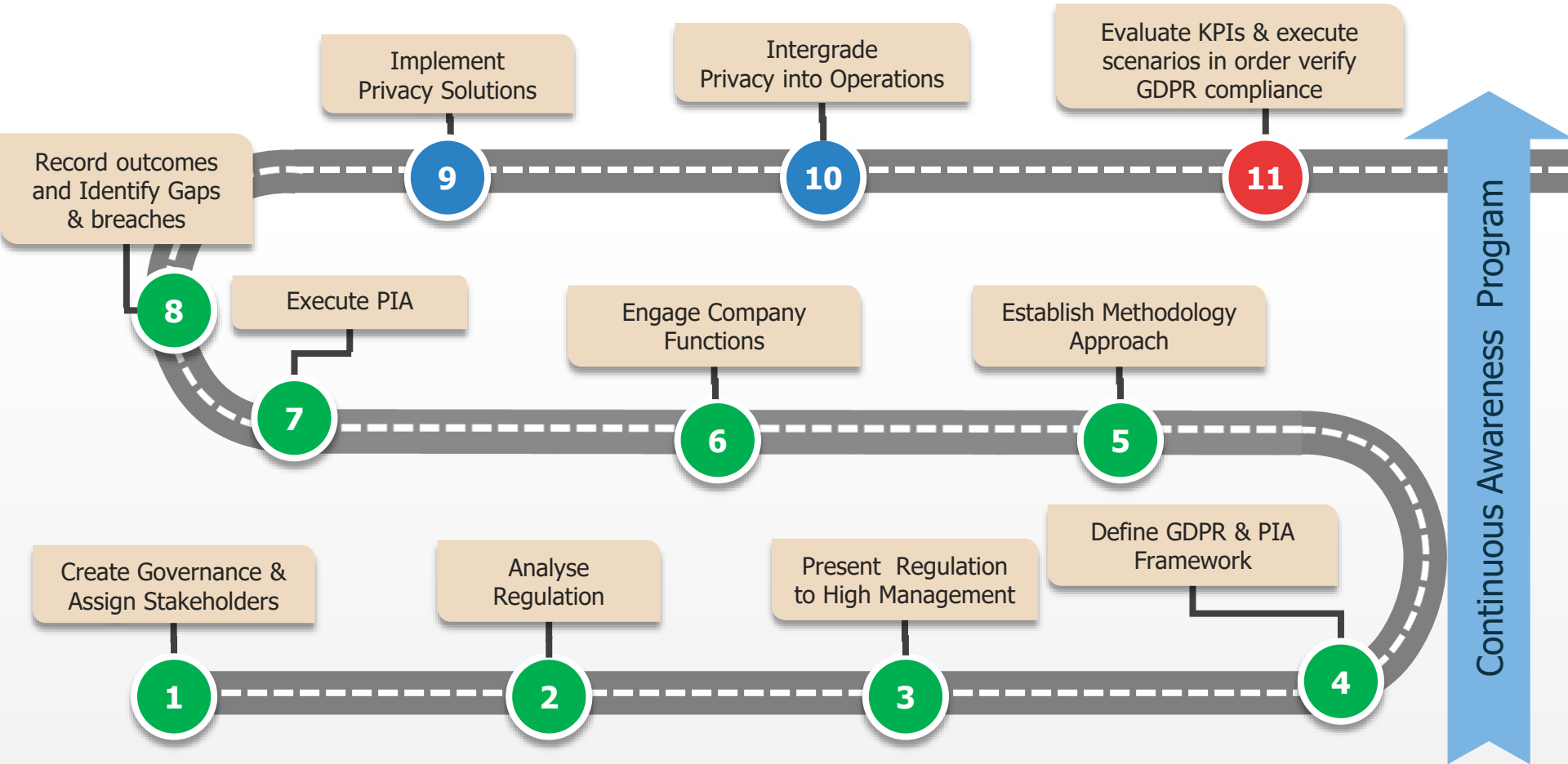


GDPR: Is it just another regulation or a great opportunity for operational excellence?

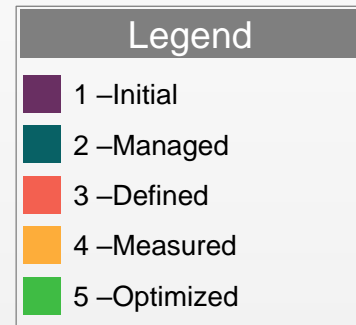
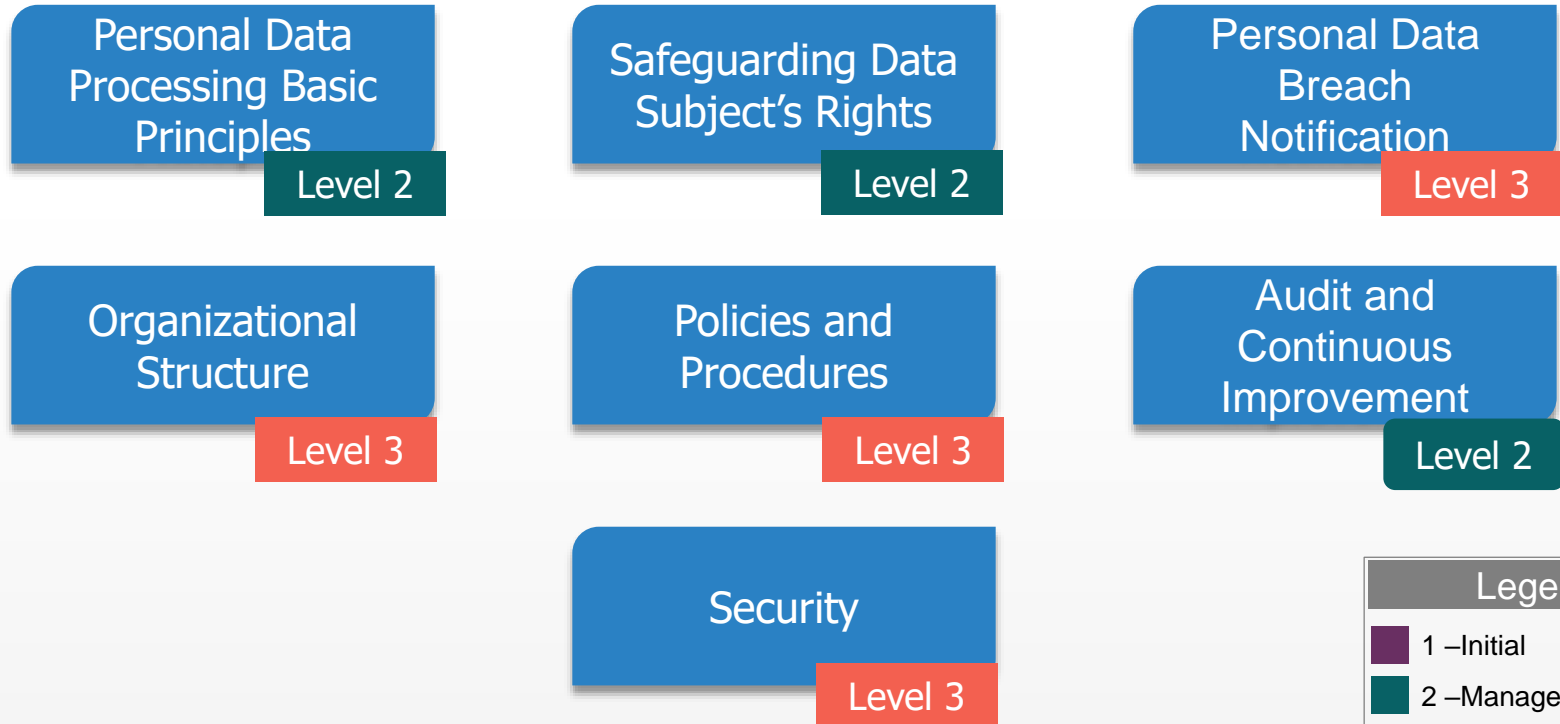
Athens , February 2018



GDPR Roadmap



Maturity Status (PIA Results)

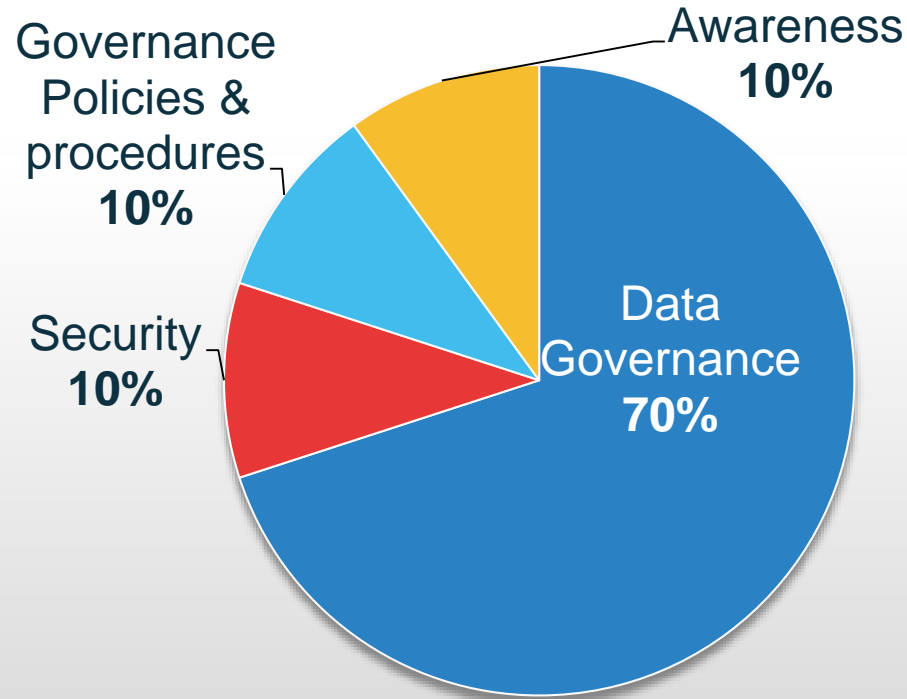


Based on CMMI Maturity Model

GDPR Findings

Consent	Requests for consent for different purposes are not distinguished.	Consent is opt-out
Retention	Retention periods for personal data are not clearly defined.	
Portability	No policy for satisfying requests for personal data portability.	
Security	USB ports are enabled on all corporate PCs and Laptops.	Emails containing personal data are not encrypted
Forgetness	There are no mechanisms for personal data erasure.	
Collection Purpose	Not all data collected, stored, transferred etc. are necessary for the purposes of personal data processing	
Contracts	The template contract between IAG and an insurer partner is not updated based on GDPR provisions	
Audit	The scope and criteria of the internal audit process does not include personal data protection requirements.	
Data Breach	The security incidents records do not include all the required information regarding personal data breaches.	

GDPR : Effort Diagram



Approaching GDPR (Governance & Policies)

Assign the role of Data Protection Officer (DPO) and appoint responsibilities

Document a corporate Data Protection Policy

Create DPO HUB (DPO, Info Sec, BCM, Legal, Compliance, Risk, IT Sec)

Define KPIs for the measurement of GDPR performance

Establish communication with Data Protection Authority

Review and update contracts & agreements with processors

Approaching GDPR (Security)

Implement Data Protection Policy security controls

Strengthen DLP functionality

Encrypt or Mask personal information depending on purpose

Review the removable storage media policy & procedure

Review, adjust & enhance processes to satisfy requests from data subjects

Secure Application environment & encryption in corporate mobile devices

Approaching GDPR (Awareness)

Educate/Train people according to GDPR principles

Create internal site for Security & GDPR Awareness

Uploading Videos & Quizzes in portal, Posters, Manuals & Guidelines

Executing periodical Clean Desk Assessment

Reward employees who comply GDPR requirements

Live Presentations across all different business functions

Approaching GDPR (Data Governance)

Strengthen corporate Data Governance Policy incorporating GDPR requirements

Enhance Data Lineage (Data Processes & Flows)

Create a personal data processing register

Tagging personal and sensitive identifier (PII , SII , VII)

Enhance Data Remediation processes

Create common data glossary

Approaching GDPR (Data Governance)

Assign the role of Data Traffic Controller and appoint responsibilities

Confirm existence of Data Owner per data category within framework

Adjust current Retention Policy

Data Disposal either hardcopy or electronic

Create Internal Data Request Center

Adjust Data Collection possesses according to GDPR requirements

Data Governance: Data Manipulation

Metadata Management



SAS® Data Management Studio

The screenshot displays the SAS Data Management Studio interface. The main workspace shows a data flow diagram for a job named 'MetadataExtraction_DB1PROD'. The flow starts with two 'Data Input' nodes: 'DB1PROD_TB1ITRAN' and 'DB1PROD_TB1IPREM'. These feed into 'Data Union 1' and 'Data Union 2' respectively. The outputs of these unions are combined into a single stream that passes through 'Rename Output Column', 'Sorting by PARENT...', 'Add Fields for Impo...', 'Data Sorting 1', and finally 'Create XML file'.

A 'Field Layout' dialog box is open in the foreground, titled 'Rename Output Column'. It shows a list of available fields and selected fields. The 'Selected fields' list includes 'TABLE_CAT', 'TABLE_SCHEM', 'TABLE_NAME', 'COLUMN_NAME', 'DATA_TYPE', 'COLUMN_SIZE', 'TYPE_NAME', 'REMARKS', 'SQL_DATA_TYPE', 'SQL_DATETIME_SUB', 'CHAR_OCTET_LENGTH', 'NUM_PREC_RADIX', and 'NULLABLE'. The 'Output Name' column shows 'TABLE_CAT' and 'TABLE_SCHEM' are selected.

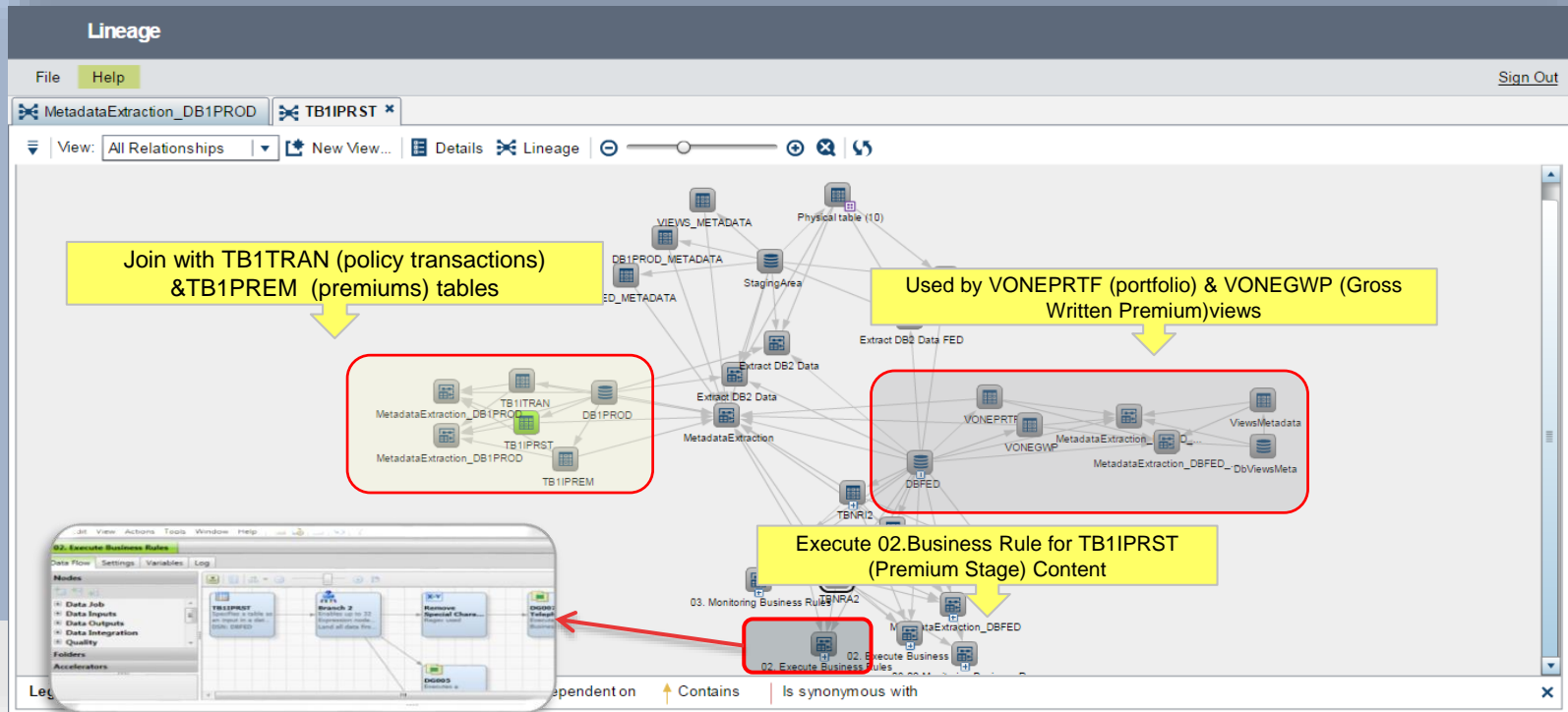
TABLE_CAT	TABLE_SCHEM	TABLE_NAME	COLUMN_NAME	DATA_TYPE	TYPE_NAME	COLUMN_SIZE	BUFFER_LEN
(null)	ONE	TB1ITRAN	BRANCH_ID	4	INTEGER	10	
(null)	ONE	TB1ITRAN	POLICY_NO	4	INTEGER	10	
(null)	ONE	TB1ITRAN	RECEIPT_NO	4	INTEGER	10	
(null)	ONE	TB1ITRAN	LAST_MODIFIED	93	TIMESTAMP	26	
(null)	ONE	TB1ITRAN	LAST_MODIFIED_BY	1	CHAR	8	
(null)	ONE	TB1ITRAN	PREMIUM_INSTALMENT_TYPE	4	INTEGER	10	
(null)	ONE	TB1ITRAN	AGENT_CD	12	VARCHAR	64	
(null)	ONE	TB1ITRAN	APPLICATION_NO	4	INTEGER	10	

Data Governance: Data Management

Enterprise Data Lineage



SAS® Data Lineage





SAS® Data Management Studio

The screenshot displays the SAS Data Management Studio interface. On the left, a tree view shows a repository of Business Rules, with 'DG002 - POLICY_TYPE Validity' selected. The main pane shows the details for this rule, including its label, description, and creation date. A yellow arrow points from the 'Data Controls' label to the 'Checks' section, which lists three conditions: 'POLICY_NO is greater than 0', 'BRANCH_ID is equal to 1 or 2', and 'POLICY_TYPE is not equal to CODE in BASE.SAS.POLICY_TYPE'. A red box highlights this list. To the right, the 'Rule Properties' dialog is open, showing the rule's name and description. A yellow arrow points from the 'Business Rule transformed to Technical Rule' label to the 'Expression' tab, which contains a SAS SQL script. A red box highlights this script, which uses a database connection to query the 'BASE.SAS.POLICY_TYPE' table and return a boolean result based on the rule's conditions. The script is as follows:

```
static dbconnection db1
static dbstatement stmt1
dbcursor curs1
boolean retvall

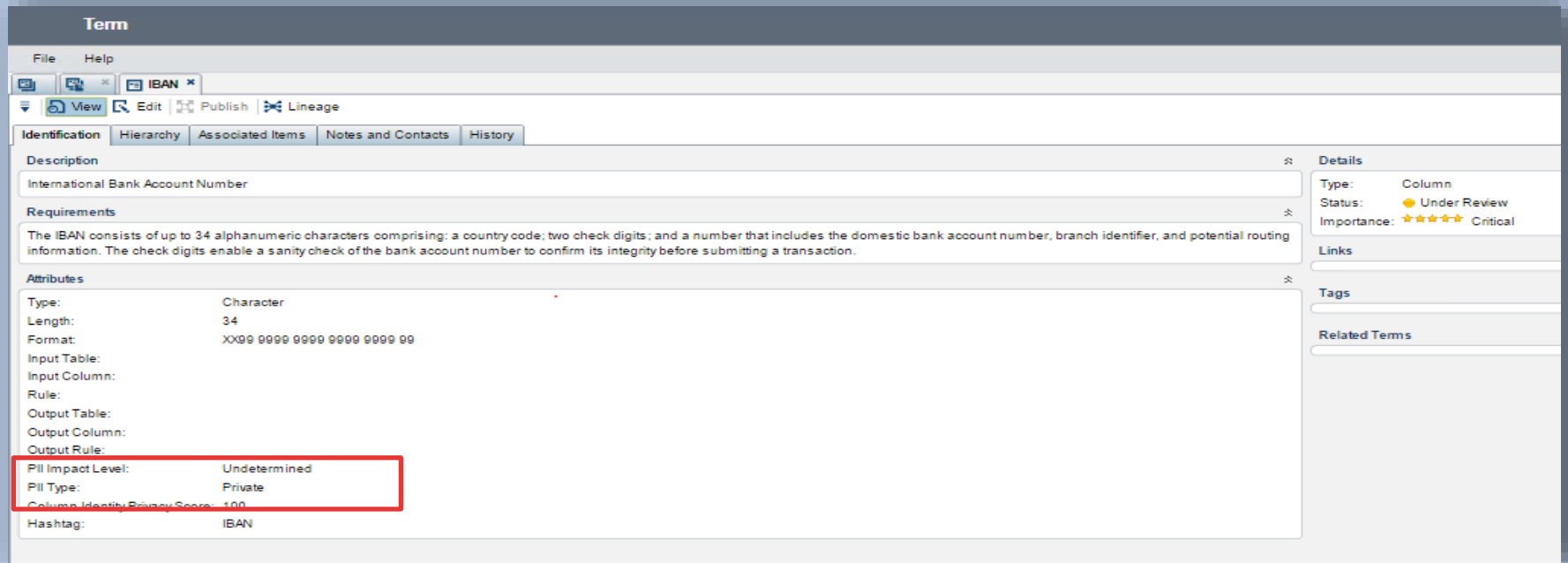
if isnull(db1) then
  db1 = dbconnect('DSN=ReferenceTables;DR=');
if isnull(stmt1) then
  begin
    stmt1 = db1.prepare('SELECT CODE FROM "
    stmt1.setparaminfo(0, 'real', 15)
    ');
  end;
```

GDPR New Principles

Personal Identity Information -PII



SAS® Data Management Studio



The screenshot displays the SAS Data Management Studio interface for configuring a term. The main content area is titled 'Term' and shows the configuration for 'International Bank Account Number'. The 'Attributes' section is highlighted with a red box, showing the following details:

Type:	Character
Length:	34
Format:	XX99 9999 9999 9999 9999 99
Input Table:	
Input Column:	
Rule:	
Output Table:	
Output Column:	
Output Rule:	
PII Impact Level:	Undetermined
PII Type:	Private
Column Identity/Privacy Score:	100
Hashtag:	IBAN

The right-hand sidebar contains a 'Details' panel with the following information:

- Type: Column
- Status: ● Under Review
- Importance: ★★★★★ Critical

Below the 'Details' panel are sections for 'Links', 'Tags', and 'Related Terms', which are currently empty.

Data Governance: Data Framework



Wiki-Like Search



SAS® Business Glossary

SAS® Business Data Network - Search

51 results for "customer": 51 Business Data items

51 Business Data items [Show all in SAS Business Data Network](#)

- [Average Annual Premiums per customer and per product \(MIC Report Definition\)](#)
The average Annual Premiums of the active customers per product on the reference date. Sum of Annual Premiums of the active customers per product divided by the number of active customers of each corresponding product on the reference date.
- [Average Annual Premiums per customer of customer inflow \(local currency\) \(MIC Report Definition\)](#)
The average Annual Premiums per customer of the customer inflow on the reference date.
- [Average Annual Premiums per customer of customer outflow \(local currency\) \(MIC Report Definition\)](#)
The average Annual Premiums per customer a customer had X months before its status become "inactive" during the reference (or specified) period.
- [Average Annual Premiums per customer of the stable customers \(local currency\)\(MIC Report Definition\)](#)
The average Annual Premiums per customer for those who are not part of the customer inflow or customer outflow on the reference date.
- [Average Annual Premiums per policy of customer inflow \(local currency\) \(MIC Report Definition\)](#)
The average Annual Premiums per policy of the customer inflow on the reference date.
- [Average Annual Premiums per policy of customer outflow \(local currency\) \(MIC Report Definition\)](#)
The average Annual Premiums per policy a customer had X months before its status become "inactive" during the reference (or specified) period.
- [Average Annual Premiums per policy of the stable customers \(local currency\) \(MIC Report Definition\)](#)
The average Annual Premiums per policy for the customers who are not part of the customer inflow or customer outflow on the reference date.
- [Customer inflow \(Annual Premiums in local currency\) \(MIC Report Definition\)](#)
Positive sum of the Annual premiums of the customers that had no active policies on the start date of the period considered, but have at least one active policy on the end date of this period.
- [Customer inflow \(for policy metric\) \(MIC Report Definition\)](#)
(Absolute) Number of inflow policies from the customers that had no active policies on the start date of the period considered, but have at least one active policy on the end date of this period.

Data Governance: Data Framework



Data Remediation



SAS® Data Management Studio

Data Remediation

File Help

38 issues

Grouped by (ungrouped)

Assignee

Issue	Open Issues	Item	Subject Area	Application	Importance	Status	Assignee	Age (Days)
DG003 - POLI...	Data Quality Issues	RECORD ID 30944...	Data Issues ofNon...	Continuous Data M...	☆☆☆☆☆	Closed	Simou Julie	4
DG003 - POLI...	Data Quality Issues	RECORD ID 30945...	Data Issues ofNon...	Continuous Data M...	☆☆☆☆☆	In Progress	Anastasia Mpana	4
DG003 - POLI...	Data Quality Issues	RECORD ID 30721...	Data Issues ofNon...	Continuous Data M...	☆☆☆☆☆	Open	(unknown)	4
DG003 - POLI...	Data Quality Issues	RECORD ID 30721...	Data Issues ofNon...	Continuous Data M...	☆☆☆☆☆	Open	(unknown)	4
DG003 - POLI...	Data Quality Issues	RECORD ID 78135...	Data Issues ofNon...	Continuous Data M...	☆☆☆☆☆	Open	(unknown)	4
DG003 - POLI...	Data Quality Issues	RECORD ID 54936...	Data Issues ofNon...	Continuous Data M...	☆☆☆☆☆	In Progress	Simou Julie	4

Issue Details Issue Data

Issue: Data Quality Issues > RECORD ID 30721295 > DG003 - POLICY_STATUS equal to CANCELLED

Status: Open

Importance: ☆☆☆☆☆

Assignee: (unknown)

Due date: 11 Dec 2016

```
RULE=DG003 - POLICY_STATUS equal to CANCELLEDTASK=DG003 - POLICY_STATUS equal to CANCELLEDREPORTED DATE =DG003 - POLICY_STATUS equal to CANCELLEDREPORTED FIELDS=_KEY#BRANCH_ID#CANCEL_ISSUE#CANCEL_START#POLICY_NO#POLICY_STATUSREASON=USER ERROR
```

Issue: DG003 - POLICY_STATUS equal to CANCELLED

Item: RECORD ID 30721295 (1 issue)

Package: Data Quality Issues (38 issues)

Subject Area: Data Issues of NonLife Area

Application: Continuous Data Monitoring

Data Governance: Data Framework

Data Monitoring and Dash boarding



SAS® Data Monitoring & Dash

boarding

Visual Analytics - Report Viewer

DGD Profiling v4 - Metrics by Table

Count (# of obs.) 8

Report MIC - ONE Profiling Report V1

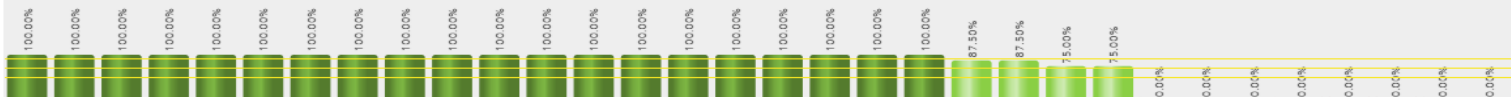
Data Source StagingArea

Data Table ST_TB1POLI

Run Date Wednesday, October 5, 2016 02:48:39 PM

Overall Filling Ratio 72.66%

Field Filling Ratio

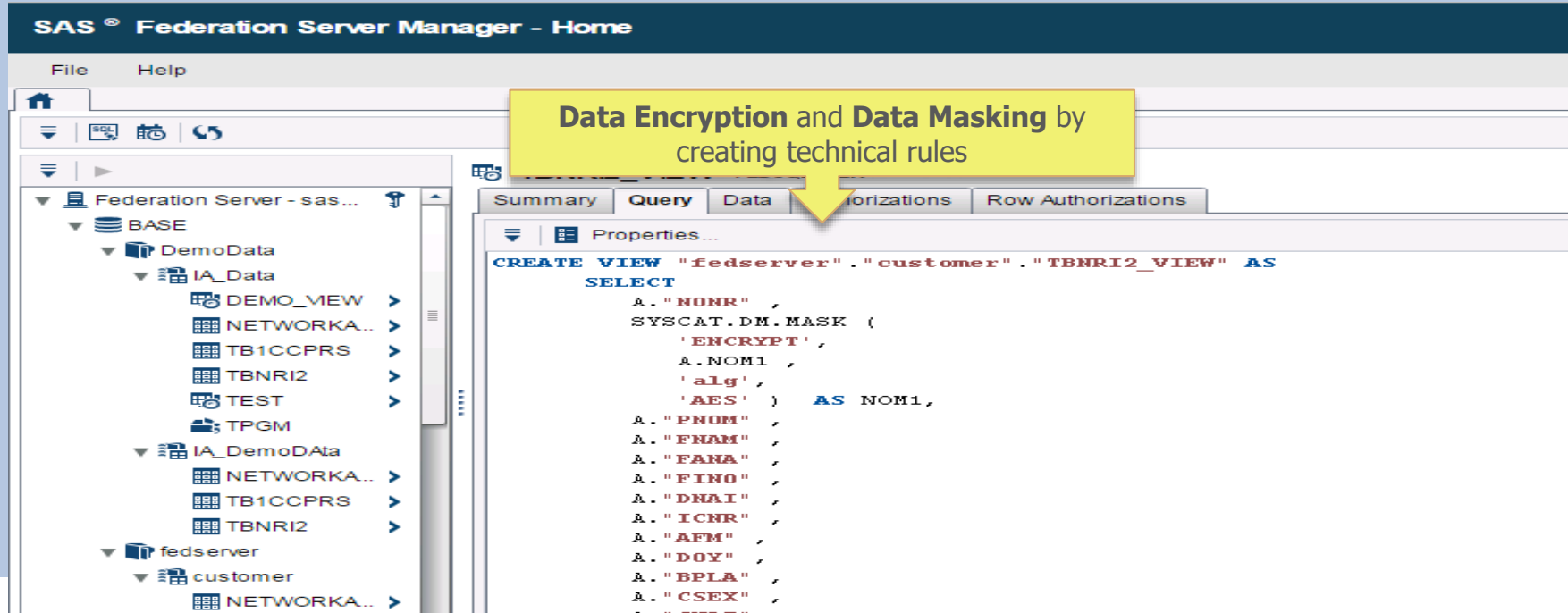


Metrics Details by Field

FIELD NAME	FIELD POSITION	FIELD TYPE	UNIQUE COUNT	NON NULL COUNT	NULL COUNT	PCT NON NULL	BLANK COUNT	PCT NULL BLANK	PCT NOT NULL BLANK	PATTERN COUNT
TRANSACTION_TO_BE_ISSUED	31	Numeric	0	0	8	0.00%	0	100.00%	0.00%	
INIT_POLICY_NO	21	Numeric	0	0	8	0.00%	0	100.00%	0.00%	
MEMBER_ID	26	Numeric	0	0	8	0.00%	0	100.00%	0.00%	
BONUS_AGENT_CD	23	Character	0	0	8	0.00%	0	100.00%	0.00%	
CONTACT_PERSON_PHONE	17	Character	0	0	8	0.00%	0	100.00%	0.00%	
STATUS	5	Numeric	1	8	0	100.00%	0	0.00%	100.00%	
PREV_POLICY_NO	22	Numeric	1	7	1	87.50%	0	12.50%	87.50%	
IS_FRONTING	19	Numeric	1	8	0	100.00%	0	0.00%	100.00%	
FRONTING_TYPE	12	Numeric	1	8	0	100.00%	0	0.00%	100.00%	
CANCELLATION_REASON_CD	24	Numeric	3	8	0	100.00%	0	0.00%	100.00%	
AFFINITY_GROUP	25	Numeric	1	8	0	100.00%	0	0.00%	100.00%	



SAS® Federation Server



Data Encryption and Data Masking by creating technical rules

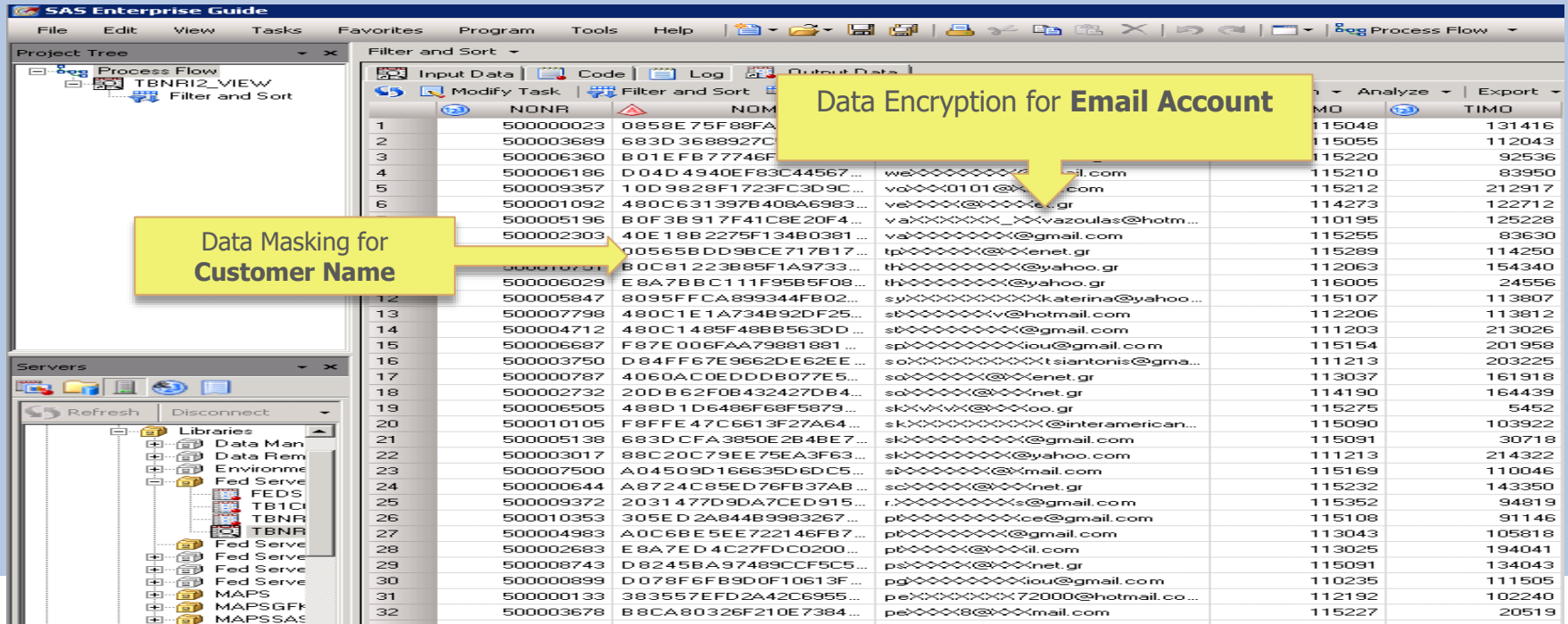
The screenshot displays the SAS Federation Server Manager interface. The left pane shows a tree view of the server structure, including a 'customer' schema. The right pane shows the 'Properties...' dialog for a view, with the 'Query' tab selected. The SQL code defines a view named 'TBNRI2_VIEW' that uses the 'SYS-CAT.DM.MASK' function to apply encryption and masking rules to the data.

```
CREATE VIEW "fedserver"."customer"."TBNRI2_VIEW" AS
SELECT
  A."NONR" ,
  SYSCAT.DM.MASK (
    'ENCRYPT' ,
    A.NOM1 ,
    'alg' ,
    'AES' ) AS NOM1,
  A."PNOM" ,
  A."FNAM" ,
  A."FANA" ,
  A."FINO" ,
  A."DNAI" ,
  A."ICNR" ,
  A."AFM" ,
  A."DOY" ,
  A."BPLA" ,
  A."CSEX" ,
  A."CNR"
```

GDPR New Principles



SAS® Federation Server



The screenshot displays the SAS Enterprise Guide interface with a data table. Two callout boxes highlight specific data handling techniques:

- Data Encryption for Email Account:** A yellow callout box points to the email address column, where several entries are replaced with redacted symbols like 'x' and 'y'.
- Data Masking for Customer Name:** A yellow callout box points to the 'NONR' column, where names are replaced with redacted symbols like 'E 8A7B B C 1 11F95B5F08...'.

NONR	NOM	MO	TIMO
500000023	0858E 75F88FA...	115048	131416
500003689	683D 3688927C...	115055	112043
500006360	B 01 E FB 77746F...	115220	92536
500006186	D 04D 4940EF83C44567...	115210	83950
500009357	10D 9828F1723FC3D9C...	115212	212917
500001092	480C631397B408A6983...	114273	122712
500005196	B 0F 3B 91 7F41C8E20F4...	110195	12528
500002303	40E 18B 2275F134B0381...	115255	83630
500006505	005658 DD9BCE717B17...	115289	114250
500006731	B 0C81 223B85F1A9733...	112063	154340
500006029	E 8A7B B C 1 11F95B5F08...	116005	24556
500005847	8095F FCA899344FB02...	115107	113807
500007798	480C1 E 1A734B92DF25...	112206	113812
500004712	480C1 485F488B563DD...	111203	213026
500006687	F87E 006FAA79881881...	115154	201958
500003750	D 84FF67E9662DE62EE...	111213	20325
500000787	4060A C0EDDD8077E5...	113037	161918
500002732	20D B 62F0B432427DB4...	114190	164439
500006505	488D 1 D6486F68F5879...	115275	5452
500010105	F8FFE 47C6613F27A64...	115090	103922
500005138	683D CFA3850E2B4BE7...	115091	30718
500003017	88C20C79EE75EA3F63...	111213	214322
500007500	A04509D166635D6DC5...	115169	110046
500000644	A8724C85ED76FB37AB...	115232	143350
500009372	2031 477D9DA7CED915...	115352	94819
500010353	305E D 2A844B9983267...	115108	91146
500004983	A0C6B E 5EE722146FB7...	113043	105818
500002683	E 8A7E D 4C27FD0C0200...	113025	194041
500008743	D 8245BA97489CCCF5C5...	115091	134043
500000899	D 078F6FB9D0F10613F...	110235	111505
500000133	383557EFD2A42C6955...	112192	102240
500003678	B8CA80326F210E7384...	115227	20519

GDPR New Principles

Enterprise, Govern, Risk and Compliance (EGRC)



SAS® Enterprise GRC

The screenshot displays the SAS Enterprise GRC interface. The top navigation bar includes 'Home', 'Incidents', 'Risk Management', 'Information Security', 'Control Testing', 'Audits', 'Policies', 'Issues and Action Plans', 'Administration', and 'Reports'. A dropdown menu for 'Information Security' is open, listing options: Assets, Controls, Control Packages, Recommended Controls, Risk Profile, Processes, Assessments, Assessment Planning, Libraries, and Dimension Browser. A yellow callout box highlights the 'Controls' option with the text 'Impact mitigation tools for data breaches'. Below the navigation, there are filters for 'External Standards' (ISO 27k) and 'Geography' (None Selected). The main content area shows a table of controls.

Actions	Control Title	Control Description
1	Information security policy document	ISO 27k: An information security policy document shall be approved by management, and published and communicated to all employees and relevant external
2	Review of the information security policy	The information security policy shall be reviewed at planned intervals or if significant changes occur to ensure its continuing suitability, adequacy, and effectiveness. PCI 12. Includes a review at least annually and updates when the environment changes.
3	Management commitment to information security	Management shall actively support security within the organization through clear direction, demonstrated commitment, explicit assignment, and acknowledgement of information security responsibilities.
4	GroupWide - Information security coordination	Information security activities shall be co-ordinated by representatives from different parts of the organization with relevant roles and job function.
5	Allocation of information security responsibilities	
6	CPP analysis and increase penetration of the card at risk file through block and reissue	CPP analysis and increase penetration of the card at risk file through block and reissue

Rows 1 to 6 of 6

Data & Reporting Request Center



☰ INTERAMERICAN | Service Desk

☰ Service Catalog ▾

☰ Application Problems/Installation
Εγκαταστάσεις - Δυσλειτουργίες εφαρμογών
(Λάθη, ξεκλειδώματα, εκτύπώσεις, mail, αλλαγή)

☰ Data Management
Data Management

☰ Hardware Problems
Δυσλειτουργία σε υπολογιστή (υπολογιστές,
laptop(s), οθόνες, εκτυπωτές και προτζέκτορες)

☰ Infrastructure Change
Πρόσβαση σε Δίκτυο, Αρχεία, Φακέλους,
Internet, Email, Τηλέφωνο κλπ.

☰ Network and Telephony Problems
Προβλήματα δικτύου, τηλεφωνίας, FAX και
mobile συσκευών

☰ Orders
Παραγγελία Υπολογιστών, Laptop(s), Οθόνης
(οθονών) και Περιφερειακών

☰ Problems/Application Requests
Applications: SAP, SAS, MIC

☰ Relocation
Μετακομίσεις Ατόμων, Εξοπλισμού και
Υποκαταστημάτων

☰ User Account Requests
Αιτήματα για την Δημιουργία, Διαγραφή και
Τροποποίηση χρηστών

☎

Data Management

Description

Available Requests

ACE Analysis & Reporting Requests

Reporting pertaining to customer or business performance



Enterprise Data Management & Reporting (IT Department)

Implementing data management and operational reporting for all line of business



SAP Reporting

Implementing Financial & BW Reports



Customer Centric & CX Platforms

My Customer (CRM) & Cosmos (UCM)



Data Extraction/Receiving & Transfer

Personal or corporate data sent to/received from 3rd parties



Database Extraction (IBM Team)

Requests regarding data extraction from a database schema



Production Jobs (Batch Jobs)

Data Management - Operations





- Set up a Clean Desk policy
- Ensure paper documents are safely stored and disposed of
- Classify Unstructured data
- Employee involvement through continuous awareness
- Verify Processors' compliance
- Control requests for data
- Expected additional guidelines from Data Protection Authority & Hellenic Insurance Union

- ✓ **Strengthen** customer trust and customer relationships, resulting in loyalty
- ✓ Enhance market **reputation** & business **cooperation**
- ✓ Competitive **market advantage**
- ✓ Strengthen **security** & minimized security Incident
- ✓ Digital benchmark through **PIA**
- ✓ **Smart** Big Data leads to better, safer, faster processing
- ✓ **Elimination** of redundant or duplicate data leads to reduced costs & faster processes



...is not just another
framework or regulation
but a **great opportunity**
to enhance
operational excellence!

