify:
- their most risky projects and contracts
- potential risks linked to all their projects and contracts
- Support Member States' authorities in their administrative controls and management checks



Regulation



CPR

- Common Provisions Regulation
- Regulation (EU) No 1303/2013
 Article 125 (4)(c)
- Regulation (EU) No 2021/1060 Article 74 (1)(c)
- "The managing authority shall have effective and proportionate anti-fraud measures and procedures in place, taking into account the risks identified."

CAP

- Common Agricultural Policy Horizontal Regulation
- Regulation (EU) No 2021/2116
 Article 59 (2)
- "The Commission shall make available to the Member States a data-mining tool to assess risks presented by projects, beneficiaries, contractors and contracts while ensuring minimal administrative burden and effective protection of the Union financial interests."

RRF

- Regulation establishing the Recovery and Resilience Facility
- Regulation (EU) No 2021/241
 Article 22 (4)
- "The Commission shall make available to the Member States an integrated and interoperable information and monitoring system including a single datamining and risk-scoring tool to access and analyse the relevant data."



What is Arachne?



What?

Detection + prevention of

- Irregularities
- Errors
- Fraud

How?

Identify risks

- Individual checks
- Horizontal checks
- No automatic decision

When?

In different stages of the project lifecycle

- Ex-ante
- Continuous monitoring
- Document results

Why?

- Increase efficiency / effectiveness of the MCS
- Gear administrative capacity

Who?

Core users: MA / PA / IB

- CA, AA
- Auditors DG EMPL, DG REGIO, DG AGRI, DG ECFIN, DG MARE
- OLAF, ECA, EPPO: Case by case



Impact for national authorities



Technical impact

Data extraction

 Collect and extract data from national or regional system(s).



XML Files

 Create Arachne data files and upload the data files for the risk calculation to Arachne.

Administrative impact

Trainings

Delivery of training for designated users.

Manual of Procedures

- Define how and when to use Arachne.
- Define how to treat / to interpret the results.

User Management

000

Define users and roles.



MS Support by EC Arachne Team



Presentation of the Arachne risk scoring tool



- What is Arachne, how does it work, data flow, risk scoring principles.
- Which external databases are used.
- Impact for Member States (technical and functional).
- How to create Arachne data files.
- Live demo of the tool.

Support during the integration phase



- Generation of Arachne compatible data files.
- Quality review of the provided data.
- Generation of summary reports of the first risk scoring results.
- Creation of Arachne accounts.
- Advice on integration of Arachne in management verification processes.

Training for Arachne users

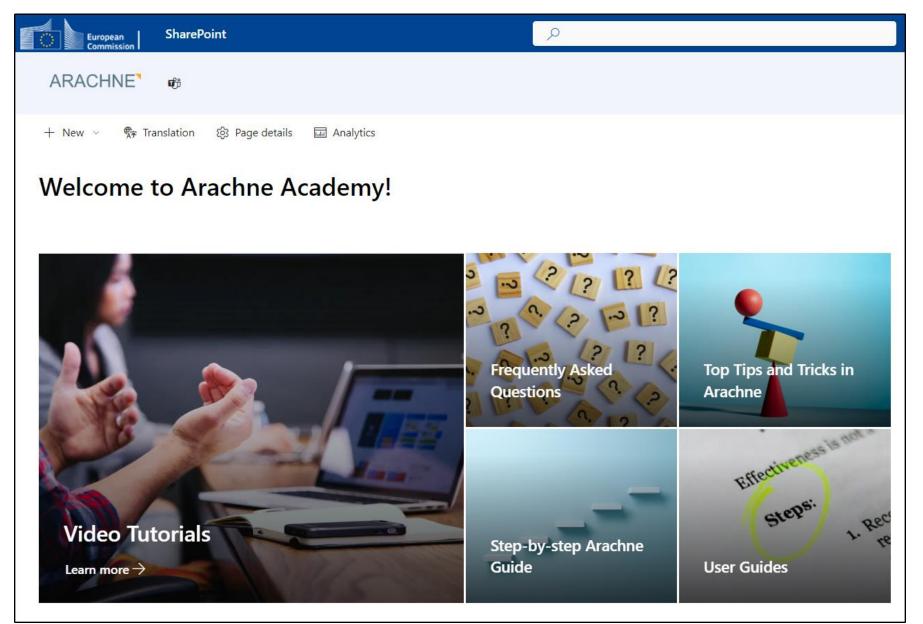


- Initiation courses.
- Advanced user sessions (1 or 2 days).
- Train the trainer principle whenever possible.



User Documentation and Forum

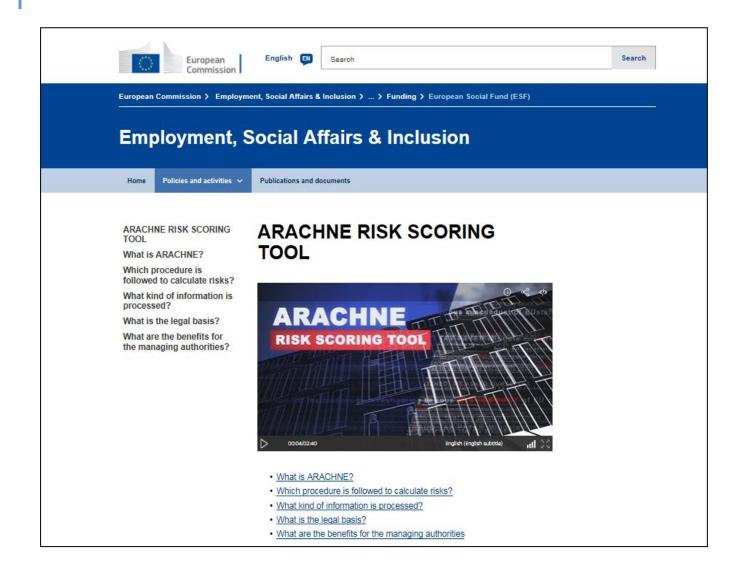






Arachne website









Related documents





Brochure





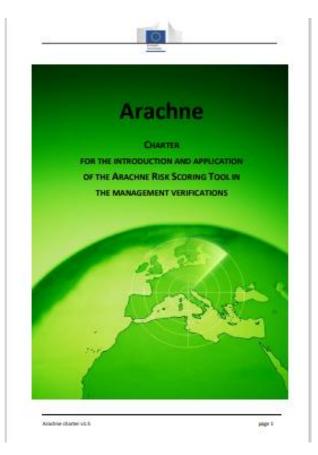


FAQ



Arachne Charter

- □ PURPOSE: **to endorse a set of common principles** supporting the **authorities** with the full support of the Commission services to **introduce**, **apply and integrate the Arachne Risk Scoring Tool** in their management verification processes. An update of the charter is ongoing.
- By using Arachne, the programme authority accepts to adhere to the principles set out in this charter.
- **☐** Main topics covered by the charter:
 - Cost and license fees
 - Support provided by the EC
 - Authorisation procedure and access rights
 - Transmission of data
 - Legal Basis
 - Data protection
 - All data used in Arachne to enrich project data, is public available data
 - Programme authority must inform beneficiaries about use of Arachne
 - Data retention







Data protection

- ✓ The EDPS provided their <u>first opinion</u> on Arachne <u>in 2017</u>
- ✓ A new data protection impact assessment was deemed necessary due to novelties and new GDPR
- ✓ Data protection impact assessment was carried out on the current version of Arachne and <u>approved on 22 July 2022</u>, without notification obligation to the EDPS.

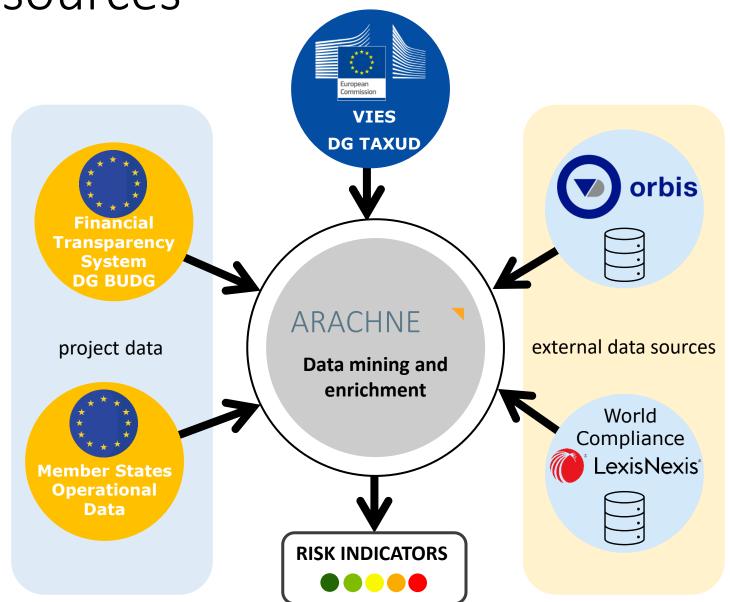


LINK DPO REGISTER: https://ec.europa.eu/dpo-register/detail/DPR-EC-00598
PRIVACY STATEMENT: https://ec.europa.eu/social/BlobServlet?docId=25704



Data sources







Data sources - operational data



Regulation (EU) 480/2014 - Annex III Regulation (EU) 1060/2021 - Annex XVII Regulation (EU) 2021/241 - Article 22 IT systems

Member States



Project data

- Project ID
- Project name
- Status
- DG
- Project type
- Beneficiary
- Project cost
- EC Financial Assistance
- Start date / end date
- Project partners
- Project details
- Related people

Contract data

- Contract ID
- Contract description
- Date signature
- Initial end date / Final end date
 - Contractor / Subcontractors
 - Amount
 - Nbr Addenda / Amount of addenda
 - Key experts
 - Procurement information
 - Type
 - Tenders: valid/excluded/Total
 - · Publication date

Expenses / invoices

- Expense ID
- Expense Type
- Description
- Amount
- Contractor
- Invoice date
- Payment date

Entity data

- · Entity ID
- Name
- VAT number
- Turnover
- Address (Street, Number, Zipcode, City, Country)
- Beneficial Owners (Name, Birthdate, VAT)





Data sources - Orbis





Companies: +/- 450 million companies worldwide (active and inactive):



General info: Address information, size, type, sector.



Ownership info: shareholders, subsidiaries, participation rate.



Managers / Owners.



Financial data: 41 mln companies (turnover, cash flow, solvency ratio, ...)



Indicators like credibility and bankruptcy.

Managers/Owners: +/- 458 million persons:



First name, last name, birthdate.



Functions(s), nomination start & end dates.



Afinities, number of companies and role in company.



Data sources - Orbis





The data is collected from **publicly available information** such as official annual reports or balance sheets submitted to regulatory bodies.

The level of **details** available in the database varies by country and company size.

Database updated in ARACHNE **every 3 months**.

All data available in ARACHNE through search.



Data sources - WorldCompliance





It collects, aggregates and centralzies 2.5+ million profiles:



PEP lists

Politically Exposed Persons

(Financial Action Task Force recommendations)



Sanctions lists

Office for Foreign Assets Control, World Bank Debarred Parties Lists, The Centraul Bureau of Investigation, ...



Enforcement lists

EU Terrorism List, FBI Most Wanted, Interpol Most Wanted, Narcotic & human traffickers, Money launderers, fraudsters and other criminals, ...



Adverse media lists

Company or person that has been linked to illicit activities by news sources.



Data sources - WorldCompliance





The data is received from **regulatory and governmental authorities** (except for adverse media list).

Database updated in ARACHNE every 3 months.

Information is only accessible **through the Arachne alert details** (not through search for a given company/person).



Data sources – Vies

- Validating VAT identification numbers of
 economic operators
 registered in the European
 Union for cross border
 transactions on goods or
 services
- https://ec.europa.eu/taxat ion customs/vies/







VIES						
VAT Validation	Technical Information	Self Monitoring	Help ∨	Specific disclaimer for this serv	vice Data Protection	
VIES VAT number validation						
You can verify the validity of a VAT number issued by any Member State / Northern Ireland by selecting that Member State / Northern Ireland from the drop-down menu provided, and entering the number to be validated.						
	Memb	er State / Northern Ire	land*			
	VATIN	umber*				
	Requi	ester Member State / N	lorthern Irela	nd:		
				~		
	VAT n	umber				
				Verify		

Arachne Risk categories



1

Procurement

- Lead time between publication of tender and contract signature.
- Nbr of valid tenders vs received tenders.
- · Financial correction.

6 risks

2

Contract Mgmt

- Contractors with invalid VAT Nbr.
- Contract amount versus turnover of the contractor.
- Contract addenda cost vs contracted amount.

11 risks

3

Eligibility

- Payments outside eligibility period.
- Duplicate amounts within expenses.
- Expenses higher than project cost.

9 risks

4

Performance

- Nbr of people trained vs people to be trained.
- Project cost vs km road constructed.
- Water waste cost vs population to benefit.

18 risks

5

Concentration

- Beneficiaries involved in multiple projects/OP's.
- Contractors involved in multiple projects/OP's.
- Subcontractors involved of multiple projects of the same beneficiary.

15 risks

6

Reasonability

- EC Fin. Assistance vs project cost
- Administration cost vs project cost
- Seminars-publishing costs vs project cost

15 risks

7

Reputation and Fraud

- Propensity to Bankruptcy
- Link between beneficiary and (sub)contractors
- Involvement in sanction and enforcement lists
- Involvement in sensitive regions

33 risks





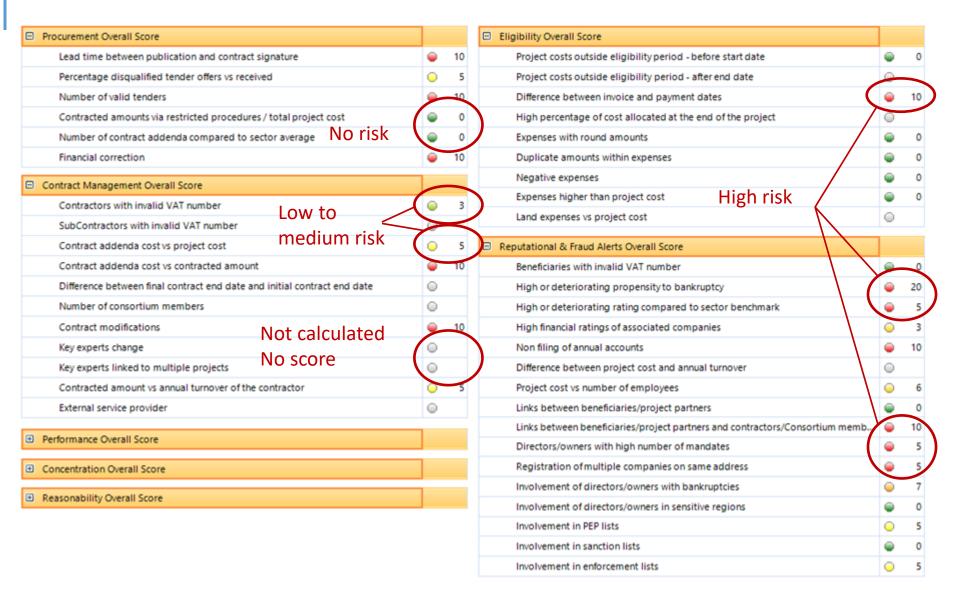






Risk scoring mechanism





Color coding:

- No data available
- No risk
- Low to
- medium risk
- Medium to
- high risk
- Very high risk







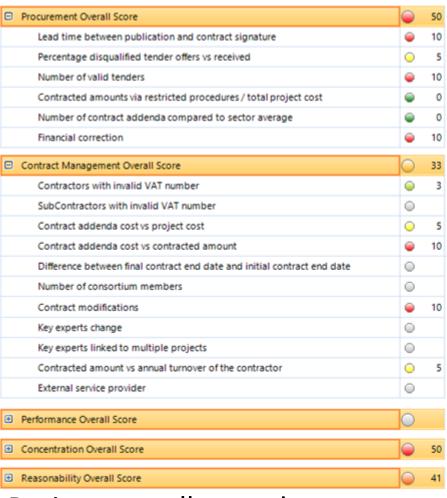






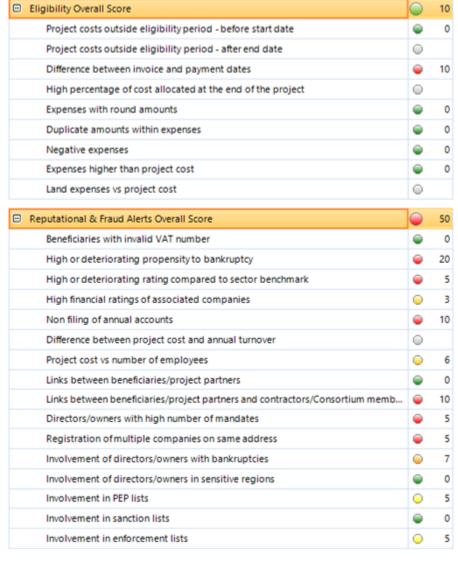
39





Project overall score!

= Average of the categories =





Basic risk concepts



- No automatic decisions based on Arachne risk scoring
- Arachne is not "the" anti-fraud strategy, it's a complementary tool to support the Member States in their administrative controls and management checks
- Not all 'red flags' must be tackled only what is defined in the anti-fraud strategy
- Arachne only **identifies potential risks**. It remains the Member States' responsibility to check/confirm the risk and to mitigate confirmed risks.



First action: verify the identified risk!

Interpret professionally

Act and report



Use Arachne: what?



Individual checks

Check links between companies involved in a project

Check financial risks

Check potential double funding

Check SME status

Horizontal checks

Select projects to audit/control based on a risk based approach

Check systemic risks in an operational programme

Ex-ante validations

Check individual applicants

Bulk validations

Other

Check evolution of risk of a project

Export risk indicators into national system

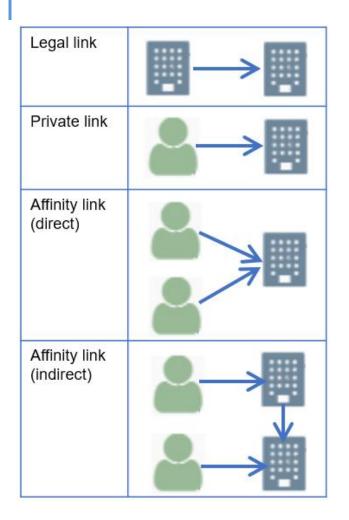
Case management

Search for companies with specific criteria (expert mode)



Individual checks for a project Potential conflict of interests





Category: Reputational & Fraud

- Links between beneficiaries/project partners
- Links between beneficiaries/project partners and contractors/consortium members
- Links between beneficiaries/project partners and subcontractors
- Links between contractors/consortium members
- Links between contractors/consortium members and subcontractors
- Links between related people and involved companies
- Links between beneficial owner and involved companies or related people

- Directors/owners with high number of mandates
- Involvement in PEP lists
- High rotation of directors



Individual checks for a project Concentration



Double funding

- Beneficiaries involved in multiple programmes/plans
- Partners involved in multiple programmes/plans
- Contractors involved in multiple programmes/plans
- Beneficial owners involved in multiple Programmes/Plans

Favouritism

(Flaws in the project selection? Why has this contractor so many contracts? Collusive behaviour?)

- Contractors involved in multiple projects of the beneficiary
- Consortium members involved in multiple projects of the beneficiary
- SubContractors involved in multiple projects of the beneficiary
- Supervision contractor multiple times in same constellation with work contractors



Concentration risks: only 'overlapping' projects



Individual checks for a project Financial and administrative capacity



Financial capacity

- Difference between project cost and annual turnover (Reputational & Fraud)
- Overall EC financial assistance vs turnover of the beneficiary (Reasonability)
- High or deteriorating propensity to bankruptcy (Reputational & Fraud)
- Contracted amount vs annual turnover of the contractor (Contract Management)

Administrative capacity

Project cost vs number of employees (Reputational & Fraud)

Financial and administrative capacity

- Beneficiaries involved in multiple projects (Concentration)
- Newly created company (Reputational & Fraud)
- Non filing of annual accounts (Reputational & Fraud)



Individual checks for a project Financial and administrative capacity



Financial capacity

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Financial and administrative capacity

- Beneficiaries involved in multiple projects (Concentration)
- Newly created company (Reputational & Fraud)
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Horizontal checks: Dashboards



Dashboards can be used in 3 ways:



Focus on projects, contracts, beneficiaries, contractors

Sampling (using filter panel)



Focus on risks (indicators, categories)

Identify potential systemic shortcomings in a specific area such as procurement or concentration



Focus on 1 beneficiary

Check all "red flags" for **one beneficiary** in the project
dashboard



Ex-Ante checks



What?

- Module that allows the Member states' authorities checking risks linked to applicants (candidate beneficiaries, contractors, sub-contractors) in the selection phase
- Ex-ante module is completely integrated in Arachne web interface

Security

- User needs to receive privileges (via local administrator)
 Access restricted to 'own' OPs
- Logging

No impact on approved projects

• Ex-ante data is not used in risk calculations of 'approved'/'ongoing' projects while ex-ante risk calculations use data of 'approved' projects

How

- Data entry screen ('dataset editor') or Excel template
- Daily run
- No automatic re-calculations



Audit trail: document the results



Save views as image or as PDF

Save printable report as PDF

- Company printable report
- Project printable report

Export to Excel

Audit trail

- Risk evolution
- Historical risk indicators

Case Management



Arachne – Demo | Screenshots | Q&A





Company Detailed Report



General information	General information				
E.C. Information	Unique identification number				
Counters	Name				
VPI Information	Previous company name				
Stock exchange	Company alias	-			
Stock exchange information	Туре	C - Industrial companies			
Ideal Con	Address				
Identifiers	Company city				
Data sources	Zip code				
Financial information	Head office country (address)				
Shareholders	Status code	Active			
Shareholders	Primary NACE Rev. 2.0 w. desc.	Television programming and broadcasting activities			
Subsidiaries	Age	29			
*RelatedPeopleLabel	BvD Size	LA - Large			
Related projects	Legal form	Private			
Contracts	VPI Information				
Beneficiary alerts	VPI Effective year	2020			
Contractor alerts	VPI Bankruptcy score (1-20)	7			
	VPI Bankruptcy rating (A-F)	В			
	VPI P2B Sold (Top 20%) score (1-10)	10			
	VPI Estimated Deal Value Min. (k€)	15,675			
	VPI Estimated Deal Value Max. (k€)	40,929			
	VPI - No score	41014 (1400)			
	VPI - basket	(unknown)			
	Identifiers				
	European VAT number				
	LEI				
	TIN				
	Trade register number				
	VAT number				





Company Detailed Report

Financial information

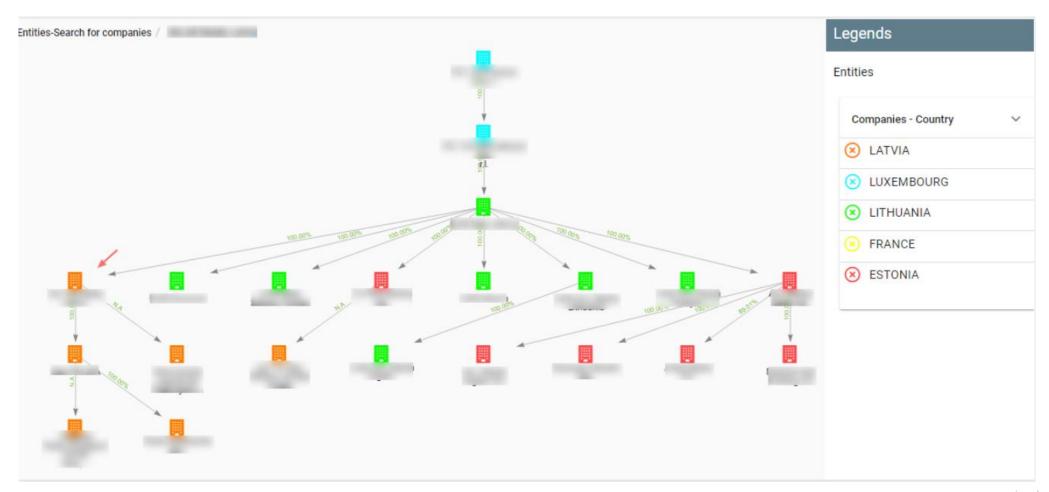
	2019	2018	2017	2016	2015
Balance sheet type	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Cash flow (k€)	8,821	13,009	6,781	274,139	12,261
Current ratio	0.13	0.29	0.26	0.90	0.18
Ebitda (k€)	26,503	32,821	30,047	26,491	36,331
Effective Year	2019	2018	2017	2016	2015
Number of months	12	12	12	12	12
Number of employees	31027	32273	30794	28351	27186
Operating revenue (k€)	946,045	1,002,758	941,409	850,331	824,007
Profit(loss)for the period (k€)	7,952	12,254	6,052	273,452	11,636
Profit & loss before tax (k€)	15,741	21,902	13,814	5,263	20,881
Profit margin	1.66	2.18	1.47	0.62	2.53
Return / capital employed	9.97	4.52	4.16	3.70	1.95
Return funds	6.90	9.73	6.49	2.55	1.86
Shareholders funds (k€)	228,089	225,137	212,883	206,831	1,125,825
Solvency ratio	28.44	29.44	27.92	12.43	61.78
Statement date	2019-12-31	2018-12-31	2017-12-31	2016-12-31	2015-12-31
Total assets (k€)	802,097	764,696	762,429	1,663,646	1,822,184

	0014	0010	0010	0011	0010
Balance sheet type	2014 Unconsolidated	2013 Unconsolidated	2012 Unconsolidated	2011 Unconsolidated	2010 Unconsolidated
Cash flow (k€)	5,139	-19,031	-7,337	364.051	44,906
Current ratio	0.37	0.03	0.02	0.20	0.25
Ebitda (k€)	20,505	-9,752	11,636	15,365	21,107
Effective Year	2014	2013	2012	2011	2010
Number of months	12	12	12	12	12
Number of employees	25731	25614	26502	29344	27549
Operating revenue (k€)	775,775	751,829	764,215	842,204	780,815
Profit(loss)for the period (k€)	3,636	-20,236	-8,862	361,790	42,067
Profit & loss before tax (k€)	3,648	-21,805	-6,539	16,975	56,084
Profit margin	0.47	-2.90	-0.86	2.02	7.18
Return / capital employed	1.00	-1.11	0.80	2.97	10.07
Return funds	0.33	-1.88	-0.55	1.43	6.77
Shareholders funds (k€)	1,114,189	1,161,553	1,181,789	1,190,652	828,861
Solvency ratio	59.62	62.04	63.36	58.89	48.05
Statement date	2014-12-31	2013-12-31	2012-12-31	2011-12-31	2010-12-31
Total assets (k€)	1,868,956	1,872,133	1,865,317	2,021,769	1,724,891



Company Local View

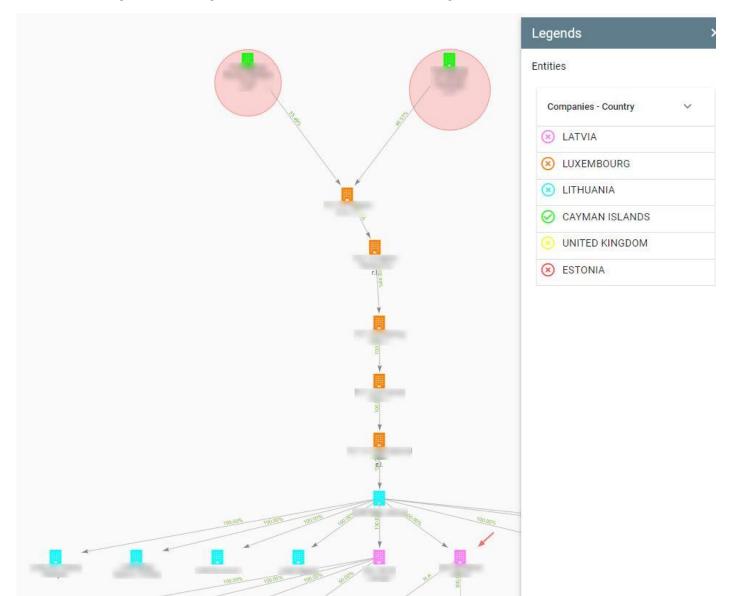






Company Hierarchy View

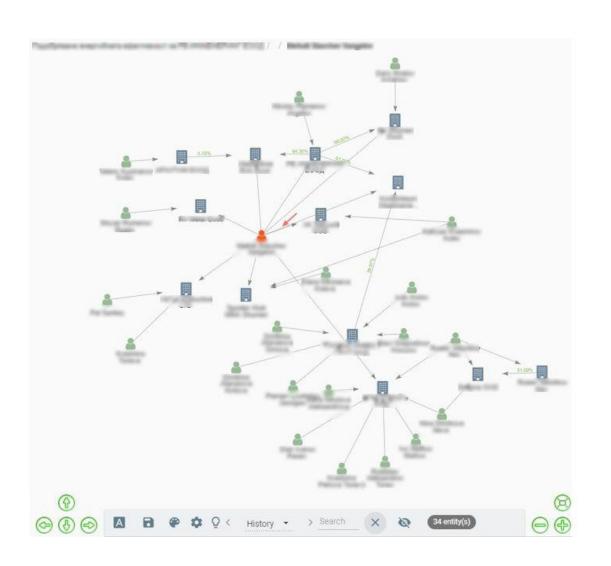






Person Affinity View









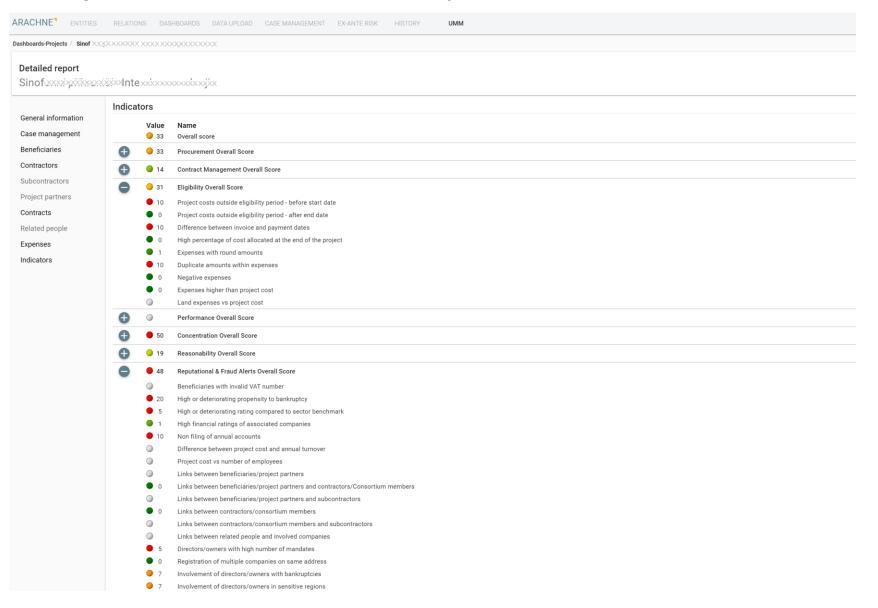


oject		Concentration Overall Score		Reasonability Overall Score	Remetational & Fraud Alerto	Overall Score	Beneficiaries with invalid VAT		High or deteriorating propensity to bankruptcy	High or deteriorating rating compared to sector	Denominars. High financial ratings of	associated companies	Non filing of annual accounts	Difference hatman	cost and annual turnover	Project cost vs number of employees	Links between beneficiaries/project partners	Links between beneficiaries/project partners and contractors/Consortium members	Links between beneficiaries/project partners and subcontractors	Links between contractors/consortium members	Links between contractors/consortium members and subcontractors	Directors/owners with high number of mandates		Registration of multiple companies on same address	Involvement of directors/owners with
		5	•	50		21	0		7	• 0	0	-	• 0	•	10	O -	O -	O -	O .	O -	•	5	•	5	• 0
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		26		33	0	27	0	-	16	3	0		5		0	• 0	O -	0	O -	• 0	0 -	4	•	5	• 0
		17		33	0	29	0	-	20	4	0	-	• 0		0	• 0	0 -	• 0	O -	O -	O -	5	•	5	• 0
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Project Detailed report







Project Risk Indicator Details 1/7



Group involvement in sensitive region

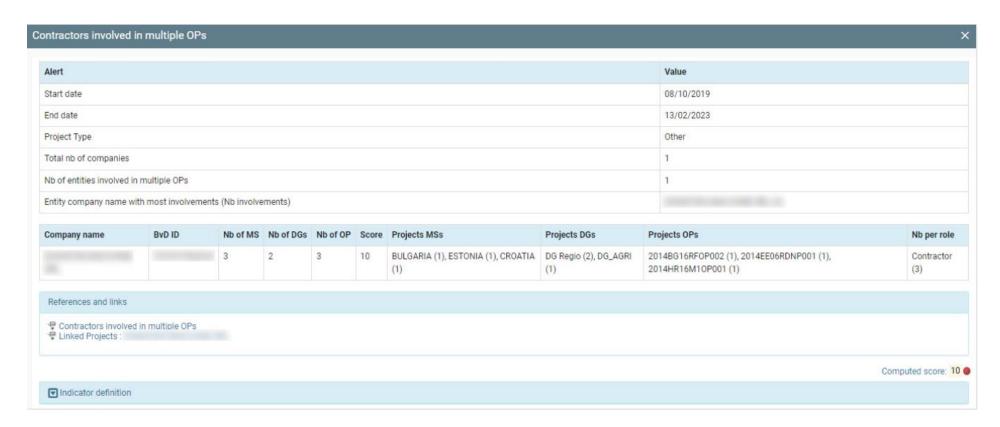
lert										Value				
otal nb of comp	anies							2	25					
lb of companies	raising the alert							3	3					
Company name	BvD ID	Company Role	Group name	Group identifier	Total nb of involvements in a sensitive country	Nb of involvements in most risky level countries	Involvement in level 2 countries	Involvement in level 3	countries	Involvement in level 4 countries	Sco			
		Contractor	Ţ.		48	1		UKRAINE (47)		VIRGIN ISLANDS, BRITISH (1)	10			
		Contractor			2	2				CAYMAN ISLANDS (2)	10			
		Contractor			17	5		SWITZERLAND (2), SIN (1), VIET NAM (1), BEL			7			
References and Companies raisin Groups raisin	aising the alert									Computed sci				



Project Risk Indicator Details 2/7



Indicator – Contractors involved in multiple programmes/plans

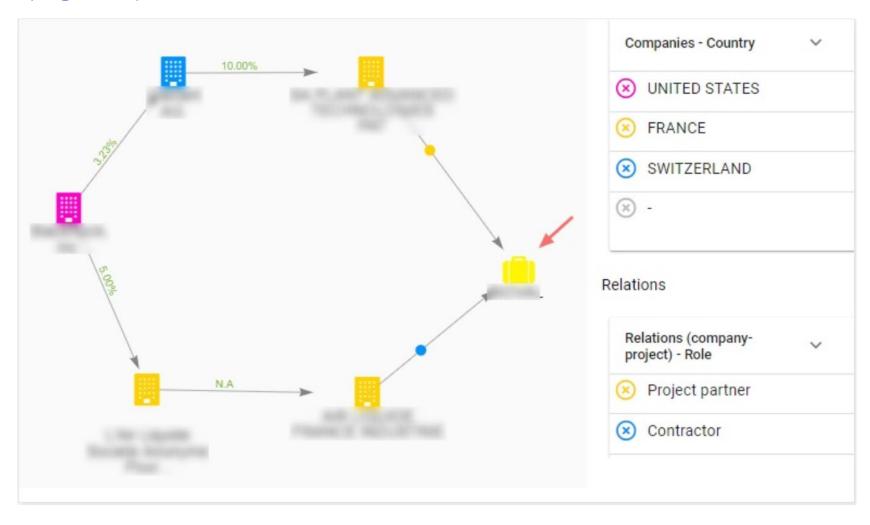








Indicator – Links between beneficiary and contractor (Legal link)

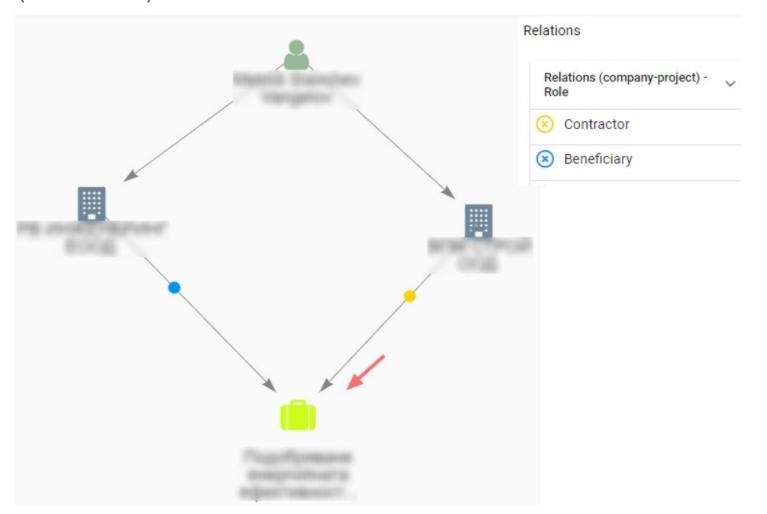








Indicator – Links between beneficiary and contractor (Private link)

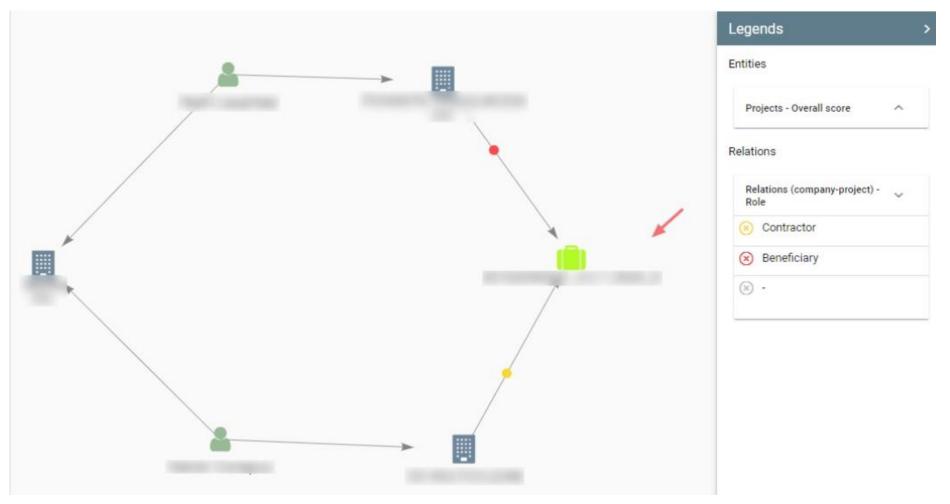






Project Risk Indicator Details 5/7

Indicator – Links between beneficiary and contractor (Affinity link)

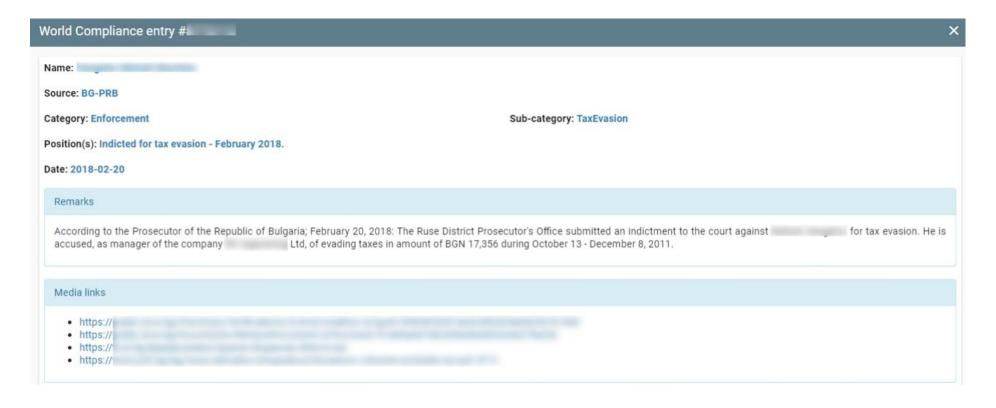








Indicator – Involvement in enforcement list









Indicator – Involvement in PEP list

World Compliance entry #	×
Name:	
Source: Website	
Category: PEP	Sub-category: FamilyMember
Position(s): Son of	Pleasure.
Date: 2021-12-03	
Remarks	
Media links • http://	
https:// https://	



Project Risk Evolution



Risk score evolution of project:





Arachne website and mailbox



https://ec.europa.eu/social/main.jsp?catId=325&intPageId=3587



EC-ARACHNE-INFO@ec.europa.eu



Thank you



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Source: EC, internal data

