



INTRODUCTION & OVERVIEW

NURU-TECH

IN A NUTSHELL... WHAT'S ALL ABOUT



- **Businesses** are *by nature* looking for innovative ways to... :
 - Further grow their market share, brand, customer satisfaction & profits.
 - Consolidate their business and reduce their exposure to risk, or address regulations.
 - Support & optimize their processes, operations, reduce costs and expenses.
- **Yet...** Advanced businesses do not often look at **corporate success stories** in markets outside US/EU.
 - Some markets in periphery have a rich base in innovative companies, pushed by a culture of **high customer service standards**.
 - Vendors in periphery markets have learned to succeed in a highly flexible, low-price and technologically competitive environment.
 - Regulated industries (especially: Telco & Banking) are subject to quasi identical requirements, therefore solutions are portable.
- **NURU-Tech creates a bridge between European businesses and non-EU/US software companies (B2B).**
- We compile and offer a **catalogue** of new products & platforms, from several vendors.
 - Mature & robust products, designed for large enterprises.
 - Multiple references and success stories in large enterprises (Banking, Telco, Holdings, eCommerce, Airlines, Public Services, etc.)
 - High coverage: products for all industries and all domains... and continuously growing.

**We offer alternatives options to meet business expectations about service, quality & performance,
... at very competitive price.**

THE BEST OF TWO WORLDS

NURU-Tech offers alternative ways to meet business needs about quality & performance

Products that fit:



- ✓ Niche knowledge
- ✓ Niche expertise
- ✓ Niche innovation



- ✓ High energy & commitment
- ✓ Very cost-effective
- ✓ No risk: Try & Buy...

Products that provide solutions for:

- Data mgmt. & privacy regulations,
- Fraud detection,
- RPA (Robotic Process Automation),
- Advanced Business Intelligence,
- Business process mgmt. & automation,
- Smart operations,
- Accelerated development,
- Digital transformation,
- ... *and many more counting...*

Multi-Sectors: *Banking, Insurance, Telco, Retail, Government Institutions...*

DOCUMENT STRUCTURE

- **Introduction**
- **Product Catalogue Sample**
- **Operational Details**

NURU-TECH



You wouldn't believe the jewels you could find... if only you were trying.

Nuru-Tech's aim is...:

- To offer **new, attractive & cost-effective products** to new markets, i.e. Europe.
 - All are tested and proven to be value-adding in major corporations.
 - Many are truly innovative and offer niche capabilities (i.e. have additional relevance to business/IT stakeholders).
 - Far better value-for-price vs. international products (i.e. in case a similar competitor product exists).

- To support the sales efforts of partner companies, which struggle to break the “glass ceiling” of international recognition, because...
 - Their engineering potential and quality is not recognized, or better: **not yet discovered**.
 - Partners in the program have weak sales organization, no presence abroad, no access to market.
 - There could be uncertainty about support when the product is not an international brand.

- Approach:
 - Find and **qualify suitable opportunities** and facilitate the steps leading to a fruitful exchange and deal.
 - Market through digital channels, network of institutions, as well as social networks.
 - Help by means of our Germany entity: local support, contracting and delivery
 - *Business communication in German, French, English.*
 - *Product expertise & documentation in English [default].*

NURU-TECH CATALOGUE

*The catalogue will keep growing...
Check it out time & again.*

➤ **Product Selection Criteria:**

- The products are already successful and have **serious** references in Turkey.
- They have a clear business case and/or address clear business use cases/pain points.
- They score high in terms of innovative idea/quality/technologies used.
- They typically require minimal effort for a PoC or trial.
- Some vendors may offer niche consultancy services, next to products.

- Done it before.
- No bad surprises.
- Time & cost reduction.



- Highly dynamic organizations.
- Wide expertise available to support
- Insight from a very competitive market

VALUE PROPOSITION

In average: achieve at least 50%! cost savings vs. international brands, for equal capabilities and better service.

- **Smart alliance** between flexibility & quality.
 - High commitment to customer satisfaction.
 - Higher flexibility, higher availability, more elasticity & readiness to support informally.
 - Result-oriented: fast adaptation to new requirements, and quick integration of enhancements.

- Very competitive pricing, by international standards, thereby adding value to customer.
 - Mature products, typically with little or no need for post-sales professional service support.

- Proven **success stories** in major corporations.
 - ... and from within a highly competitive market with a very high customer Service benchmark.

- Nothing to loose: **“Try & Buy” supported** where possible.

- Successful working experience and mutual trust between vendors & Nuru-Tech.

- Make better use of **YOUR** resources & time... both are too valuable.
 - Use them as consultants, leveraging tools and communicating actionable output... Not for development.
 - Score points with your customers, with innovative ideas & through competitive offerings.



HOW DOES IT WORK?

- Nuru-Tech is not a reseller: it is a **match maker**.
- Nuru-Tech creates the opportunity and relates the customer/consultancy with the vendor.
 - **No** charges for this service (instead: a light referral fee will be charged to vendor upon successful sales).
 - Provide additional product information and vendor contact details [... to customer].
 - Provide context information, and facilitate communication, for more efficient response to inquiries [... to vendor].
- Nuru-Tech is interested in a **win-win outcome**: we will accompany the opportunity and help it succeed.
 - Assist in follow-up and home-works, throughout the sales cycle.
 - Assist in communication, meetings, make sure the message passes both ways.
 - Assist in reviews & renewals, etc.
- Nuru-Tech is keen on **transparency** and trusted relationships.
 - We can be intermediary, i.e. support/sales is possible over Nuru-Tech's German entity...
 - ... But only if useful to both parties, and even so: it should not eclipse direct relationship with vendor.
- Nuru-Tech can support with consultancy & delivery support where required.
 - Optional support, both related and unrelated to catalogue items (on-demand only).
 - Additional consultancy, sourcing & outsourcing, as well as delivery services in IT Mgmt. (see next slide).



NURU-TECH'S OWN *ADDITIONAL* SERVICES

... not directly related to the catalogue.

➤ **We can respond to a wide range of needs:**

- IT management consulting.
- Mediation of **individual technical specialists**, i.e. developers/analysts, for **injection** or into existing teams – based on demand.
- BSS-side digital transformation & system integration – predominantly in CRM-OM / PRM / BI.
 - Mediation/Sourcing of projects, with deep reaching network of capable partners in Turkey (incl. outsourcing, if required).
- Project/Program management & PMO, on behalf of customers and/or on behalf of vendor.

➤ **We also offer a wide range of consultancy/SI services (including some in German):**

- Implementation of IT management processes & standards (ITIL, COBIT, SOX, IT Security, etc.).
- **Maturity assessments** in BI, IT & PMO, IT governance, IT compliance.
- Audit consultancy (including remediation of findings), e.g. IT service management, supplier/provider steering.
- Enterprise Architecture (EA).
- Business Intelligence (“Classic” DW, Advanced Analytics, Big Data-based technologies, AI/ML).

DOCUMENT STRUCTURE

- **Introduction**
- **Product Catalogue**
- **Operational Details**

HOW TO READ THE CATALOGUE?



- The catalogue assumes one is searching with a purpose, i.e. for a solution to a pain-point.
- **Starting off from your industry & domain...** (Note: some products are valid across industries)

APPLICABLE INDUSTRY: (Note: a product can be applicable to multiple industries at once, or even all)

DOMAIN:

SUB-DOMAIN:

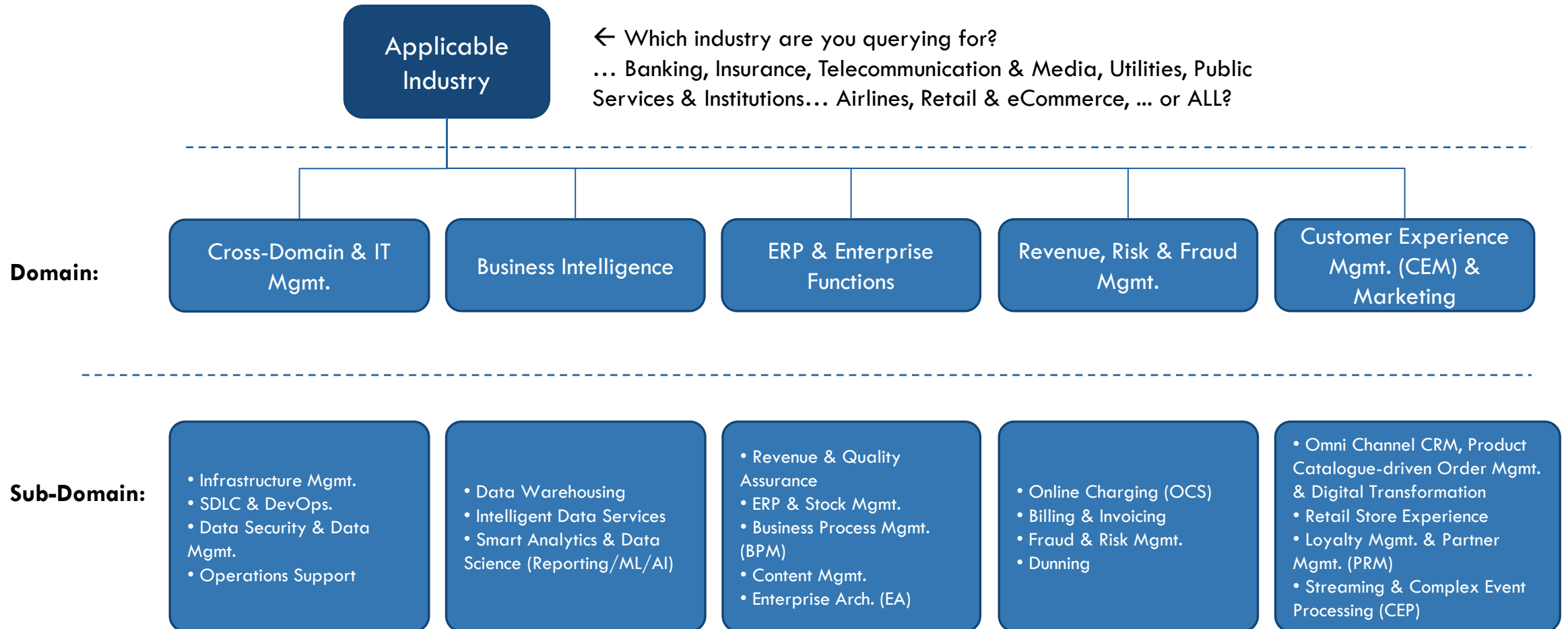
- The following info can be seen for first scanning:

Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References in Turkey
A short heads-up about what this product does, very high-level.	Puts the product in business context, i.e. in what kind of situation it fits, thereby helping to better assess its potential match.	Names the major competitor product from international markets and global brands (if any). If <i>none</i> , it implies the product is truly innovative...	Reference to Turkish success stories, often major corporations.

- More information can be provided on request, for every product:
 - Detailed description, key features & differentiators, comments on configuration & installation, pricing scheme, etc.
 - Product & vendor name & contact details.
 - More product material...
- ... Information and assistance for further steps, free of charge & commitment.**

SITE MAP... FINDING THE RIGHT SECTION

(Possibly subject to change, as the Catalogue evolves)



DOCUMENT STRUCTURE

Interested?

Nuru-Tech provides you with more info & material...

- **Introduction**
- **Product Catalogue: Products applicable to...**
 - Applicable **across all** industries
 - Restricted to some industries
 - Banking
 - Insurance & Law
 - Telecommunication, Media & Technology
 - Utilities & Production Industry
 - Public Services & Institutions
 - Airline, Retail, Logistics & eCommerce
- **Operational Details**

"DWH PROJECTS ARE AN ENDLESS LOOP OF CODE WRITING, KEEPING QUALITY STANDARDS, CHANGE, AND CODE RE-WRITING AGAIN." (CIO)

DOMAIN: BUSINESS INTELLIGENCE
SUB-DOMAIN: DATA WAREHOUSING



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>An ODI code generator, working from any given transformation script written in SQL.</p> <p>The output code is machine-generated, standardized, has expert developer grade, and is being generated within seconds... allowing for instantaneous review and test.</p> <p>The tool also auto-generates documentation.</p> <p>Ref. ID: A14</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • DWH projects are lengthy and expensive. This tool reduces development time to a fraction of what it used to be, and thereby also reduces overall delivery time. • There is too much focus on development and too little on analysis, therefore there is often plenty of rework. • The ETL architecture is complex and sensitive to quality variations, adding risks to maintenance, operations, SLA's. • It is difficult/expensive to find competent resources in ODI, and to retain them. • This tool helps in avoiding a degradation of standards throughout the solution life-cycle time, especially with high resource turn-over. • Documentation gets outdated quickly... there is a need for auto-documentation as well as integration with modelling tools (e.g. Power Designer). • The tool also provides clarity about testing scope and guidelines, i.e. methodology alignment, e.g. what is the reference basis for test results? • Similarly, clear lines are drawn about input/output, roles and & responsibilities of the business analyst, tester, and developer. • The SQL code is the output of the Analysis effort, and input to starting the development work. A validated SQL statement is one that demonstrates that the mapping and transformation is in principle meeting the business requirement... pending its realization in an ETL tool and in-line with the ETL architecture guidelines! <p>It can be used in the following situations:</p> <ul style="list-style-type: none"> • Development of an entire new DWH from scratch. • Development of new DWH modules and new requirements. • Architecture review of an existing DWH solution and streamlining on its standards. • Migration, e.g. from ODI 11g to ODI 12c. • Migration from an other ETL tool to ODI 12c (provided the other tool can generate standard SQL from its own code). 	<p>None (!)</p>	<ul style="list-style-type: none"> • Turkcell (since 2019) • Is Bankasi (since 2020) • Garanti BBVA (since 2020) • Ziraat Bankasi (PoC completed) • Odeabank (PoC completed) • SBM (PoC completed) • *** Cannot be disclosed ***

To consider in any project or maintenance effort featuring ETL development (ODI).

"THE FIRST THING I WONDER WHEN I GET A REPORT IS WHETHER THE DATA IS CORRECT." (CXO)

DOMAIN: CROSS-DOMAIN & IT MGMT.
 SUB-DOMAIN (1): DATA SECURITY & DATA MGMT.
 SUB-DOMAIN (2): OPERATIONS SUPPORT



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>A tool that identifies data inconsistencies, i.e. detects anomalies and triggers alerts, according to predefined thresholds and business rules.</p> <p>It monitors values and trends in data exchange between multiple sources and can execute a vast number of different types of controls.</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Recurring issues in report reconciliation (e.g. financial reports), or issues recognized late in data consistency and completeness... especially in CXO reports. • Lots of information getting stored and transferred during daily operations in all business areas. Large organization struggle with the handling and controlling of large amounts of diverse data, even more so when it is being transformed and the same information is replicated in different systems for various purposes. These anomalies may have following impacts on business: <ul style="list-style-type: none"> ◦ Billing & reporting problems because of duplicated, outdated, or corrupted data. ◦ Customer trust issues because of miscalculations or missing/incomplete data. ◦ ... and many more, on both transactional side and business intelligence. • The tool enables data accountability and mandates data quality verification, upon detecting of anomalies or inconsistencies, and possibly driving auto correction. It helps formulating data quality and data governance standards. • As a simple but robust IT tool, it addresses a need often missing in operations: <ul style="list-style-type: none"> ◦ Creating alerts to prevent bad experiences. ◦ Easy operations, e.g. making easy visual data consistency rules and check results. • Thereby, it helps getting rid of manual code, or SQL scripts, for each control, and provides a single platform from which all controls can be designed and executed. • This tool can also be used to verify consistency of complex order entry, e.g. in a complex enterprise when multiple sources are required to contribute to an order. • It is also very suitable in big migration projects, both for testing structures and consistencies and for quality assurance of the data migration itself... all with same license and tool. • By including multiple parties in escalating warnings/issues early on, it reduces IT's bottleneck effect when investigating urgent issues... often too little, too late. 	<ul style="list-style-type: none"> • QuerySurge • Informatica Data Quality 	<ul style="list-style-type: none"> • ING Bank (since 2014) • Akbank (since 2014) • Fibabanka (since 2019) • Turkcell Superonline (since 2014) • Türk Telekom (since 2017) • Vodafone TR – Expected. • Etisalat – Expected.

To consider in any organization that integrates critical data on regular basis, and needs embedded controls and alarm mechanisms for quality assurance.

"BUSINESS CANNOT SECURELY ACCESS AND MANAGE ITS OWN DATA: IT'S ALL IN EXCEL! UNFORTUNATELY EVERY REQUEST, NO MATTER HOW SIMPLE, HAS TO GO THROUGH IT..." (CIO, CHRO, CSO)

DOMAIN: CROSS-DOMAIN & IT MGMT.
 SUB-DOMAIN (1): DATA SECURITY & DATA MGMT.
 SUB-DOMAIN (2): OPERATIONS SUPPORT



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>A tool that enables business users to prepare and manage its data assets, in particular reference data & lookups.</p> <p>It manages and controls access to reference data deep inside IT data systems, makes abstraction of technology layers and data models.</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Quickly addresses inconsistencies or gaps in reports: missing, unreferenced or nameless reference data can be quickly corrected. The latency in defining reference data (such as tariff code, reseller id, branch id, etc.) in ERP systems can be bridged, e.g. while the transaction data is already in DWH system. • Any known data problem on the source system may take a long time to correct which means the reports will show incorrect data until the issue is resolved. • Some information may not be kept in any enterprise systems and are subject to manual entry (e.g. sales quotas and targets, score cards, list of leads, results of surveys, etc.). <ul style="list-style-type: none"> ◦ This info is typically kept on Excel "somewhere", thus also liable to data security and protection issues or losses. ◦ Their manipulation is error-prone: changes should be approvable and tracked. ◦ There are issues with authoring and control ("who has the latest version"). • The hierarchy on which the enterprise reporting is based is often built on the financial reporting criteria, or on organization hierarchies as integrated from HR systems. However, departments such as Sales or Marketing may have different hierarchies which they want to use when viewing their reports. These should be edited easily. • Business/IT Units do not need to have technical skills or specific knowledge of the data model and can manage their data through an easy-to-use interface to the database. • All transactions by all users happen through a single centralizing platform: all transactions are enabled, controlled, verified and logged following the same processes and standards. 	<ul style="list-style-type: none"> • Apparo Fast Edit 	<ul style="list-style-type: none"> • ING Bank (since 2020) • Vodafone (since 2020)

To consider in any organization that wants to hand over control to business to manage its own reference data and lookups.

Ref. ID: A9

"PROCESSING DATA STREAMS AND REAL TIME EVENTS IS ALL GOOD AND EXCITING,
BUT ROI, TIME-TO-MARKET AND COMPLEX BUSINESS
SCENARIOS ARE STILL AN ISSUE." (CMO)

DOMAIN: CUSTOMER EXPERIENCE MGMT. & MARKETING
SUB-DOMAIN: STREAMING & COMPLEX EVENT PROCESSING (CEP)



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>A tool with powerful and flexible stream-processing capabilities to capture and act on real-time events.</p> <p>The fastest way from idea to implementation: it was designed from ground-up for business users, with minimum dependency on IT. Its visual and user-friendly interface allows designers to conceptualize and release new scenarios quickly, exploiting new opportunities and prevent threats.</p> <p>The implementation life cycle counts in days or weeks, rather than months.</p> <div data-bbox="30 1100 555 1339" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>To consider in any organization that wants to implement scenarios triggered from real-time data across the enterprise.</i></p> </div> <p>Ref. ID: A10</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Supports the vision of a continuous intelligence platform and customer journey orchestration: <ul style="list-style-type: none"> ◦ Real time event processing capabilities. ◦ Real time visualization and dashboarding. ◦ Possibility of integration with intelligent processing and machine learning. • High maturity and reach: <ul style="list-style-type: none"> ◦ A very large amount of scenarios have already been implemented in areas such as real-time marketing, customer experience mgmt., real time fraud mgmt., etc. ◦ Preventive maintenance: suitable in industries providing equipment and maintenance services. ◦ Customer support: proactively inform customer services of events affecting quality of service, and anticipate preparations required to compensate failures. ◦ ... and many more: data and business insight can be monetized through the implementation of almost any scenario. • The tool has the ability to sustain short time-to-market after first delivery, i.e. through its intuitive and easy-to-use editors. • To further accelerate ROI, it comes with a set of ready scenario in several business areas (e.g. marketing and fraud mgmt., for banking, telco operators and e-commerce). • Adaptability to any business situation and need: <ul style="list-style-type: none"> ◦ It features 2 scenario editors: (1) Eclipse RCP to design complex scenarios, and (2) web-text based scenario editor for business users and easier scenarios. ◦ Actions: being one of the core components of the platform, a rich set of out-of-the-box actions can be extended easily. ◦ Vendor has the ability & flexibility to support with non-standard listeners. • All-in-one platform, from listener to action: all scenarios can be entirely modelled, E2E, i.e. on one single tool supporting the whole enterprise. 	<ul style="list-style-type: none"> • IBM Infostreams • Tibco Streambase • SAP ESP • Software AG Apama • Pegasystems 	<ul style="list-style-type: none"> • Akbank (since 2017) • Carrefour (since 2016) • Dogus Teknoloji (since 2016) • Garanti BBVA (since 2018) • ING (since 2018) • Is Bankasi (since 2013) • Pegasus (since 2018) • TEB (since 2014) • Türk Telekom (since 2015) • Turkcell (since 2016) • Vakifbank (since 2014) • Vodafone TR (since 2016) • Yapi Kredi (since 2015) • Millenicom (since 2016) • ... <p>International:</p> <ul style="list-style-type: none"> • Raiffeisen RU (since 2018) • T-Mobile (since 2017) • MTS (since 2017) • LCW (since 2020) • Vodafone UKR (since 2017) • Unibank (since 2018) • Home Credit (since 2018) • ...

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

"ANY EASY TOOL TO HELP WITH ARCHIVING DATA FROM DATABASES? OR SECURING DATA AS IT MOVES TO CLOUD? ...ANYTHING BETTER THAN SCRIPTS!" (COO)

DOMAIN: CROSS-DOMAIN & IT MGMT.
SUB-DOMAIN: DATA SECURITY & DATA MGMT.



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References
<p>A tool for test data mgmt., purging or migration – including between different technology platforms.</p> <p>It copies data from between environments (e.g. "production" to "test"), while applying rule-based masking of sensitive data.</p> <p>Both full extraction and data sampling are supported.</p> <p>Consistency is preserved, by starting from a given table or from sample records, then deriving all explicitly or logically related records.</p> <p>It can also synthesize new data (columns or records), for test purposes, based on given patterns and rules.</p> <p>Ref. ID: A2</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Reduces complex and time-consuming tasks in the identification/creation/generation of test data inside of IT organizations, which increases exponentially with the number of data systems involved in testing, and the data integration between these systems. • Reduces time & cost of critical resources to define & extract suitable test data (e.g. DBA's, Senior Testers & Developers), as well as execution time: <ul style="list-style-type: none"> ◦ It eliminates the need for complex scripts and additional maintenance effort. ◦ Its jobs are repeatable towards multiple environments, truncate & recreate on-demand (e.g. for Agile teams). ◦ Can also be used as archiving tool. • Data/Information Security: any additional privacy can be achieved according to any masking/scrambling rule, and for any of the data that is being copied, which can be table-to-table or the result of queries, or schema to schema. More data can also be synthesized (i.e. generated). • This tool provides a repeatable & reliable approach on how to apply systematically restrictions related to data privacy and security, for data replication scenarios and/or access to production data (See also GDPR, DSGVO, SOX, GLBA, PCI DSS, HIPAA, FIPA, KVKK & BDKK compliance requirements). • Operations support: use this tool also for ad-hoc analysis of production data, for operational purposes – not only for testing: one-time securing of data on a production system with in-line masking (e.g. for hot analysis of production issues). • Integration with ODI (in case ODI was used to create test environments): reading the ODI jobs and importing them automatically (i.e. a time saver to organization managing their environment with ODI). • HW costs savings by working with reduced data sets (consistent samples of data), yet still guaranteeing consistency and meaningfulness of data, in multiple environments. 	<ul style="list-style-type: none"> • Informatica TDM • IBM Optim (while also being compatible with other IBM Products) • Microfocus SDM • Oracle Data Masking Pack • CA TDM • SAP TDMS 	<p>Turkey</p> <ul style="list-style-type: none"> • Turkcell (since 2011) • Türk Telekom (since 2017) • THY (since 2017) • BKM (Banking Authority) (Since 2017) • QNB Finansbank (since 2019) <p>International:</p> <ul style="list-style-type: none"> • Prior Bank (Since 2013) <div data-bbox="1760 1065 2461 1276" style="border: 1px solid black; padding: 10px; margin-top: 20px;"> <p><i>To consider in large organizations struggling with the mgmt. of their test data, or with purging, archiving & migration, and with the handling of its sensitive content.</i></p> </div>

"WHO CAN GUARANTEE THAT MY SENSITIVE DATA ARE PROTECTED AND SECURED, IN ONE SINGLE SHOT, NO MATTER WHO OR WHAT QUERIES IT?" (CTO)

DOMAIN: CROSS-DOMAIN & IT MGMT.
SUB-DOMAIN: DATA SECURITY & DATA MGMT.



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>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.</p> <p>It is placed between any client application and any given database, with high availability, and at no impact to any client or user.</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Large organizations must secure their sensitive data, as they are being accessed and queried from many different sources and users at once (both via applications as well as SQL editors). • All data protection and security is handled at once, from a single application, for all possible users and clients of a database. • It addresses the need to consistently handle data security for its internal staff as well as for external consultants, according to business rules that apply different levels of access controls (i.e. different types of masking/hiding) to different user roles. • Manageability: all database access and scenarios are controlled from a single point. • Reduces role of the DBA as a player involved in the control of whether sensitive data is being accessed, both allowing him/her to focus on managing the database instead, rather than auditing or managing the exposure of data. • Dynamic adaptation of rules applies not only to user role, but also the querying medium (e.g. query originating from Siebel vs. from a Toad client, or from HQ offices vs. from a Branch), thereby providing a lot of differentiating flexibility to adapt to any business need. • Provides a comprehensive approach on how to apply systematically restrictions related to data privacy and security (See also GDPR, DSGVO, SOX, GLBA, PCI DSS, HIPAA, FIPA, KVKK & BDKK compliance requirements). • Consistently applies the same rules and controls towards operations, i.e. by also controlling data shown to operations staff, i.e. in their manual and direct operations on database-level. 	<ul style="list-style-type: none"> • Informatica DDM • IBM Guardium • Oracle Data Reduction 	<ul style="list-style-type: none"> • Vodafone (since 2017) • Is Bankasi (since 2016) • QNB Finansbank (since 2018) • Turkcell (since 2020)

To consider in large organizations looking for a catch-all solution to manage live access to sensitive data.

"I HAVE TOO MANY DATABASES. MY DBA'S SPEND 80% OF THEIR TIME MANAGING THE CONSISTENCY OF DATA ACCESS AND PRIVILEGES FOR ALL USERS." (CTO)

DOMAIN: CROSS-DOMAIN & IT MGMT.
 SUB-DOMAIN (1): DATA SECURITY & DATA MGMT.
 SUB-DOMAIN (2): OPERATIONS SUPPORT



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>A centralized tool for database access control, managing any application/user access and access privileges to any database, dynamically, upon every new database session.</p> <p>By doing so, it effectively implements data mgmt. & data access policies of an organization, and hands-over control to data owners, away from DBA's.</p> <p>The tool works in high availability mode. There is no performance drop to any client or user.</p> <p>Ref. ID: A5</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Large organizations must secure and organize/control access to their data, by means of a defined data ownership structure and data access approval processes, then by effectively fulfilling the requests and applying those controls. The more complex the organization and the more data is distributed in multiple systems, the more this information becomes extremely tedious and complex to assess or compile. • Eventually, this tool controls and report at all times any decision about data access: who does what, why, when, how, for how long – e.g. through what application, for what purpose, and by whose authorization (See also GDPR, DSGVO, SOX, GLBA, PCI DSS, HIPAA, FIPA, KVKK & BDKK compliance requirements). • It removes the DBA as the low-level player usually charged with the responsibility of granting data access and privileges, often without proper control, and although he/she most likely lacks sufficient judgement & competence to decide. <p>This allows him/her to focus on managing the database, rather than managing users:</p> <ul style="list-style-type: none"> o The tool owns and determines data access rules, then automates and enforces access control for any upcoming connection request – rather than requiring explicit calls and coordination between requester, approver and DBA. o Proactive control helps getting rid of repetitive scripts and queries crawling user lists, metadata and logs for verification. o It also implements database user activity mgmt., by keeping all access logs, as well as all access request logs, and supports auditing and reporting over it. <ul style="list-style-type: none"> • Fundamentally, this tool manages access on data owner level, not DBA level: it enables the highest maturity in data mgmt. & data security policies, i.e. based on explicit access granted by explicit data owner, after approval process, and for a time-limited period (with refresh option). 	<p>None (!)</p>	<ul style="list-style-type: none"> • Is Bankasi (since 2018) <div data-bbox="1854 631 2517 896" style="border: 1px solid blue; padding: 10px; margin: 10px 0;"> <p><i>To consider in large & complex organizations in which data access policies and their enforcement are of critical importance, and in which size prevents effective solutions..</i></p> </div> <div data-bbox="1778 1059 2451 1382" style="border: 1px solid blue; padding: 10px; margin: 10px 0;"> <p>Note: A first implementation will require a review of current access rights and already identify many redundancies, unnecessary privileges and users, thereby already contribute to a major reduction in data exposure from the very beginning.</p> </div>

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

DOMAIN: CROSS-DOMAIN & IT MGMT.
SUB-DOMAIN: DATA SECURITY & DATA MGMT.



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>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 into connected client PC's and their clipboard!</p> <p>For the special case of security threats in unstructured data, it can also apply masking/blurring on the fly, and prevent leaks.</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Large organizations may be challenged in understanding where they store sensitive data that is subject to special regulation and/or internal security: <ul style="list-style-type: none"> ◦ In structured data, scanning any connected database (RDBMS). ◦ In unstructured data (i.e. any data not stored on RDBMS), whether on file systems, HDFS, or even [personal] client computers, as well as for any file type – e.g. text files (xml, txt, json, etc.), office documents, images (.jpeg, .png, etc.), pdf. • As such, this tool is instrumental to the baselining and implementation of an organization's data security framework (See also GDPR, DSGVO, SOX, GLBA, PCI DSS, HIPAA, FIPA, KVKK & BDKK compliance requirements). • It helps organizations to first define which data is "sensitive", then understand whether they have any, and where it is being stored... in order to take both controlling and securing actions thereafter, in both transactional and BI environments. • It does so not only by looking at meta data (i.e. based on interpretation of column names), but also by looking at the data itself, and in multiple locations – up to inside client computers. • A number of actions can be triggered upon finding matching data, turning it not only into a tool for reporting, but also operations. • Masking can be applied in real-time on unstructured data, i.e. upon having been identified as sensitive – thus taking immediate preventive actions against leaks. • With the help of this tool, organizations can continuously re-assess their risks and exposure, as their IT ecosystem evolves, and enforce control over what sensitive information is being replicated on client computers – eventually also allowing intrusive action to secure it in real-time. • A number of actions can be triggered upon finding matching data, turning it not only into a tool for reporting, but also operations. 	<ul style="list-style-type: none"> • IBM Guardium • Informatica TDM • Microfocus SDM • Microfocus TDM (minor overlap) 	<ul style="list-style-type: none"> • Is Bankasi (since 2019) • QNB Finansbank (since 2019) • THY (since 2018) • Ziraat Katılım Bankasi (since 2019) • Ziraat Technology (since 2020) • Ziraat Bank (since 2020) • Turkcell (since 2017) • IBTech (technology company of Deniz Bank) (since 2018) • Turkiye Finans (since 2020)

To consider in large & complex organizations, where uncertainty prevails about the whereabouts of sensitive data, and where help is needed in managing their spread.

“MY DATABASE CONNECTION DETAILS ARE KEPT IN EVERY CLIENT, INSTALLED ON EVERY PC. YOU CALL THIS SECURE?” (COO)

“MY OPEX IS STILL TOO HIGH - REDUCE IT MORE, EVEN IF BY 50K.” (COO)

DOMAIN: CROSS-DOMAIN & IT MGMT.
 SUB-DOMAIN (1): DATA SECURITY & DATA MGMT.
 SUB-DOMAIN (2): OPERATIONS SUPPORT



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>An SQL query editor software (TOAD-like), but web-based: the effect is savings in license and desktop support/DBA time, as well as in enhanced security.</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Large organizations must install and manage SQL editors on every client PC: <ul style="list-style-type: none"> ◦ This is a bottleneck and generates continuous costs in IT desktop support (e.g. installing database agent, client application, set parameters & complete configuration). ◦ Assets must be managed for new/moving/leaving users, etc. ◦ Inventories must be updated: licenses are usually by number of installed users and admins (i.e. on PC-basis): these constraints are being evaded, by providing a single tool for all users. • Cost savings in licenses as well as in operations. • Very easy handling of access towards external consultants, since no installation is required on their PC. • DBA's regularly update the system: if any IP or service name is changed, all clients would have to be updated. Henceforth this would be done in a central place, once for all. • A centralized platform allows some security measures to be applied, such as hiding connection parameters, thus heighten control of database access (i.e. who is supposed to access what database). 	<p>None (!)</p>	<ul style="list-style-type: none"> • Is Bankasi (since 2017) • Dogus Teknoloji (since 2019) • Anadolu Sigorta (since 2019)

To consider in order to ease the day-to-day load of desktop support & DBA's, and reduce costs.

Ref. ID: A3

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

“I AM SPENDING MILLIONS ON LICENSES FOR GLOBAL BRANDED PRODUCTS, EVERY YEAR. GIVE ME AN ALTERNATIVE!” (CTO)

DOMAIN: CROSS-DOMAIN & IT MGMT.
SUB-DOMAIN: DATA SECURITY & DATA MGMT.



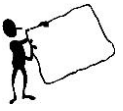
Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>A tool that monitors ALL database user activities (especially including DBA's), securely logs them (safe from malicious editing), and provides flexible reporting and alarms over them.</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Essentially defines itself as an alternative to IBM Guardium with equivalent capabilities and purpose, but at significantly more affordable price. • Large organizations need a central AND secure place in which ALL activities related to a given database are being logged, by any possible users, including those have privileged, direct or root access to the system. • This tool closes the security loophole given by DBA's themselves, i.e. securely logs EVERYONE's transactions without exception and work-around • By doing so, it also addresses a security need in the organization's data security framework (See also GDPR, DSGVO, SOX, GLBA, PCI DSS, HIPAA, FIPA, KVKK & BDKK compliance requirements). • It performs detailed database user activity monitoring and has both a session and an SQL transaction logger. • It can trigger action upon the violation of some business rules (e.g. alarms, messages, or other...). • It has an enhanced built-in reporting infrastructure, for legal or company-internal reporting. <ul style="list-style-type: none"> ◦ About 80+ pre-defined reports (most frequently required). ◦ Ability to define and design additional ones. 	<ul style="list-style-type: none"> • IBM Guardium • Imperva • Oracle Vault 	<ul style="list-style-type: none"> • Is Bankasi (since 2019) • Turkcell (successful PoC)

To consider in order to address the strictest regulations about transactions logging on a database.

Ref. ID: A1

"BUSINESS AND IT DON'T MEAN THE SAME THINGS WHEN THEY TALK: EVERYONE HAS A DIFFERENT INTERPRETATION OF WHAT DEFINES AN ENTITY." (CDO)

DOMAIN: CROSS-DOMAIN & IT MGMT.
 SUB-DOMAIN (1): DATA SECURITY & DATA MGMT.
 SUB-DOMAIN (2): ENTERPRISE ARCHITECTURE.



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>A tool that helps defining and managing data across the enterprise, scanning and discovering physical data elements in IT systems, and unifying them under a single business glossary.</p> <p>It matches physical data elements of various degrees of granularity with their logical counterparts in the glossary, thereby also defining owners as well as other characteristics.</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Large organizations need a central dictionary, unifying the definition and attributes of all data and their occurrences across the enterprise. <ul style="list-style-type: none"> ◦ Treats and models data as an asset (information architecture). ◦ Specifies general characteristics and policies on data, no matter where they are implemented. ◦ Records an explicit link between business semantics and data records in IT, i.e. data in their various forms of implementation and locations. • Answers the questions: <ul style="list-style-type: none"> ◦ What do I have, where, how often, related to what and whom, consumed by whom? ◦ Provides the answers on business level, and for all data, not only "sensitive ones". • A systematic build-up of the glossary can be pursued, e.g.: <ul style="list-style-type: none"> ◦ Proceed iteratively in concentric circles: domain > database -> schema -> table -> column, allowing for a maturity build-up, i.e. capturing enterprise meta data with ever more fine-grained detail. ◦ Starting with documenting sensitive data: apply known definitions and harvest results... then repeat on other data topics. • Maps business concepts to technical assets. <ul style="list-style-type: none"> ◦ Business and technical teams are bound by a common language, or "translation". ◦ Provides unique business definition of sometimes ambiguously defined concepts. ◦ Gives an explicit link to where any business data is distributed/implemented physically, on entity and attribute-level, as well as in which database, schema and domain. • It is a building block in an organization's data security framework (See also GDPR, DSGVO, SOX, GLBA, PCI DSS, HIPAA, FIPA, KVKK & BDKK compliance requirements), enabling proper data mgmt. by determining data owners and providing a platform through which data can be easily defined, related and looked-up. 	<ul style="list-style-type: none"> • IBM InfoSphere Information Governance Catalog • Microsoft Data Catalog • Informatica Enterprise Data Catalog • Abinitio Metadata Hub 	<ul style="list-style-type: none"> • Is Bankasi (PoC ongoing) • Turkcell (PoC ongoing)

To consider when there is a need to create a common dictionary of business terms and entities, and document the mapping to their actual location(s) in IT systems.

"BPM TOOLS ARE NOT AGILE. CHANGES OR NEW PROCESSES ARE STILL SLOW TO IMPLEMENT & RELEASE... AND IT IS NEVER IT'S PRIORITY." (CHRO, CSO, CFO)

DOMAIN: ERP & ENTERPRISE FUNCTIONS.
SUB-DOMAIN: BUSINESS PROCESS MGMT. (BPM)



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References
<p>A business process mgmt. software platform (BPM) implementing complex business processes, and supporting process transformation into a fully digitalized and automated corporate environment. That includes also ITSM and other support functions.</p> <p>It is renowned for its surprisingly easy design- and release capabilities, allowing for agile implementation and very low IT dependency.</p> <div data-bbox="25 992 547 1213" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>To consider in any digital transformation, improvement in business process mgmt., or business process automation.</i></p> </div> <p>Ref. ID: A12</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • It enables medium- and large-scale organizations to design and deploy unlimited processes that seamlessly interconnect people and systems, at low cost of time and resources. • Design of new processes (or enhancing existing ones) don't require vendor or IT support, thanks to its intuitive and ease of use, both in design and deployment. • Process improvements: every company, once it reaches a certain size (> 50 employees), has business processes which need to be conceptualized, designed, and eventually managed. This BPM platform helps achieving this as digital platform. <ul style="list-style-type: none"> ◦ Works literally as designed (i.e. as visualized in a designed flow). ◦ Supports process analysis (bottleneck analysis). ◦ Promotes proactive interactions – replaces emails to track & manage business. ◦ Streamlines and accelerates processes and removes paperwork. • New versions can be released instantaneously and informally, without breaking the consistency and execution flow of old running ones. • Collaboration: <ul style="list-style-type: none"> ◦ Social networking: supports document sharing & messaging, interactive group conversations, video calls for co-working in remote operations. ◦ All-in-one platform: it supports open communication & messaging. • All records of communication are preserved on this single platform. • Compliance, Safety & Security: <ul style="list-style-type: none"> ◦ Secure Data Sharing. ◦ Keeps all logs and traces. ◦ Built-in warnings. • Supports access-protected document repository, i.e. only through the platform, with meta-data search or full text search support and supports the document life cycle through integration with a document archiving/mgmt. system. 	<ul style="list-style-type: none"> • Pega • Appian • Bizagi • IBM BPM • Signavio • BonitaSoft • Creatio • Flowwright • ServiceNow • Eba • Paperwork 	<p>Turkey:</p> <ul style="list-style-type: none"> • BNP / TEB (since 2016) • Vakifbank (since 2014) • ETS Tur (since 2019) • Ülker Group (since 2014) • Borusan Enbw (since 2019) • Aegon (since 2015) • Katilim Emeklilik (since 2015) • Bilgi University (since 2019) • Sysmex (since 2016) • Eczacibasi ESAN (since 2013) • Ünlü & Co (since 2019) • Emeklilik Gözetim Merkezi, incl. 18 pension fund companies (since 2018) • A101 (since 2015) • QNB Finansbank (since 2019) • Tuborg (since 2020) • ... <p>International:</p> <ul style="list-style-type: none"> • Pladis/UB (since 2017) • Kiltoprak Trust (since 2017) • TMF Group (since 2015)

"WHEN DOING BACKGROUND CHECKS ON ANY OTHER COMPANY, THE FIRST THING TO DO IS TRY GATHER REGISTRATION INFO AND OTHER PUBLIC DATA... UNFORTUNATELY OFTEN VERY FRUSTRATING AND VAIN." (CRO)

DOMAIN: BUSINESS INTELLIGENCE
SUB-DOMAIN: INTELLIGENT DATA SERVICES



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>“KYC as a Service for B2B businesses”: a machine learning, web-based intelligence suite that provides market intelligence about other companies, e.g. competitors, affiliated businesses, suppliers, B2B customers, franchises, etc., by:</p> <ul style="list-style-type: none"> • querying and tracking companies or individuals, i.e. as per information kept in government institutions and available in public announcements. • crawling public information, interpreting news, and assessing their digital presence. <p>In doing so, it flags and provides first assessments about the health and risks of other businesses.</p> <p>Ref. ID: A16</p>	<p>The following features and advantages should be noted:</p> <ul style="list-style-type: none"> • Unique in the market, at this level of complexity and coverage: the output makes use of data and machine learning techniques to produce a unique result. • All information it compiles is entirely based on public information, starting with the formal national registry of commerce, but also including scores of other data available online – international, national and regional. • The tool supports ad-hoc search as well as provides information about risks associated to a given portfolio, daily...: <ul style="list-style-type: none"> ◦ Alerts & warnings from a rich set of public government sources. ◦ Alerts & warnings from checking the company’s digital presence in the internet. ◦ Extractions from public/online news: more than 920 news outlets(!). • News hunting provides a range of options to improve accuracy and insight. <ul style="list-style-type: none"> ◦ Search for news related to companies listed in a portfolio & associated keyword(s). ◦ Financial sentiment analysis (positive/negative), i.e. news analysis in financial terms. • Further features and modules: <ul style="list-style-type: none"> ◦ Module predicting likely fraudulent merchant (i.e. POS machines owners). ◦ Module for license plate search in news (financial/insurance fraud related to cars). ◦ Balance sheets scoring (risk score), performed on given/uploaded balance sheets. ◦ Shareholder overview: distribution “pie-chart” (beta version) – provided upon ad-hoc search for companies. • It is very easy to use, provides immediate results, and allows for easy maintenance of track lists (portfolio’s). • Multi-lingual support (for now: Turkish & English – more can be added easily). • Graphical visualization of business-to-shareholder-to-business relationships. • Has a very easy and transparent subscription scheme (see below). • Comes as a data service: no IT footprint (login over a web page). • API connections are also supported, for direct integration into legacy enterprise tools. 	<p>None (!)</p>	<ul style="list-style-type: none"> • TEB (since 2019) • TEB factoring (since 2019) • Pasha Bank (since 2019) • Shell (since 2019) • Multinet (since 2019) • Kuveyt Türk (since 2018) • Akbank (since 2020) • Moka (since 2020) • Finansbank (since 2020)

To consider in any B2B business, or institution, where there is a need to view formal information & official statuses, about ANY company registered in the country – ready to use!



"ACCESS CONTROL TO THE DEVICES IN MY DATA CENTRE IS SO IMPORTANT, BUT MY TOOLS ARE LIMITED, FRAGMENTED AND HARD TO INTEGRATE... I NEED A USER FRIENDLY & UNIFIED PLATFORM!" (COO & CTO)

DOMAIN: CROSS-DOMAIN & IT MGMT.
SUB-DOMAIN: CYBER-SECURITY & SECURE COMMUNICATION MGMT.

Short Description	Business Use Case & Pain Points Addressed	Competitor Product	[Permitted] References
<p>"Protect What You Connect": a cyber security tool to efficiently manage, monitor secure access to any platform, device, or network element through a single & centralized platform.</p> <p>It supports organizations in securing their critical assets and assists in achieving regulatory compliance requirements.</p> <p>(Data centre security: PAM, MFA, SSO, time/geo fencing, session mgmt. and monitoring, dynamic password controller, TACACS+ and Radius, etc.)</p> <p>Ref. ID: A11</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Organizations with important data centres struggle with risks and issues of security breaches: <ul style="list-style-type: none"> ◦ There are millions of data records stolen/leaked every day. ◦ Every breaches costs an average of 3,5 Mio USD. ◦ 81% of breaches are due to stolen passwords. ◦ 43% of breaches are linked to internal actors. • It handles all aspects and complexities associated to any needs and scenarios of a data centre, regardless of whether applied to real time communications systems, desktops, mobile devices and/or collaboration applications, or to connected machines in IoT scenarios. • It provides centralized visibility of privileged accounts, logging/recording of privileged user sessions. • In particular, it addresses: <ul style="list-style-type: none"> ◦ Regulatory compliance (e.g. GDPR, DSGVO, KVKK). ◦ Risk of insider threats. ◦ Malware that targets privileged accounts. ◦ Security of outsourced IT operations (contractors/vendors). ◦ Audit trails and on-demand reporting. • As such, the following obstacles are source of problems: <ul style="list-style-type: none"> ◦ Authorizing and tracking the activities of privileged accounts. ◦ Visibility and accountability of users as individuals, not as accounts. ◦ Lack of policy enforcement, differentiated by user, user groups, and device groups. ◦ Lack of dynamic capabilities to enforce certain policies, e.g. geo-fencing. ◦ Missing functions to query and audit sessions on any of the secured devices. • Breach of compliance with policies and auditing requirements. • Incomplete coverage (e.g. Linux, .ssh, network-based devices...). 	<ul style="list-style-type: none"> • Cyberark • Beyondtrust • Thycotic 	<p>Turkey:</p> <ul style="list-style-type: none"> • Arvato (since 2018) • BMC Power (since 2016) • Millenicom (since 2017) • TurkishBank (since 2018) • NuroI (since 2018) • Sekerbank (since 2017) • Sutas (since 2017) • Turk Telekom (since 2007) • Turkcell (since 2011) • Vodafone Fix (since 2017) • Denizbank (since 2017) • Medline (since 2016) • Petrol Ofisi (since 2018) • ING (since 2018) • ... <p>International:</p> <ul style="list-style-type: none"> • RBC (since 2018) • Etisalat (since 2017) • Everstream (since 2018) • Zong (since 2018) • Ufone (since 2018) • ErTelecom (since 2018) • Megafon (since 2017) • MTS (since 2019) • ...

To consider in any organization, data centre, that is concerned about security breaches and heightened control, especially of privileged accounts.

"ONE-TIME-PASSWORD IS UNPOPULAR BECAUSE IT'S USER UNFRIENDLY... AND ON TOP OF THIS IT'S NOT 100% SECURE."
(COO & CTO)

DOMAIN: CROSS-DOMAIN & IT MGMT.

SUB-DOMAIN: CYBER-SECURITY & SECURE COMMUNICATION MGMT.



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	[Permitted] References
<p>A feature-rich mobile security solution for all critical mobile and online transactions that require one-time password authentication (OTP), for multi-factor authentication (MFA), where SMS OTP meets limitations and the use and transaction signing is mandated.</p> <p>This tool replaces the code sent over SMS for authentication to customers: it thereby eliminates security loopholes as well as improves customer experience.</p> <p>It includes more features and functions, required for a comprehensive digital login.</p> <p>Ref. ID: A13</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • It is designed to improve the security of transactions through all digital channels, e.g. sensitive sessions such as banking transactions or payments. • In multi-factor authentication process, it replaces SMS OTP which is costly and increases with the number of customers as well as online traffic. • SMS OTP are not secure: <ul style="list-style-type: none"> ◦ It is easy to see the content of SMS messages, e.g. for people who have access to the database on the sender side. ◦ SIM card can be copied and intercept the messages sent to a phone. • Simple and seamless user experience: <ul style="list-style-type: none"> ◦ SMS OTP are disliked as user experience is bad: an SMS must be first received, read, and its code transcribed into the application. ◦ With Soft OTP there is automatic authentication in the background – without needing messages to be sent and codes to be copied. • Further user experience-related features can be added/activated: <ul style="list-style-type: none"> ◦ Push Notification Integration (standard). ◦ QR Code & Captcha & Biometric Integration (Fingerprint, Face, Retina etc.). • The application is highly configurable and adaptable to customer needs – usually not requiring any change on legacy side. <p>Regulatory Compliant</p> <ul style="list-style-type: none"> • EnSecure is fully supporting regulations limiting the use of SMS OTP and requiring transaction signing. • Security is aligned with public, international security standards and protocols. • More than just being a “Soft OTP” replacing the “SMS OTP”, it supports additional features and security mechanisms so that this platform can act as the “brain” of a digital login system. 	<ul style="list-style-type: none"> • OneSpan • Kobil • RSA 	<p>Turkey:</p> <ul style="list-style-type: none"> • Merkez bankası (Central Bank of Turkey) (since 2017) • Ziraat Katılım (since 2016) • ... • *** Cannot be disclosed *** <p>International:</p> <ul style="list-style-type: none"> • IDB (Bahrain) (since 2016) • UniCredit (Italy) (since 2018) • ... • *** Cannot be disclosed ***

To consider in businesses with an important and critical self-service component, relying on multi-factor authentication..

"EVERY TIME I RAISE AN ANALYTICS USE CASE, IT RESPONDS WITH A 5 MONTHS PROJECT AND 500K COSTS... ALL I NEED A SANDBOX!" (CMO)

DOMAIN: BUSINESS INTELLIGENCE
SUB-DOMAIN: SMART ANALYTICS & DATA SCIENCE
 (REPORTING/ML/AI)



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References
<p>A product that leverages machine learning techniques and helps business owners or production engineers with industry and market expertise to experiment with their data and get immediate, intuitive and actionable insight (e.g. production optimization, demand prediction, cross-sell, purchase propensity, churn propensity...).</p>	<p>This tool solves the following pain points, or greatly reduces their impact:</p> <ul style="list-style-type: none"> • Data analytics projects are expensive, and results are not known. With this tool...: <ul style="list-style-type: none"> ◦ Quick trials are possible, at no cost. ◦ Results can be seen, before the project starts! (you get what you see) ◦ There is neither need for IT support to integrate the results, nor for a BI Tool to visualize the results. Output shows immediately to the user, with clear, easily understandable parameters and intuitive charts. • Every business user can perform machine-learning analyses on a prepared sample of tabular data of any kind (e.g. about customer data, products, company, sensors...). • The complexity of algorithms and scores of Python and R codes have been translated into an easy-to-use application with comprehensive dashboards. No need for sophisticated theoretical background. • With a few clicks, and within a few minutes, data can be uploaded and processed to extract future predictions & newly found business parameter values. • Churn, Cross-sell, Fraud and many more data-driven predictions for relevant business questions can be addressed without training or IT-induced latency. • Purchase propensity, especially for eCommerce businesses: predict your visitors & customers. <ul style="list-style-type: none"> ◦ Improving marketing ROI (+30%): by predicting eCommerce visitors, therefore have a better targeting in campaigns. ◦ Expanding the target audience itself (+35%): better identification of the visitors that have higher conversion than “add-to-basket visitors”. • Other examples of business scenarios and achievements (non-exhaustive): <ul style="list-style-type: none"> ◦ Payment Services: revenue loss from churn was reduced by over 70%. It identified churn characteristics and allowed to take preventive action. ◦ Government: effort to fight business fraud and smuggling was predicted with over ten-fold accuracy compared to previous methods. 	<p>(Machine-learning side)</p> <ul style="list-style-type: none"> • SAS Enterprise Miner • RapidMiner • DataRobot • Alteriycs • Power BI ML <p>(On the marketing side)</p> <ul style="list-style-type: none"> • CleverTap • Optimove • Criteo • Dynamic Yield 	<p>Turkey:</p> <ul style="list-style-type: none"> • MultiNet (since 2018) • Aygaz (since 2019) • Otokar (since 2019) • Enuygun.com (since 2019) • TatilSepeti.com (since 2019) • Kredi Kayit Bürosu-KKB (since 2019) • TAV (since 2019) • Gittigidiyor (since 2020) • Yemeksepeti (since 2020) • Mgros – expected. <p>International:</p> <ul style="list-style-type: none"> • Chobani (US) (since 2018) • AB Sciex (Singapore) (since 2019)

To consider for business users or production engineers that are looking for instantaneous analysis of data sets, for predictive analysis, without any dependency on IT – ready to use!

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"IT IS STILL TOO EASY TO TRICK PEOPLE WITH PICTURES... WE MISS SIMPLE, SMART, EFFICIENT PLUG-INS TO SUPPORT OUR PROCESSES." (CFO)

DOMAIN: REVENUE, RISK & FRAUD MGMT.
SUB-DOMAIN: FRAUD & RISK MGMT.



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References [in Turkey]
<p>A tool that checks pictures given as an input, and matches them instantaneously vs. an own existing pool of pictures, e.g. to find fraudulent recurring insurance claims, or hijacked advertisements.</p> <p>Moreover, it crawls through online digital media and processes pictures containing frames with text, eventually leading to uncover fraud cases.</p>	<p>In principle, fraud cases depend on the business needs/use cases of the customer. This platform could be used in an endless number of scenarios, all of which...</p> <ul style="list-style-type: none"> • Require a comparison of a given image published in digital media, or submitted in a request, with an available pool of "own pictures" to find matches. • Require extraction of text from pictures in digital media, or submitted ones, and their subsequent intelligent interpretation. <p>Implemented use cases:</p> <ul style="list-style-type: none"> • Help insurances in uncovering fraud by analysing the pictures of accidents and matching them vs. a database of other accident pictures, in order to find recurring claims filed with the same picture. • Help banks in uncovering fraud in the financing second-hand cars: loans are being given according to the value of those proposed cars, but which are wrecked in real. The money is instead being used for other purposes. • Crawl through the news of accidents in digital media (national and regional): <ul style="list-style-type: none"> ◦ Matches license plates of cars involved in the accidents in order to identify possible fraud cases. This allows for tracing the real cause of the accident. ◦ Parses articles to give clues on whether the driver was (e.g.) under alcohol influence, even though the accident was filed in another context. <p>More examples:</p> <ul style="list-style-type: none"> • E-commerce sites may detect theft in product postings. • Real-Estate companies may detect sales objects copied by competitors to attract attention from potential buyers, then negotiate a share of the sale. • ... Any company whose business critically relies on picture support. 	<p>None (!)</p>	<p>*** Cannot be disclosed ***</p> <div data-bbox="1778 654 2448 886" style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p><i>To consider in any B2B business that relies on photographic material, and in which the pictures can be inducing fraud, or are liable to theft or illicit copying.</i></p> </div> <p>Specific to:</p> <ul style="list-style-type: none"> • Insurance & Law • Airline, Retail, Logistics & eCommerce

Ref. ID: A17

"CONSULTANTS ARE PLENTY, BUT THE ONES THAT REALLY UNDERSTAND THE BUSINESS ISSUES, FIND INNOVATIVE SOLUTIONS, DELIVER THEM AND ARE AFFORDABLE, ARE RARE." (CRO)

DOMAIN: REVENUE, RISK & FRAUD MGMT.
SUB-DOMAIN: FRAUD & RISK MGMT.



Short Description	Business Use Case & Pain Points Addressed	Competitor Product	References
<p>Niche consultancy & expertise in data services (English): expert services with competence in data collection and analysis, then enhanced through analytical development with machine-learning techniques.</p> <p>The business background is especially fitting banking and insurance industries.</p> <p>Ref. ID: B1</p>	<p>* Consultancy services *</p> <p>Services can cover (non-exhaustive):</p> <ul style="list-style-type: none"> • Customer segmentation • Customer unification • Analytical sales planning • Next best product analysis • Score card development • Risk management and process development • Channel optimization • Process optimization • Customer retention • Customer lifetime value maximization • Customer risk scoring • Fraud detection • Collections mgmt. • Forecasting analysis <p>Further insight about ongoing services, past projects and timelines can be requested from the vendor.</p>	<p>N/A</p> <p>Consultancy Services</p> <ul style="list-style-type: none"> • Insurance & Law • Banking 	<p>Turkey:</p> <ul style="list-style-type: none"> • Akbank (since 2013) • BKM (since 2019) • Allianz (since 2018) • AvivaSA (since 2014) • Multinet (since 2019) • D-Smart (since 2013) • Mastercard (since 2014) <p>International:</p> <ul style="list-style-type: none"> • Saudi Investment Bank (since 2016)

To consider when help is needed in using data to identify and understand business pain points, and suggesting innovative solutions.

DOCUMENT STRUCTURE

- **Introduction**
- **Product Catalogue Sample**
- **Operational Details**

OPERATIONAL DETAILS

➤ Contact Details:

- info@nuru-tech.com
- +49 (172) 685 88 55 (GmbH).
- +90 (552) 385 88 55 (A.Ş.).

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Address:

- Nuru GmbH
Nobelstr. 3-5
41189 M'Gladbach
Germany

Membership:

- German Chamber of Commerce

