



INFORMATION SECURITY

A ROADMAP TO SECURE YOUR BUSINESS DATA IN YOUR DATA CENTRE

NURU-TECH

CATALOGUE OVERVIEW

What is *Information Security* (i.e. Data Mgmt. & Security)?

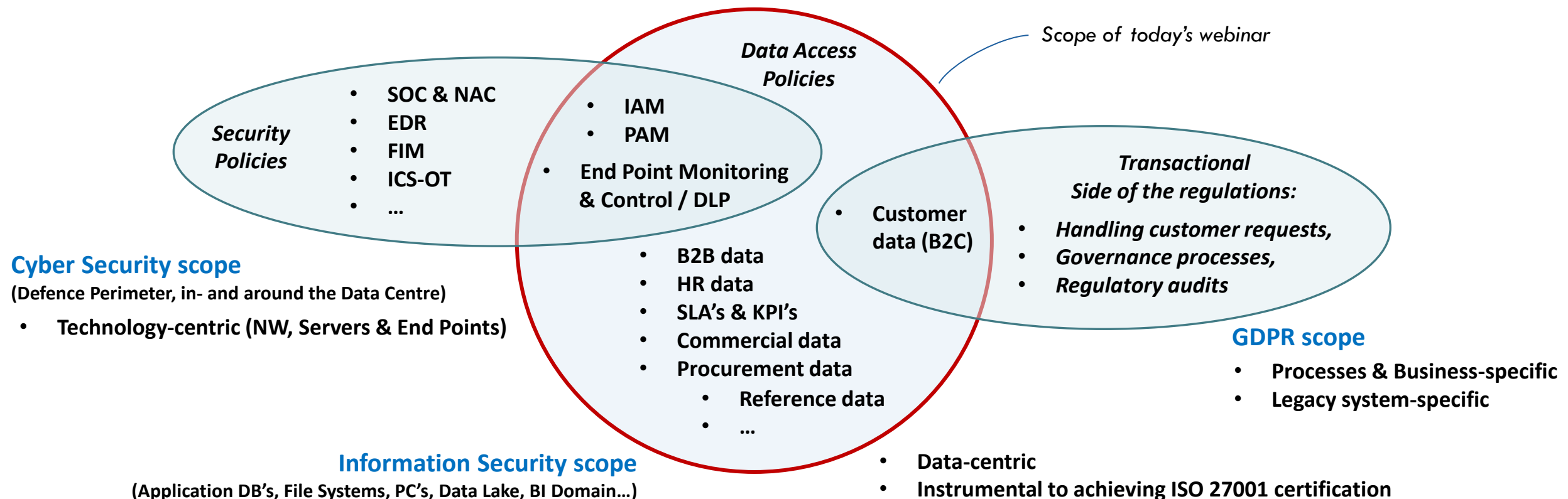
... and what is the difference with **GDPR**?

GDPR:

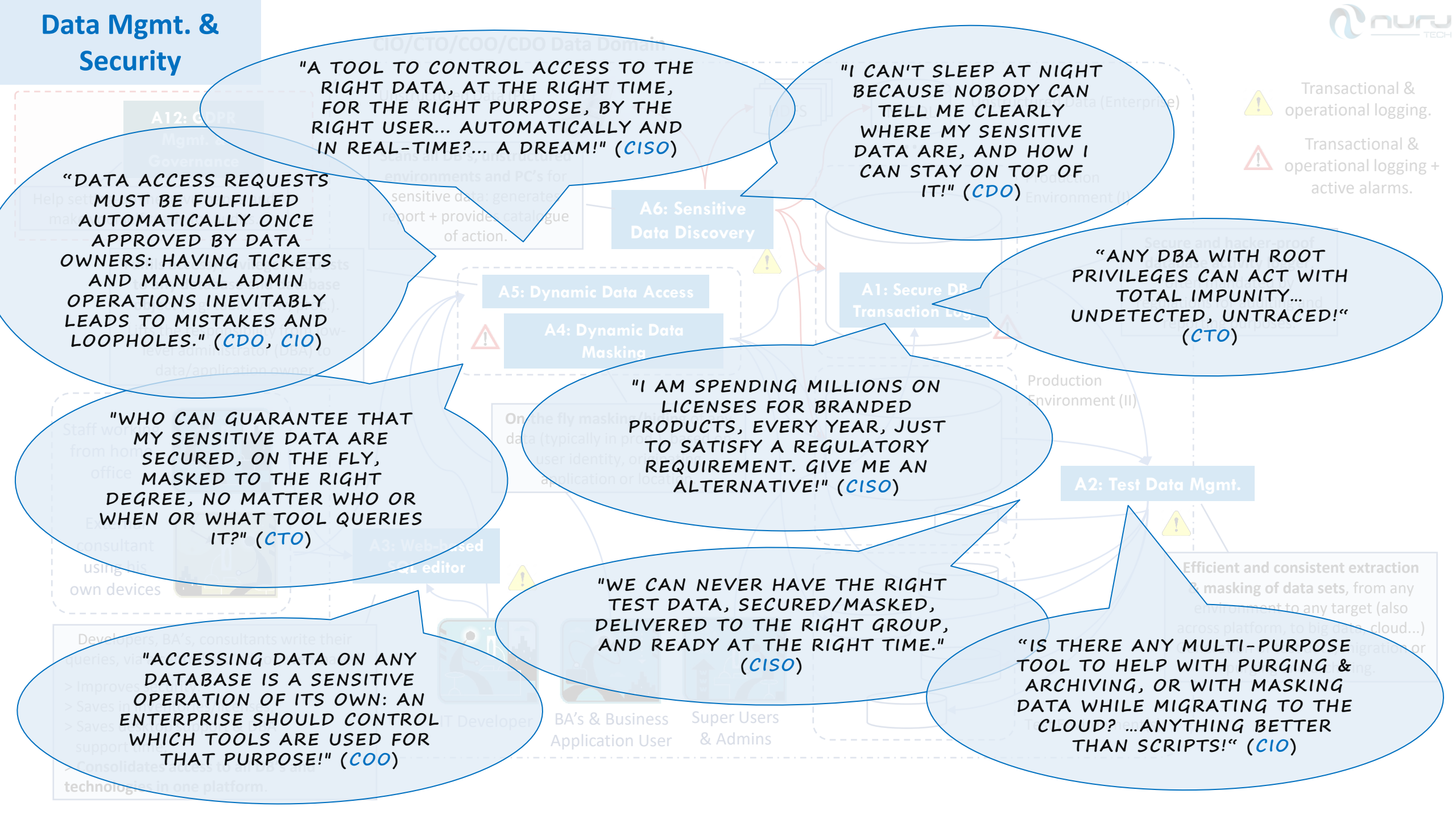
“**General Data Protection Regulation**”: regulates the privacy of the data of **individuals**, as well as their rights in determining what is being done with it.

Information Security:

Addresses **any kind of sensitive data**. It is about gaining insight & control about who has access to what data, when, how... which data is sensitive and how it can be protected.



Data Mgmt. & Security



"A TOOL TO CONTROL ACCESS TO THE RIGHT DATA, AT THE RIGHT TIME, FOR THE RIGHT PURPOSE, BY THE RIGHT USER... AUTOMATICALLY AND IN REAL-TIME?... A DREAM!" (CISO)

"DATA ACCESS REQUESTS MUST BE FULFILLED AUTOMATICALLY ONCE APPROVED BY DATA OWNERS: HAVING TICKETS AND MANUAL ADMIN OPERATIONS INEVITABLY LEADS TO MISTAKES AND LOOPHOLES." (CDO, CIO)

"WHO CAN GUARANTEE THAT MY SENSITIVE DATA ARE SECURED, ON THE FLY, MASKED TO THE RIGHT DEGREE, NO MATTER WHO OR WHEN OR WHAT TOOL QUERIES IT?" (CTO)

"ACCESSING DATA ON ANY DATABASE IS A SENSITIVE OPERATION OF ITS OWN: AN ENTERPRISE SHOULD CONTROL WHICH TOOLS ARE USED FOR THAT PURPOSE!" (COO)

"I AM SPENDING MILLIONS ON LICENSES FOR BRANDED PRODUCTS, EVERY YEAR, JUST TO SATISFY A REGULATORY REQUIREMENT. GIVE ME AN ALTERNATIVE!" (CISO)

"WE CAN NEVER HAVE THE RIGHT TEST DATA, SECURED/MASKED, DELIVERED TO THE RIGHT GROUP, AND READY AT THE RIGHT TIME." (CISO)

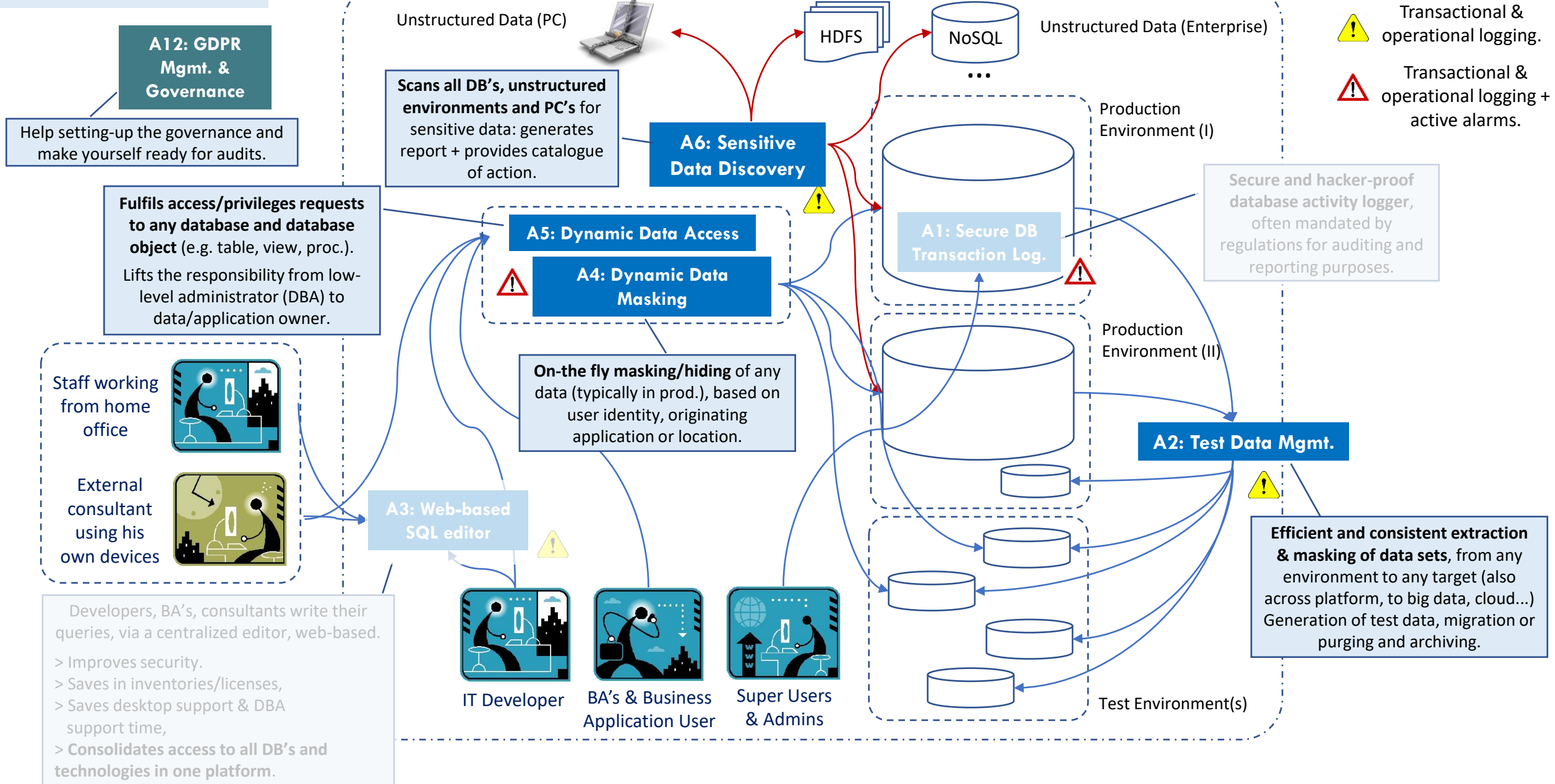
"IS THERE ANY MULTI-PURPOSE TOOL TO HELP WITH PURGING & ARCHIVING, OR WITH MASKING DATA WHILE MIGRATING TO THE CLOUD? ...ANYTHING BETTER THAN SCRIPTS!" (CIO)

"I CAN'T SLEEP AT NIGHT BECAUSE NOBODY CAN TELL ME CLEARLY WHERE MY SENSITIVE DATA ARE, AND HOW I CAN STAY ON TOP OF IT!" (CDO)

"ANY DBA WITH ROOT PRIVILEGES CAN ACT WITH TOTAL IMPUNITY... UNDETECTED, UNTRACED!" (CTO)

Data Mgmt. & Security

CIO/CTO/COO/CDO Data Domain

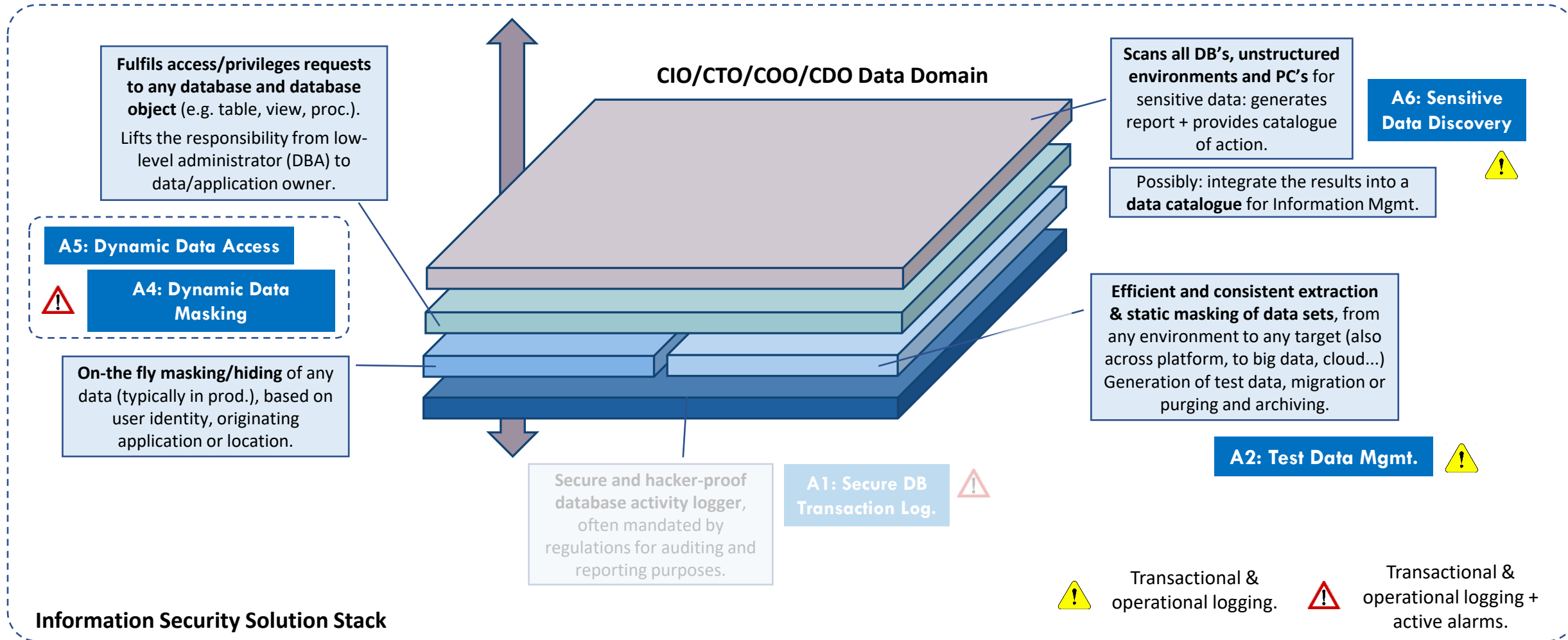


GDPR-specific Governance

Help setting-up the governance and make yourself ready for audits.

GDPR Mgmt. & Governance

Harden your Data Center from the perspective of Data Mgmt. & Security, *layer by layer*.



Inter-Operability View

- Supports **on Premise** everything – except what does not support JDBC connection.
- Supports Oracle, SQL Server in **Cloud**.
- **Roadmap**: Support *deployment* in the Cloud.
- **Roadmap**: Support HDFS.
- **Roadmap**: Support NoSQL databases.

A7: Data Catalogue

A6: Sensitive Data Discovery

- Supports **on Premise**: everything – except what does not support JDBC connection.
→ New RDBMS systems can be added easily.
- Supports Hadoop HDFS, Amazon S3, Google Cloud.
- Supports connection to MariaDB, Oracle, SQL Server in the **Cloud**.
- Supports **CouchBase, Cassandra & MongoDB NoSQL** databases.
- Supports Sharepoint.
- Supports Exchange email server.
- **Roadmap**: Support **other NoSQL** databases.

- Supports deployment in **Cloud: AWS & Azure**.
- Supports Oracle, SQL Server in **Cloud**.
- Supports **on Premise**: Oracle, SQLServer, PostgreSQL, MySQL DB2 (Luv/Z.OS), SAP HANA.
- Supports **MongoDB NoSQL** database
- **Roadmap**: Support **other NoSQL** databases, i.e. Cassandra, CouchBase, Vertica, Kafka (dynamically mask messages in Kafka Queue).
- **Roadmap**: Support Big Data Platforms.
- **Cannot** support HDFS (**Not Applicable**).

A5: Dynamic Data Access.

A4: Dynamic Data Masking

A3: Web-based SQL Editor (TOAD-like)

- Supports deployment in **Cloud: AWS & Azure**.
- Supports **on Premise**: everything – except what does not support JDBC connection.
- Supports **MongoDB NoSQL** database.
- Supports **other NoSQL** databases (**Roadmap**).
- **Cannot** support HDFS (**Not Applicable**).

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→ New RDBMS systems can be added easily.
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- **Roadmap**: Support **other NoSQL** databases.

A1: Secure DB Transaction Log.

- Supports **on Premise**: Oracle, SQLServer, PostgreSQL
- Supports connection to Oracle, SQL Server in **AWS & Azure**.
- **Cannot** support HDFS (**N/A**).

A2: Test Data Mgmt.

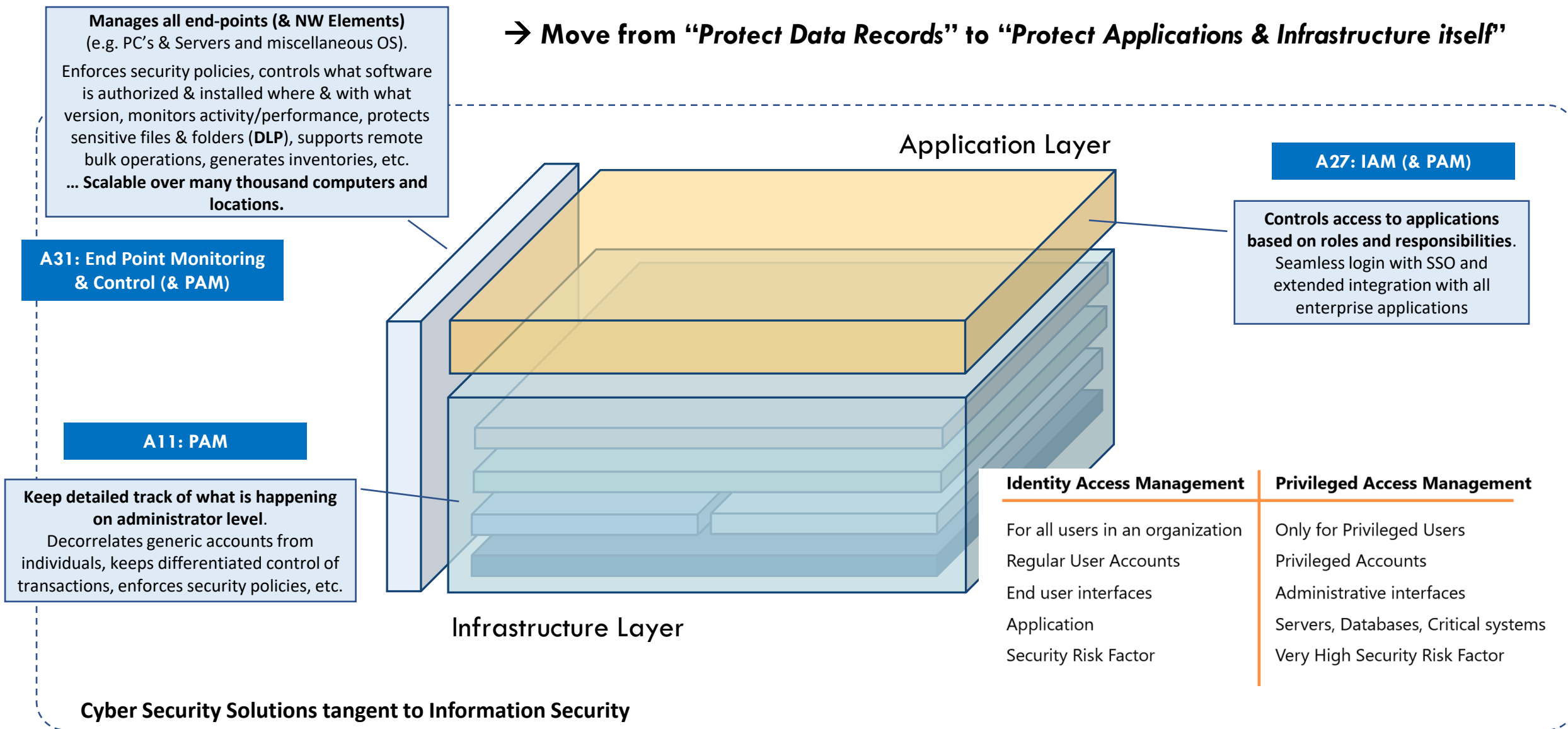
- Supports deployment in **Cloud: AWS & Azure**.
- Supports Oracle, SQL Server in **Cloud**.
- Supports **on Premise**: Oracle, SQLServer, PostgreSQL, MySQL, DB2 (Luv & Z/OS) [limited features], Terradata, Hive, Hadoop HDFS, SAP HANA [limited features], AbInitio.
- Supports Cross-Platform Data Migration:
 - Oracle <-> SQL Server
 - Oracle, SQL Server (incl. Cloud) <-> Hadoop
 - Oracle, SQL Server (incl. Cloud) <-> Hive
- **Roadmap**: Support **NoSQL** databases.

Product	CXO Quotation...	To be used in what circumstance	High-Level Description
A6 (Sensitive Data Discovery)	"I can't sleep at night because nobody can tell me clearly where my sensitive data are, and how I can stay on top of it!" (CDO)	To consider in large & complex organizations, where uncertainty prevails about the whereabouts of sensitive data, and where help is needed in managing their spread.	A tool used for the scanning, discovery, identification and reporting of sensitive data , anywhere in an organization's data infrastructure... Both structured & unstructured data, and up to email servers and PC's of employees! Corrective actions can be triggered from a catalogue of available operations , either automatically upon any finding or manually after review (e.g. blurring content, moving/removing or tagging files with sensitive content).
A5 (Dynamic Data Access)	"Data access requests must be fulfilled automatically once approved by data owners: having tickets and manual admin operations inevitably leads to mistakes and loopholes." (CDO, CIO)	To consider in organizations in which data access policies and their enforcement are of critical importance, and in which the number of users and systems to manage make DBA-level processes impractical. <i>* unique in the market: this tool enables a separation of duties, by segregating infrastructure administration from data access. *</i>	A centralized tool for data access control , managing any application/user access and access privileges to any database, dynamically, for every posted query, whatever its complexity. By doing so, it effectively hands-over control to data owners, away from DBA's . The tool works in high availability mode. There is no performance drop to any client or user.
A4 (Dynamic Data Masking)	"Who can guarantee that my sensitive data are secured, on the fly, masked to the right degree, no matter who or when or what tool queries it?" (CTO)	To consider in large organizations looking for a catch-all solution to manage live access to sensitive data in databases.	A tool for dynamic data masking, i.e. masking sensitive data on the fly , to any user or application querying for it, dynamically, according to business rules and user profiles . It is placed between client application(s) and database(s), with high availability, and with no performance impact for any client or user. <i>* supports a multitude of RDBMS, and is starting with NoSQL. *</i>
A2 (Test Data Mgmt. & Masking)	"We can never have the right test data, secured/masked, delivered to the right group, and ready at the right time." (CISO)	To consider in large organizations struggling with the generation of secure test data, or with purging, archiving & migration, or with the handling of their sensitive content when copying data from any source to any target. <i>* can also integrate/copy from on-premise to cloud, as well as HDFS. *</i>	A tool for test data mgmt., purging or migration , including between different technology platforms. It copies data from between environments (e.g. "production" to "test"), while applying rule-based masking of sensitive data . It can also synthesize new data (columns or records), based on given patterns and rules. Both full extraction and data sampling are supported. Consistency is preserved, by starting from a given table or from sample records, then deriving all explicitly or logically related records.
A1 (Secure DB Logging)	"Any DBA with root privileges can act with total impunity... undetected, untraced!" (CTO)	To consider in organizations challenged to address the strictest regulations about keeping track of any kind of database transactions, and in need of a solution capable of producing any kind of audit report.	A tool that monitors ALL database user activities , regardless of the channel, the user or the privilege of that user (especially including DBA's). It securely logs all transactions (safe from editing), and provides an alarm mechanism over them as well as flexible reporting. <i>* like IBM Guardium (well-known among security specialists). *</i>

Product	Competing Global Product(s) or Vendor(s)	Customer Metrics for IT Benchmark (e.g.)	Corresponding IT Footprint (if on-premise)
A6 (Sensitive Data Discovery)	<ul style="list-style-type: none"> IBM Guardium Informatica TDM Micro Focus SDM Micro Focus TDM (minor overlap) (Not yet seen in shortlists:) <ul style="list-style-type: none"> Mentis iDiscover Exterro 	<ul style="list-style-type: none"> Finance [#2 largest bank in revenue – 16 Mio. customers] Linear scalable: <ul style="list-style-type: none"> 350 databases (> 1 Mio. tables) – Oracle, SQL. Scanned disk size: 2 PB Data (> 2 Billion files). Number of PC's with installed agents: 450. <ul style="list-style-type: none"> Finance [#1 Private bank]: 1 PB scanned in 1 month with 8 servers (16 core, 32 GB RAM - Linux VM) 	<ul style="list-style-type: none"> GUI: 2 Servers... For each: CPU: 8 Cores; Memory: 16 GB; Disk: 100 GB; NW: 1Gbps. Scan: 5 Servers... For each: CPU: 32 Cores; Memory: 32 GB; Disk: 100 GB; NW: 1Gbps.
A5 (Dynamic Data Access)	<ul style="list-style-type: none"> None (i.e. not as a stand-alone product solely dedicated to the purpose data access control, request and fulfillment, as in-between interceptor of database requests).	<i>Software-wise, A5 builds on top of A4, and uses the same resources. Therefore the benchmark and footprint are the same for both:</i>	<ul style="list-style-type: none"> GUI: 2 Servers... For each: CPU: 8 Cores; Memory: 16 GB; Disk: 100 GB; NW: 1Gbps. Scan: 4 Servers... For each: CPU: 32 Cores; Memory: 32 GB; Disk: 100 GB; NW: 1Gbps.
A4 (Dynamic Data Masking)	<ul style="list-style-type: none"> Informatica DDM IBM Guardium Oracle Data Reduction (Not yet seen in shortlists:) <ul style="list-style-type: none"> Secupi Mentis iMask 	<ul style="list-style-type: none"> Finance [#2 largest bank in revenue – 16 Mio. customers] Linear scalable... <ul style="list-style-type: none"> 300 databases (> 1 Mio. tables) – Oracle, SQL, DB2. Number of active users: > 10.000. Number of daily transactions: > 100 Mio. 	
A2 (Test Data Mgmt. & Masking)	<ul style="list-style-type: none"> Informatica TDM IBM Optim Micro Focus SDM Oracle Data Masking Pack CA TDM SAP TDMS (Not yet seen in shortlists:) <ul style="list-style-type: none"> Mentis iScramble 	<ul style="list-style-type: none"> Telco [#1 – 35 Mio. subscribers] Linear scalable... <ul style="list-style-type: none"> 110 connected databases – Oracle, SQL. 20+ Hadoop platforms. Number of active users: > 200. Number of daily transactions: > 10.000. 	<ul style="list-style-type: none"> GUI: 2 Servers... For each: CPU: 8 Cores; Memory: 16 GB; Disk: 100 GB; NW: 1Gbps. Scan: 16 Servers... For each: CPU: 8 Cores; Memory: 32 GB; Disk: 100 GB; NW: 1Gbps.
A1 (Secure DB Logging)	<ul style="list-style-type: none"> IBM Guardium. Imperva. Oracle Vault. 	<ul style="list-style-type: none"> Finance [#2 largest bank in revenue – 16 Mio. customers] Linear scalable... <ul style="list-style-type: none"> 300 connected databases – Oracle, SQL. Number of active users logged: > 10.000. Number of daily transactions: 300 Mio. 	<ul style="list-style-type: none"> GUI: 2 Servers... For each: CPU: 8 Cores; Memory: 16 GB; Disk: 100 GB; NW: 1Gbps. Scan: 5 Servers... For each: CPU: 32 Cores; Memory: 32 GB; Disk: 100 GB; NW: 1Gbps.
A3 (Web-based SQL Editor)	<ul style="list-style-type: none"> None (i.e. no other product that has the same capability set, being at once a web-based editor, as well as able to connect to miscellaneous database types from a single editor, in parallel sessions).	<ul style="list-style-type: none"> Finance [#2 largest bank in revenue – 16 Mio. customers] Linear scalable... <ul style="list-style-type: none"> 300 databases (> 1 Mio. tables) – Oracle, SQL. Number of active users: > 10.000. 	<ul style="list-style-type: none"> GUI: 2 Servers... For each: CPU: 8 Cores; Memory: 16 GB; Disk: 100 GB; NW: 1Gbps. Scan: 4 Servers... For each: CPU: 32 Cores; Memory: 32 GB; Disk: 100 GB; NW: 1Gbps.

Complement your Information Security solutions with building blocks from Cyber Security Domain.

→ Move from “Protect Data Records” to “Protect Applications & Infrastructure itself”



Product	CXO Quotation...	To be used in what circumstance	High-Level Description
A31 (End Point Monitoring & Control)	"I need to have deep inspection in my organization's SW assets, control statuses, force upgrades, lock stations! Is there one single product to help with such practical operations?" (CTIO)	To consider in enterprises that need to control and apply its security policies, manage its IT inventories, and secure all its end points from a single control station. * horizontal cut through the capabilities of several vertical global products, with a very practical focus on operational needs. *	A security platform for endpoint control and monitoring , as well as for SW asset and inventory mgmt. Coverage includes computers, servers and network devices in corporate networks, independent of operating systems (Windows, Linux, Mac). Assets can be effectively grouped, reported on, and controlled remotely through misc. interventions, script execution, scheduled routines, etc. It can also integrate with other enterprise security solutions where necessary (SIEM, vuln. scanners, ticketing, etc.). Has recently also added a PAM module to complement its offering. * patch mgmt., policy mgmt., log collection & monitoring, inventory mgmt., vulnerability mgmt., antivirus mgmt., process mgmt., etc. *
A27 (IAM & PAM)	"IAM has been around for years but I have yet to see a tool that is easy to implement and intuitive to use. One that feels more like a business support solution rather than a cyber-security tool." (CIO, CISO)	To consider in any organization willing to implement IAM & SSO, to provide a controlled and secured access to its business applications.	A modern, feature-rich and user-friendly IAM platform, very stable and very easy to integrate even in enterprises with a very diverse application landscape with multiple directories, and for a workforce distributed in multiple locations. Has recently also added a PAM module to complement its offering. * all features are available for on-premise and in-cloud versions. *
A11 (PAM)	"I need to control the access to key assets of my data centre & NW, but my tools are hard to integrate and fragmented... I need a scalable, user-friendly & unified platform!" (CISO)	To consider in any organization, data centre, that is concerned about security breaches and heightened control, especially of privileged accounts. * best in class for Telco. *	" Protect What You Connect ": a cyber security tool in the field of Privileged Access Management (PAM), to efficiently manage and monitor secure access to any platform, device, or network element through a single & centralized platform (agentless by default). It is particularly effective for organizations requiring very high scalability , with wide assets distribution and a need to manage it "all in one box". * unique in offering PAMaaS for data centre security ; rich in features, all included in single platform and license (time/geo fencing, session mgmt. and monitoring, Dynamic password controller, TACACS+ and Radius integration, etc.) *

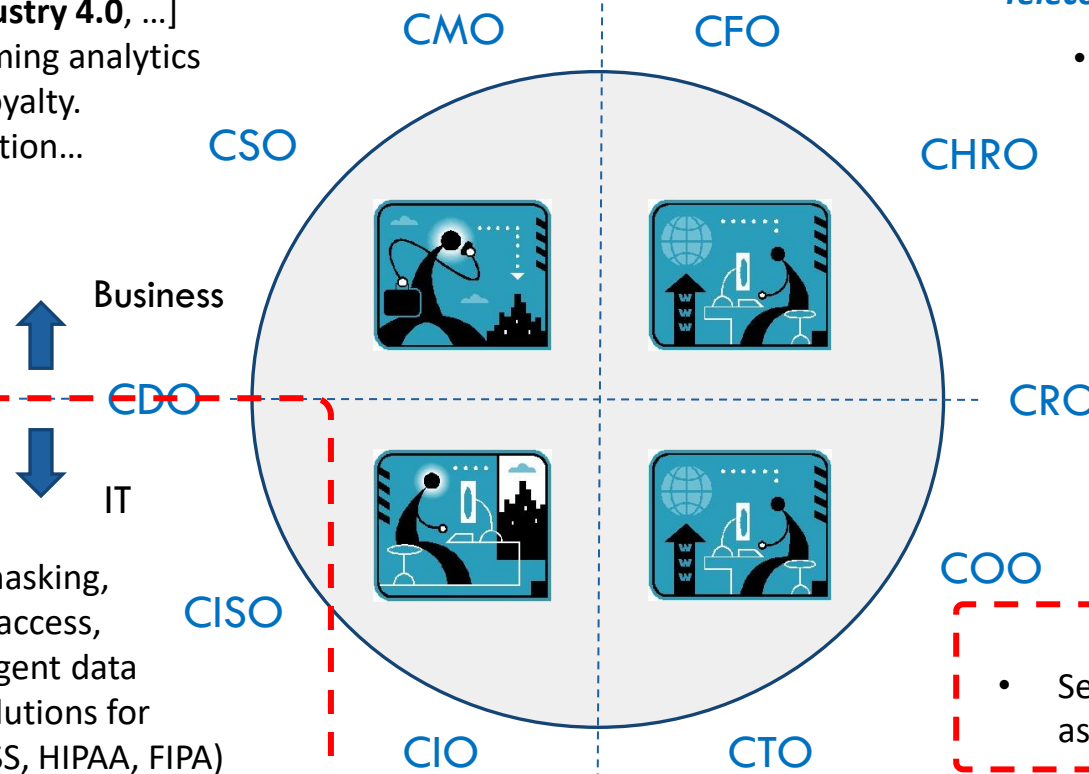
CATALOGUE COVERAGE

- Catalogue-driven & omni-channel order mgmt. (**Telco & Media**)
- ROI/ROAS booster in digital marketing & churn (**eCommerce**)
- Industry solution [IoT platform, **Industry 4.0**, ...]
- Real-time event processing & streaming analytics
- Omni-channel campaign mgmt. & loyalty.
- BPM & ITSM, RPA, process digitalization...

- Reference data mgmt.
- Data quality assurance
- ETL code generator & CI/CD
- DB virtualization & DataOps

- GDPR mgmt. & governance
- Information security
(sensitive data discovery,
data purging, migration to cloud with masking,
dynamic data masking & dynamic data access,
test data preparation & masking, intelligent data
consistency checking & controlling... Solutions for
DSGVO, GDPR, KVKK, SOX, GLBA, PCI DSS, HIPAA, FIPA)

Market place-facing Enterprise-facing



All Industries:

*Financial Services,
eCommerce & Retail,
Utilities & Production Industry,
Airline, Transport & Logistics,
Public Services, Institutions & Law,
Telecommunication, Media & Technology.*

- Online assessment platform (HR & recruiting)
- Corporate communication platform/portal
- Learning mgmt. system & content editor
 - IFRS 16 & ASC 842 financial reporting
 - B2B KYC & Fraud detection (**Finance**)
 - Blockchain solutions (**on-demand**)
 - E2E Site Operations (**Telco & Media**)
- Cyber-Security training (SOC analysts)
- Penetration Testing (Xtra deep)
- SWIFT & PCI audits & certification
- Mobile security & Soft OTP
- Secure digital onboarding (KYC).
 - Cyber-Security platforms (PAM, IAM)
- Security platform for endpoint control & monitoring,
as well as for SW asset & inventory mgmt.

Alternatives to the following... :

IBM Guardium, IBM Optim, Informatica TDM & DDM, Imperva, Micro Focus SDM & TDM, CA TDM, SAP TDMS, Oracle Data Reduction, Oracle Data Masking Pack, Secupi, Mentis iMask, iScramble & iDiscover, Exterro, QuerySurge, Informatica Data Quality, IBM Infostreams, Tibco Streambase, Software AG Apama, SAP ESP, ServiceNow, Flowwright, Creatio, Pega, Mendix, Appian, Bizagi, Signavio, IBM BPM, BonitaSoft, Cyberark, Beyondtrust, Thycotic, Centrify, OneSpan, Kobil, RSA, Apparo Fast Edit, RapidMiner, DataRobot, Alteryics, SAS Data Miner, Power BI ML, CleverTap, Optimove, Criteo, Dynamic Yield, IBM Maximo, Oracle EAM, eLearnSecurity, EC-Council, SANS, Cyberbit, Offensive Security, Hackerone, Bugcrowd, Yeswehack, Intigritty, Sight Machine, Seeq, MachineMetrics, Relayr, Codestryke, Rootcloud, Clarity, Planview, Sigma, Netcracker, Amdocs CRM, Huawei CRM, Compax, Qvantel, Okta, Sailpoint, Onelogin, IBM Identity Mgmt., Oracle Identity Mgmt., Microsoft Identity Mgmt., Redgate, Idera, Solarwind, SentryOne, Microsoft SSCM & SCOM, ManageEngine Desktop Central & Application Manager, Solar Winds Network Performance Monitor, ManageEngine OpManager & OpUtils, MS Sharepoint, MS Yammer, Facebook Workplace, UiPath, Automation Anywhere, Blue Prism, Docebo, Efront LMS, Talent LMS, SAP Success Factor LMS, Enocta, OCR Labs, Amani, Identify, Jumio, Read ID

IN A NUTSHELL... WHAT IS



- Nuru-Tech leads a consortium of vendors that offer alternative solutions to global brands.
- Nuru-Tech introduces a portfolio of alternative successful, innovative competitive software companies to new markets.

➤ **Corporate success stories** in markets outside US/EU.

- Mature & robust products, designed to support large enterprises.
- Multiple references in large enterprises (Banking, Telco, Holdings, eCommerce, Insurance, Airlines, Govt., etc.).
- **Very competitive pricing vs. global brands.**

➤ **Collective market prospecting** with focus on **emerging markets**.

- More sensitive budgets.
- Need for solutions that work for on-premise as much as in Cloud, or do not push for Cloud adoption.
- Looking for virtuous **partnerships** promoting local service providers.

ABOUT MYSELF



➤ Emmanuel Steins

- Almost 25 years of consultancy experience.
- Work experience on 4 continents.
- Development, Analysis, PMO, System Integration, Transformation, IT Strategy, CIO Advisory.
- Founder & Managing Director of Nuru-Tech.
- Current base: Turkey & Germany.

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Don't worry about taking notes: you will receive the deck afterwards

OPERATIONAL DETAILS

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 - For higher efficiency, **pls. provide details about your points of interest.**
- ## ➤ Ask for an overview of the products & a meeting with the vendor(s).
- ## ➤ Discover the catalogue online & drill down for more information:
- www.nuru-tech.com
 - **LinkedIn:** [nuru-tech](https://www.linkedin.com/company/nuru-tech)



Nuru-Tech helps enterprises to reduce their IT costs.

As a consortium of vendors from outside of the EU/US, Nuru-Tech supports best-of-breed solutions from challengers to global brands, with unmatched price/quality ratio.

We put you in direct contact with the vendor, for the right product.

*... **No** commitment.*

*... **No** charges.*

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Memberships:

- IHK (German Chamber of Commerce)
- AHK Turkey
- AHK South Africa



Deutsche Industrie- und Handelskammer für das südliche Afrika
Southern African-German Chamber of Commerce and Industry



Deutsch-Türkische Industrie- und Handelskammer
Alman-Türk Ticaret ve Sanayi Odası