Asia Digital Ecosystem Big Data Analytical Dashboard

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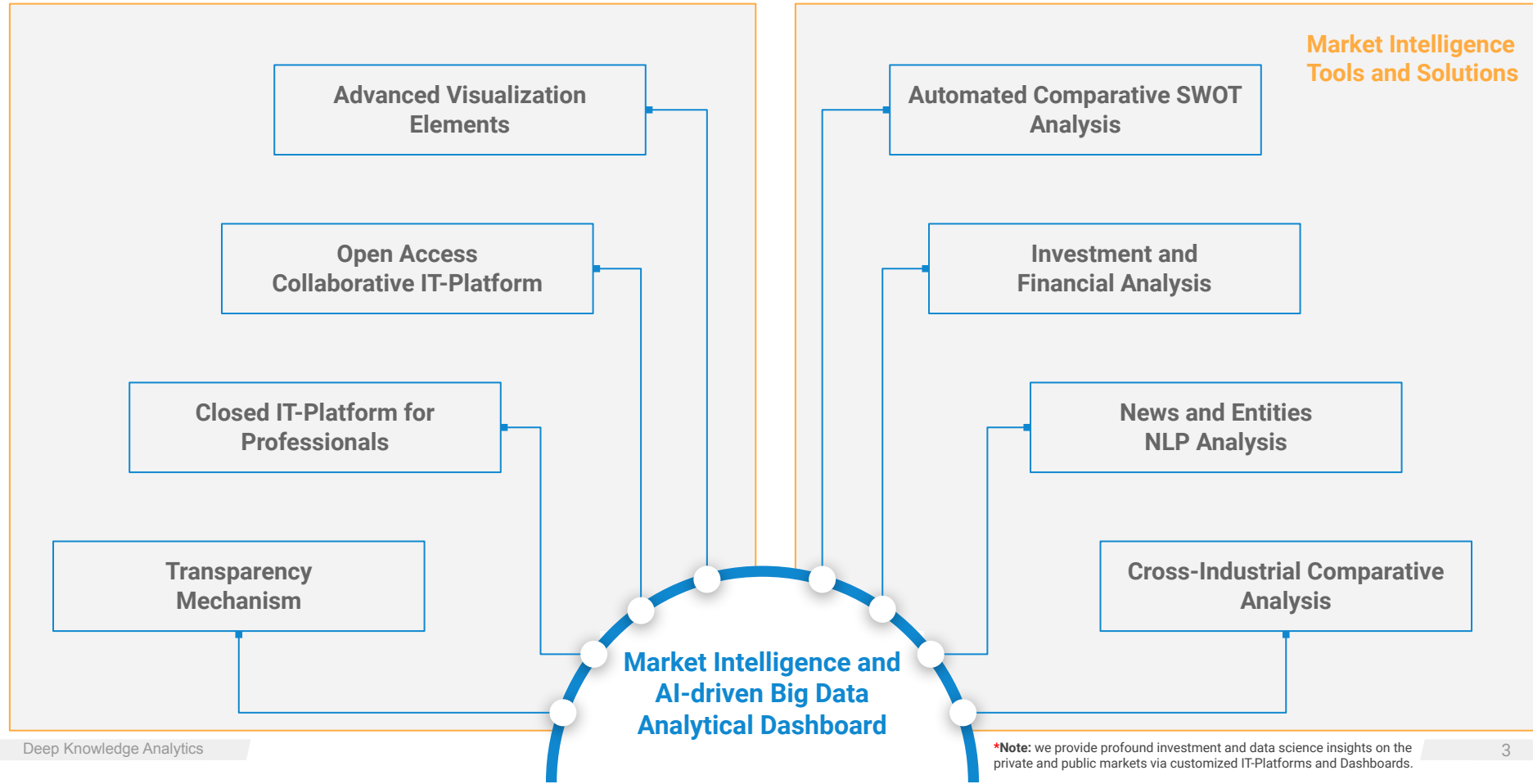
The Asia Digital Ecosystem Big Data Analytics Dashboard is robust and data-driven, designed to provide users with a comprehensive and customizable view of statistics related to Asia Digital Ecosystem companies and funding rounds.

Continuously updating its vast databases with patents, scientific articles, and research data from leading sources globally, the platform guarantees the information provided is up-to-date and in sync with industry progressions. Its user-friendly interface and customizable analysis tools enable users to explore the complex landscape of philanthropy, make data-driven decisions, and gain valuable insights into the sector.

Market Intelligence System and AI-driven Big Data Analytical Dashboard*

Market Intelligence Tools and Solutions

Advanced Visualization Elements

Automated Comparative SWOT Analysis

Open Access Collaborative IT-Platform

Investment and Financial Analysis

Closed IT-Platform for Professionals

News and Entities NLP Analysis

Transparency Mechanism

Cross-Industrial Comparative Analysis

Market Intelligence and AI-driven Big Data Analytical Dashboard

*Note: we provide profound investment and data science insights on the private and public markets via customized IT-Platforms and Dashboards.

About Deep Knowledge Group

Deep Knowledge Group is a consortium of commercial and non-profit organisations active on multiple fronts in the realm of DeepTech and Frontier Technologies (AI, Longevity, FinTech, GovTech, InvestTech), ranging from scientific research to investment, entrepreneurship, analytics, media, philanthropy and more.
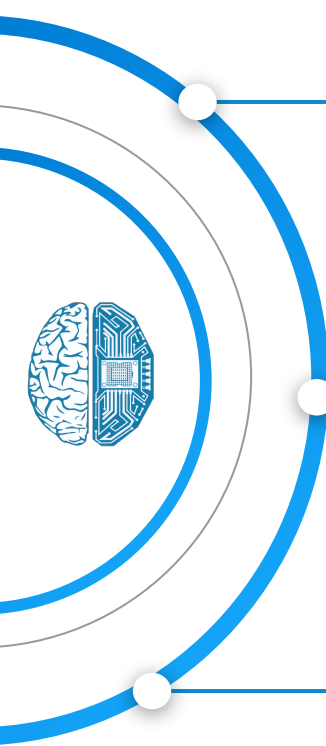
Deep Knowledge Group runs several data-driven **investments and financial vehicles**

- DEEP KNOWLEDGE VENTURES
- LONGEVITY CAPITAL
- Longevity Financial Advisors
- LONGEVITY CARD

Deep Knowledge Group's **analytical subsidiaries** are world leaders in analytics for DeepTech and Longevity industries

- AGING ANALYTICS AGENCY
- Big Data Analytics Department
- DEEP KNOWLEDGE ANALYTICS GOVTECH DIVISION
- FemTech Analytics
- NeuroTech Analytics
- COVID-19 ANALYTICS
- SpaceTech Analytics
- DEEP PHARMA INTELLIGENCE
- INNOVATION EYE
- InvestTech Advanced Solutions
- DEEP KNOWLEDGE ANALYTICS

Deep Knowledge Philanthropy pioneers several infrastructural **social impact projects**

- DEEP KNOWLEDGE PHILANTHROPY
- Swiss Longevity Valley
- LONGEVITY INTERNATIONAL
- Biogerontology Research Foundation — Prevent. Restore. Preserve.
- LONGEVITY CHARITY

Analytical Methods and Systems Developed by Deep Knowledge Group

Created frameworks as a basis for further analytical research of complex industries	Produced first-of-their-kind reports on Longevity and DeepTech	Industrial and regional representation of the market development	Different analytical products arranged into thematic dashboards	Extended the number of dashboards' tools and added the embedded AI Engine
Frameworks of Complex Longevity and DeepTech Industries	**Fundamental Analytical Reports**	**Advanced Visualization of DeepTech Industries**	**Big Data Analytics Dashboards**	**AI-driven Big Data Analytics System and Dashboards**
2013	**2014 - 2018**	**2019**	**2020 - 2021**	**2021 - 2023**

The Problem

The IT platform to be developed is said to cover the following:
- What type of services are provided by a given entity
- Do these services, as well as other parameters, indicate the sustainability of the entity
- What are the competitors of a given entity and how one could compare this entity to its peers
- What phases of drug discovery a given entity tries to cover
- What are the most expedient acquisition scenarios for a given entity.

The key-points mentioned above indicate the following features of the IT platform:
- An existence of a database with the factual information on every entity
- A need in machine learning applications to extract and then associate certain 'tags' with every entity to clarify the drug discovery phase, as well services provided
- A need in machine learning applications to create a meaningful entity-to-competitor analysis
- A need in machine learning applications to create a recommendation system able to advise on acquisition specifics.

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As a result, the following concept of the platform is created.

The Solution — AI-driven Big Data Analytical Dashboard

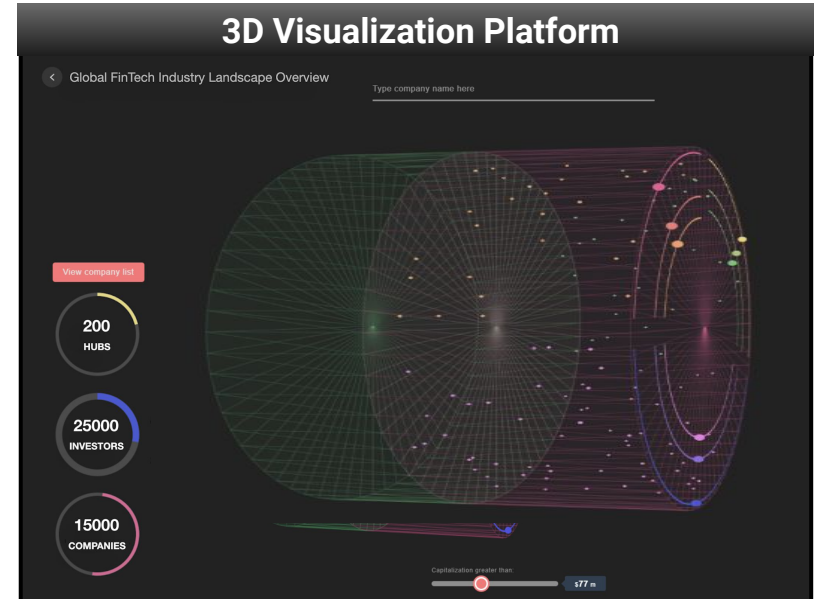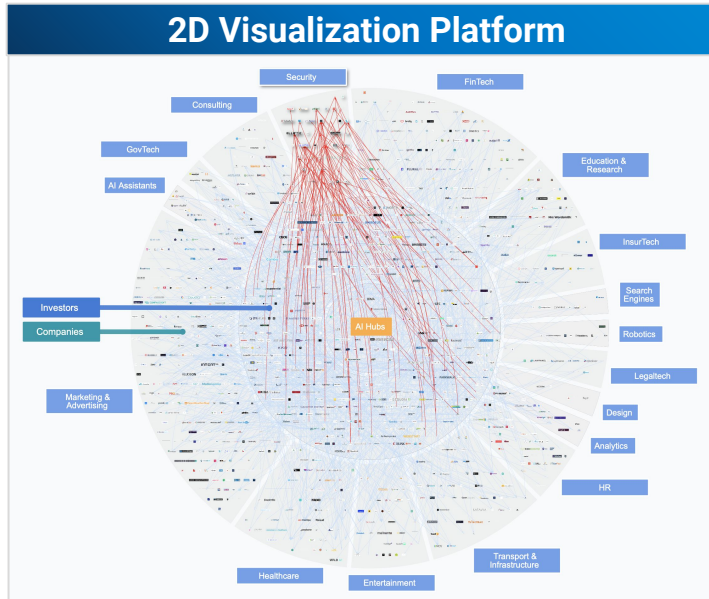Companies Founded

Funding by sector

Digital map of Asia

Companies regional distribution

Funding rounds per year

The Solution — AI-driven Big Data Analytical Dashboard

By combining Deep Knowledge Analytics' **robust data modeling, visualization, and interactivity** with its' **unparalleled market expertise, sophisticated multi-dimensional analytical frameworks and algorithmic methods, the Asia Digital Ecosystem Dashboard** can deliver sophisticated market intelligence, make pragmatic forecasting, and do industry benchmarking. To achieve this, it uses multiple specially-designed and specifically-weighted metrics and parameters. By **reporting and monitoring developments in the technological and industrial ecosystems** of the Asia Digital Ecosystem, it ensures that the collected data is accurate, up-to-date and available 24/7. Using state-of-the-art data analytics and 3D visualization tools, the Dashboard analyzes **market insights, trends, and statistics** to quickly and efficiently extract the necessary information and provide actionable answers.
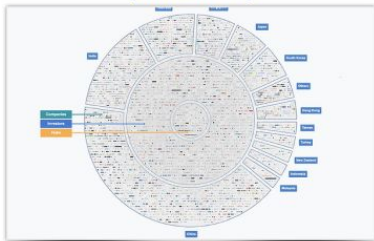
Analytical Reports

Regional Mindmaps

DeepTech & AI Interactive Mindmaps

- by Industries
- by Regions

DeepTech & AI in Asia Pacific (Industries)

View More

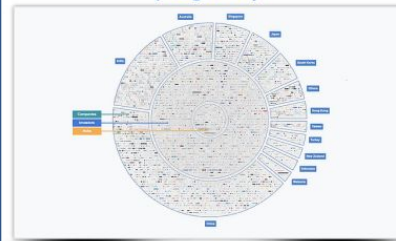### Dashboard Parameters

COMPANIES	INVESTORS	REGIONS
2400	1300	40+

HUBS	PARAMETERS	DATA POINTS
100+	25+	57000+

DeepTech & AI in Asia Pacific (Regions)

View More

DeepTech & AI Analytics

- AI Race
- Education and R&D
- Patents Worldwide
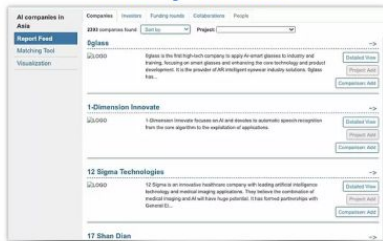- AI Status and Strategies

Databases

- Companies Database
- Investors Database
- Global Innovation 1000
- Global Power City Index

DeepTech & AI in Asia Pacific Industry Database

View More

DeepTech & AI Industry in Asia Pacific Region 2020

View More

DeepTech & AI in Asia Pacific Assessment

DeepTech & Artificial Intelligence Industry in Asia Pacific Region 2020

January 2021

DEEP KNOWLEDGE ANALYTICS

View More

Landscape Overview Documents
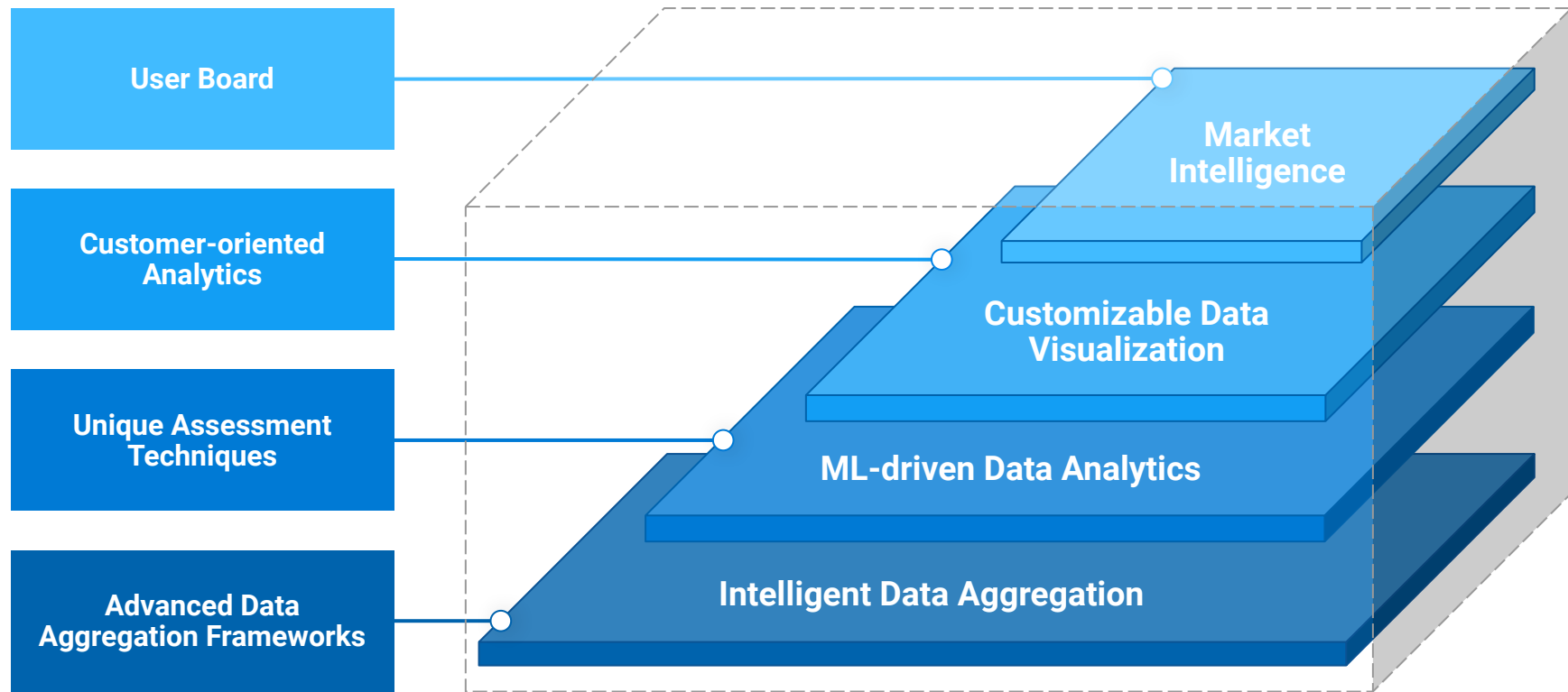
- Mindmap
- One Pager
- Press Release

AI Engine of Big Data Analytical Dashboard: Data Science behind the IT Product

Note: below, we describe the toolkit that we implement in other Deep Knowledge Group's projects and will use to build this Tailor-Made Market Intelligence System

Market Intelligence System and AI-driven Analytical Dashboard IT Architecture

User Board

Customer-oriented Analytics

Unique Assessment Techniques

Advanced Data Aggregation Frameworks

Market Intelligence

Customizable Data Visualization

ML-driven Data Analytics

Intelligent Data Aggregation

Major Components of Data Science and AI Engine Architecture

Data Aggregation

Big Data Analytics System and Dashboard cover the datasets synthesized from various sources and having the different types of representation

Database Extension

The data sets behind the finalised data provided to users is subject to constant updating to ensure the precise results of analysis

Natural Language Processing (NLP) Engine

Advanced NLP-techniques are used for gathering and storing the multiparametric and high-dimensional data.

Components of Data Science and AI Engine

AI-Based Clustering

Embedded AI engine is able to find the interconnections and form the groups of entities having the similar characteristics

Companies Assessment with Machine Learning

Dashboards provide the ranking of both private and public companies based on the aggregated and constantly refreshed market data
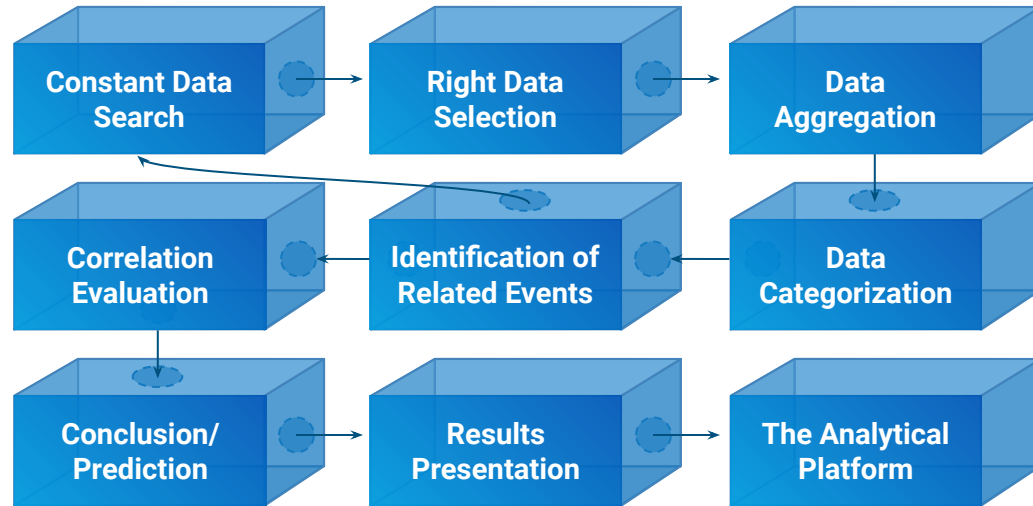
AI-based Predictions

Big Data Analytics System and Dashboard has the modules able to forecast the possible ways of future traction of certain events (such as stock prices) based on the large sets of market data

Natural Language Processing (NLP) Engine

Natural Language Processing will play one of the most important roles in the technology pipeline of the platform. Such approaches are able to give the right means for working with mixed data types, as well as process large amount of data in an automated way. Given the pain points the platform is designed to alleviate, this machine learning approach is going to provide a substantial technological support to the platform performance.
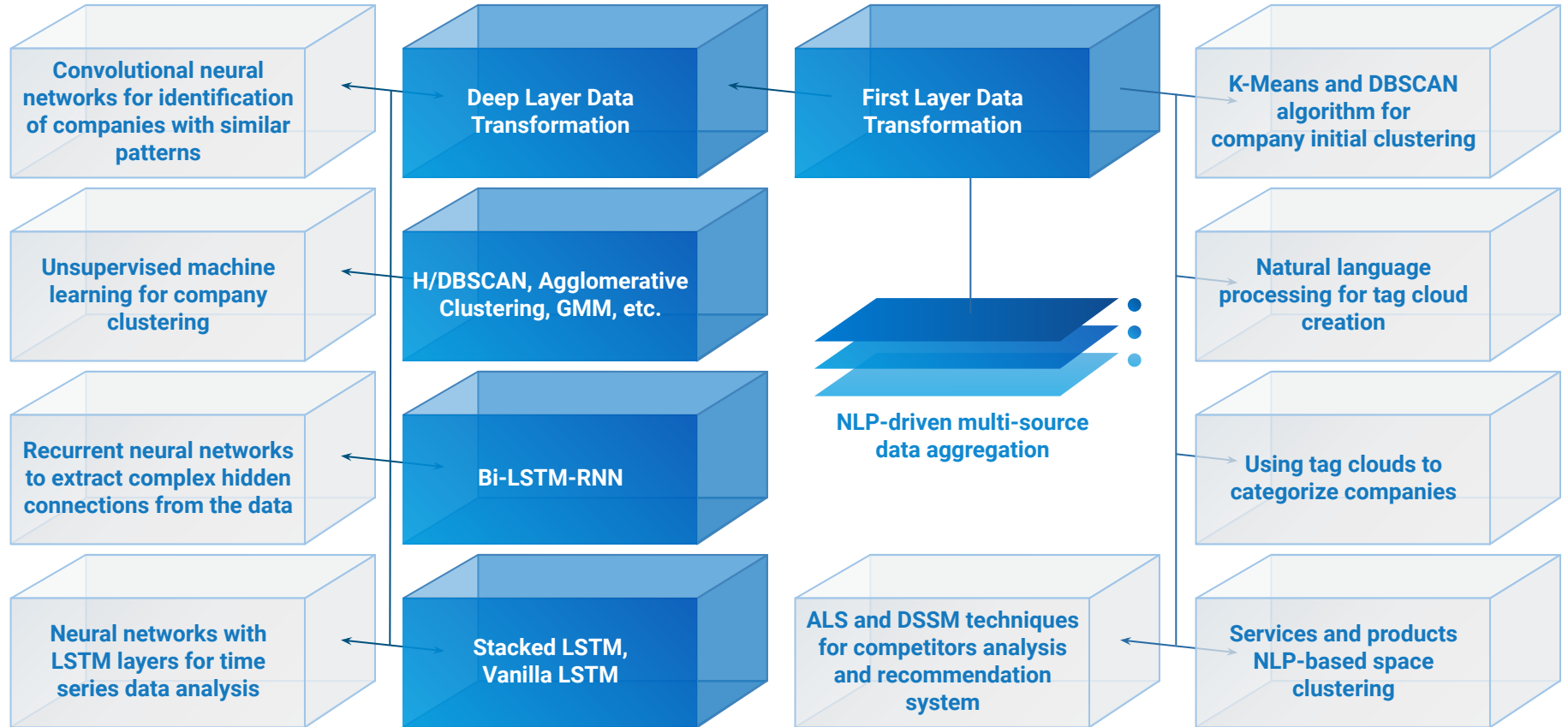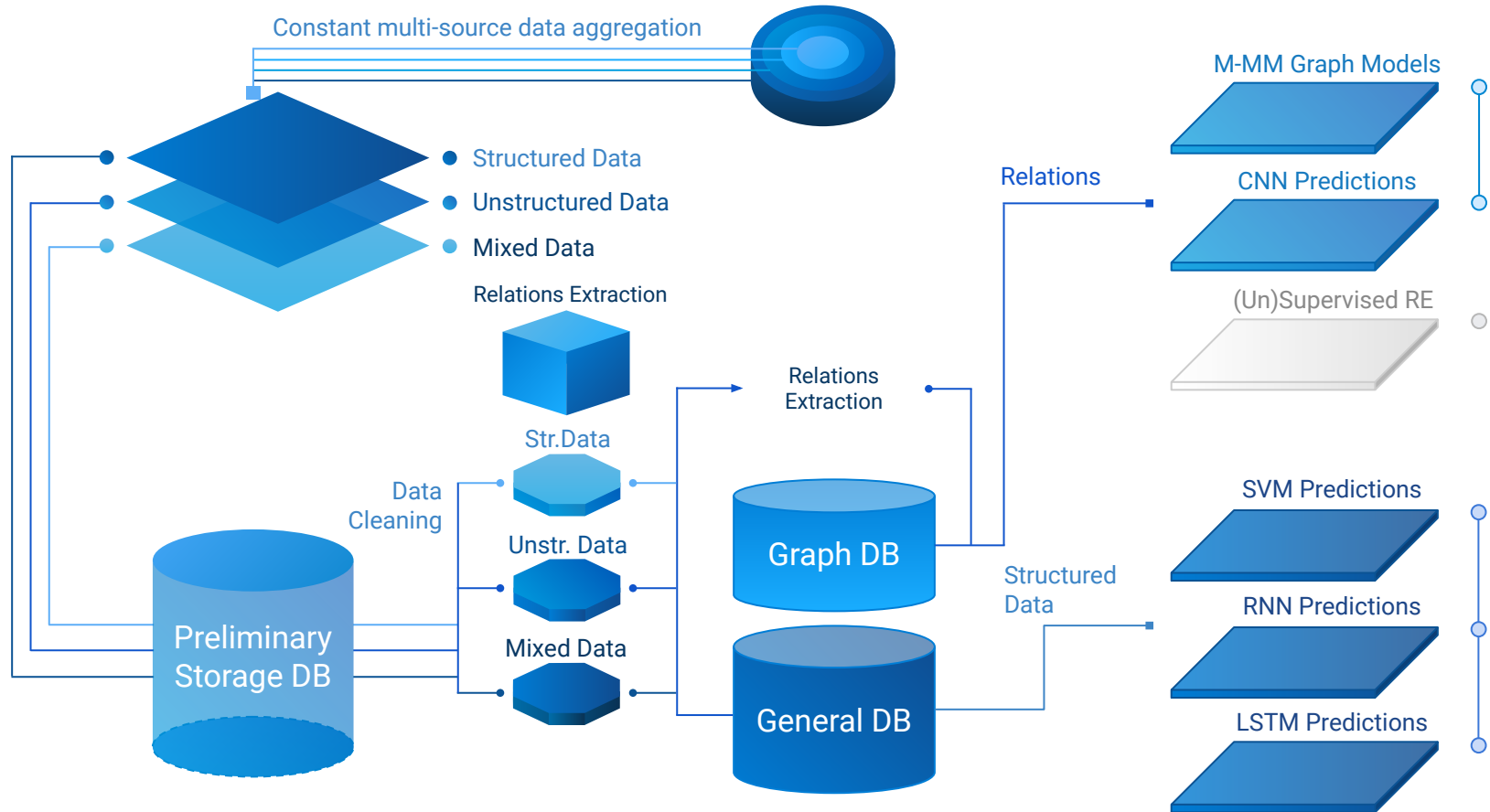
Dashboards' NLP Working Scheme

```
Constant Data Search → Right Data Selection → Data Aggregation
         ↑                                              ↓
Correlation Evaluation ← Identification of Related Events ← Data Categorization
         ↓
Conclusion/ Prediction → Results Presentation → The Analytical Platform
```

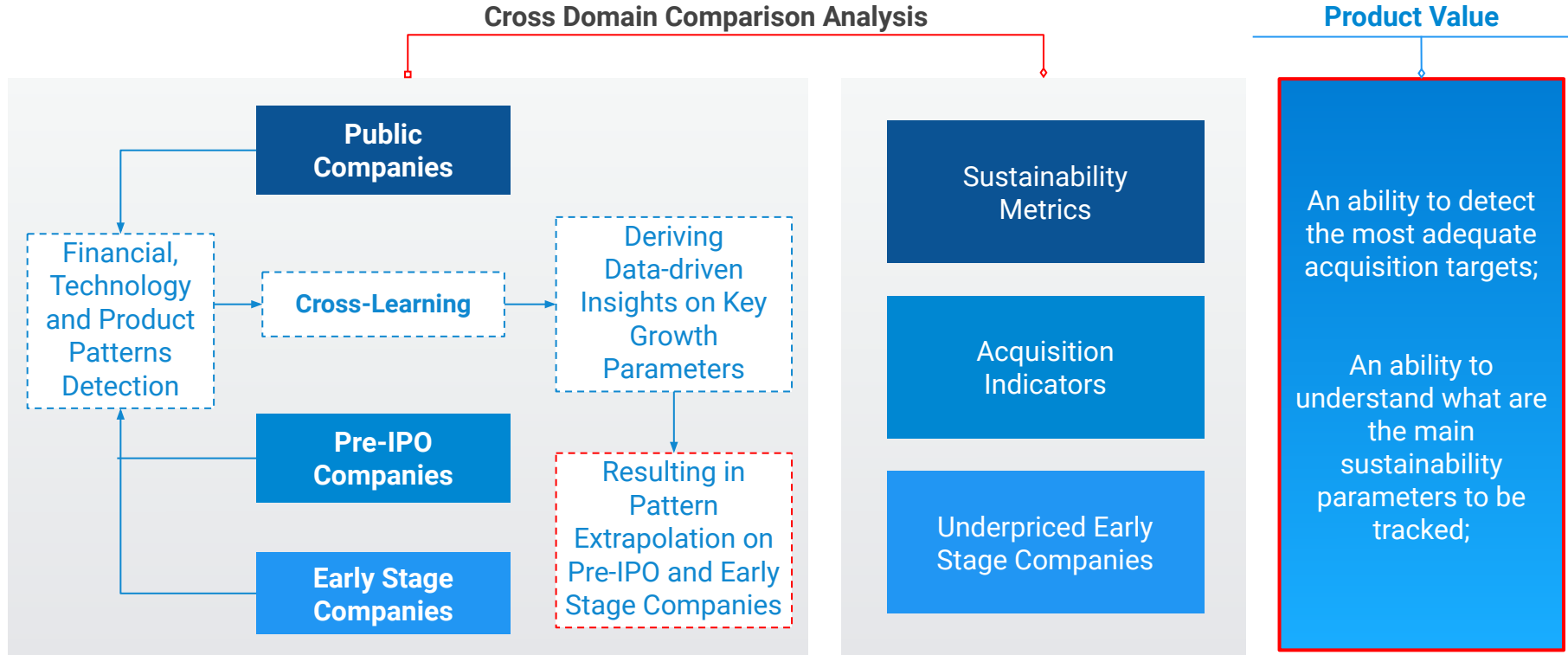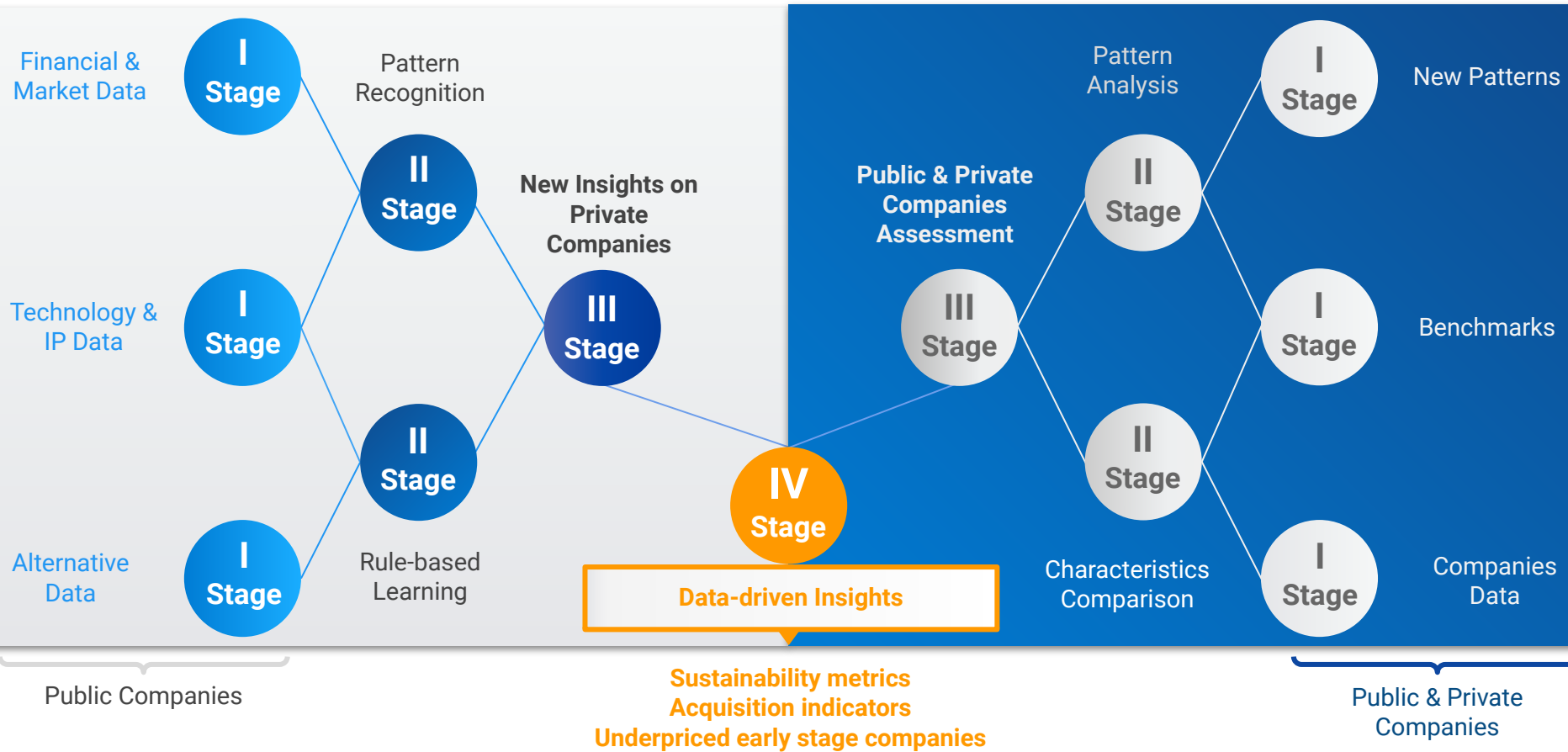| Main Applications for Dashboards	
Data Aggregation	Search and extraction of "marked" information
Data Classification and Sorting	Processing and distribution of extracted information
Data Update	Constant updating of information and search for "similar" events
Search for Correlation	Calculation of correlation between "events"
Prediction	Computing of a correlation-based prediction

Machine Learning Approaches for Company Assessment

AI General Pipeline

Constant multi-source data aggregation

- Structured Data
- Unstructured Data
- Mixed Data

Relations Extraction

Str.Data

Data Cleaning

Unstr. Data

Mixed Data

Relations Extraction

Graph DB

General DB

Preliminary Storage DB

Relations

Structured Data

M-MM Graph Models

CNN Predictions

(Un)Supervised RE

SVM Predictions

RNN Predictions

LSTM Predictions

Deriving Value from the Data Scarcity

Cross Domain Comparison Analysis

Product Value

Public Companies

Financial, Technology and Product Patterns Detection

Cross-Learning

Deriving Data-driven Insights on Key Growth Parameters

Pre-IPO Companies

Early Stage Companies

Resulting in Pattern Extrapolation on Pre-IPO and Early Stage Companies

Sustainability Metrics

Acquisition Indicators

Underpriced Early Stage Companies

An ability to detect the most adequate acquisition targets;

An ability to understand what are the main sustainability parameters to be tracked;

Overcoming Data Disproportion via the Pattern Learning

Financial & Market Data

I Stage

Pattern Recognition

II Stage

New Insights on Private Companies

Technology & IP Data

I Stage

III Stage

II Stage

Alternative Data

I Stage

Rule-based Learning

IV Stage

Data-driven Insights

Public Companies

Sustainability metrics
Acquisition indicators
Underpriced early stage companies

Pattern Analysis

I Stage

New Patterns

Public & Private Companies Assessment

II Stage

III Stage

I Stage

Benchmarks

II Stage

Characteristics Comparison

I Stage

Companies Data

Public & Private Companies

Accurate Data Science-Based Company Assessment
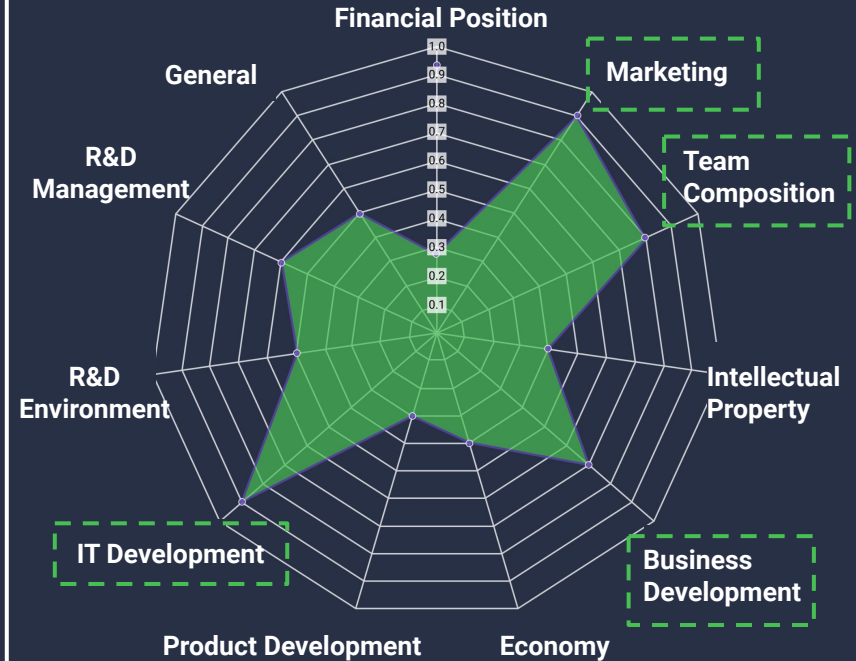
An example of a thematically adjusted frameworks for algorithmic SWOT analysis for Life Science and DeepTech companies

Synthetic Environment of Tech Industries

R&D Tech Hubs and Governmental Agencies Universe

Investors Industry Universe

Companies Industry Universe
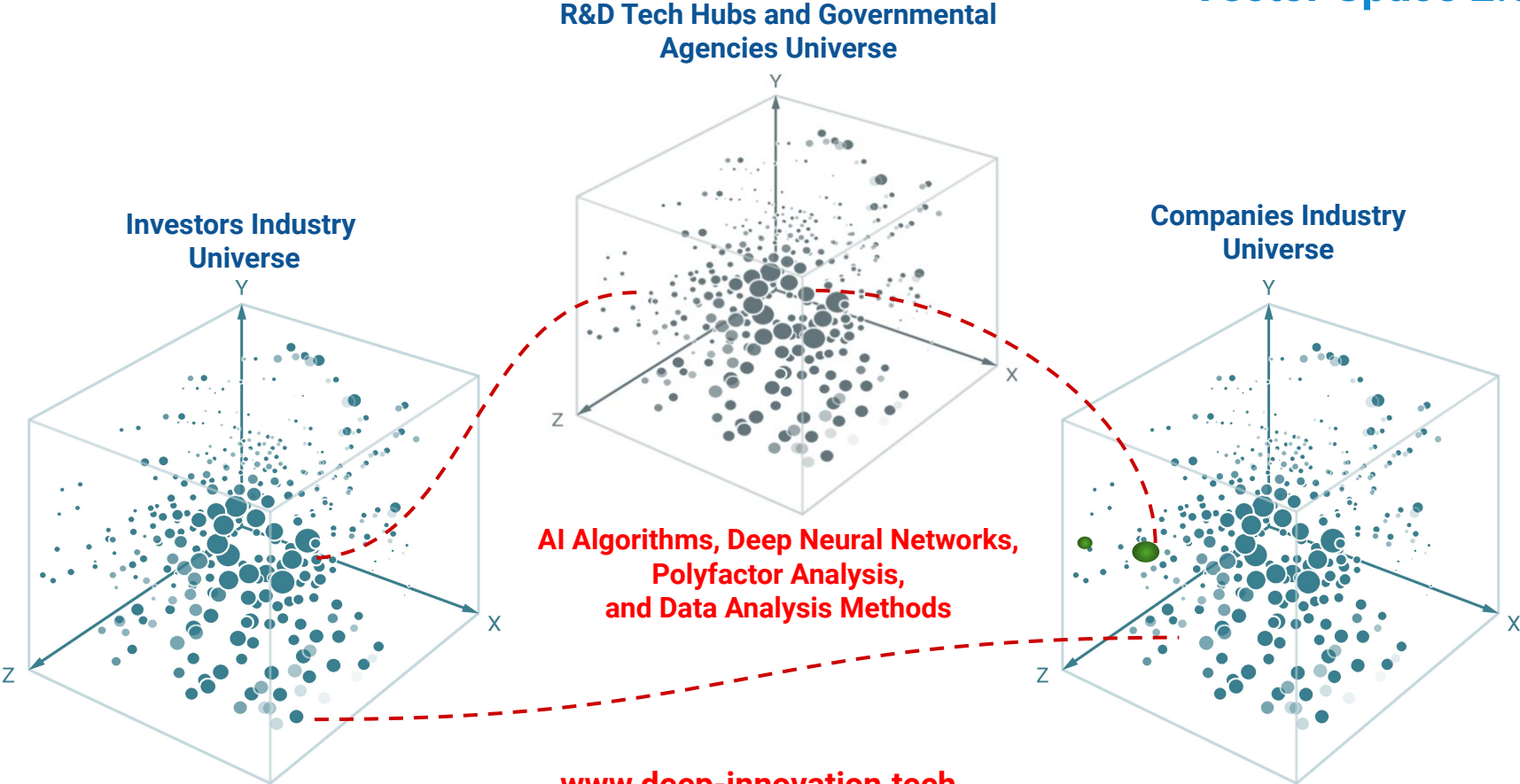
AI Algorithms, Deep Neural Networks, Polyfactor Analysis, and Data Analysis Methods

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Synthetic Environment of Technological Forecasting System

Scientific Data Environment

Multidimensional Vector Space 3.0

Industry Data Environment

Technological Universe

Time Machine, Back Propagation

Synthetic Mathematical Environment
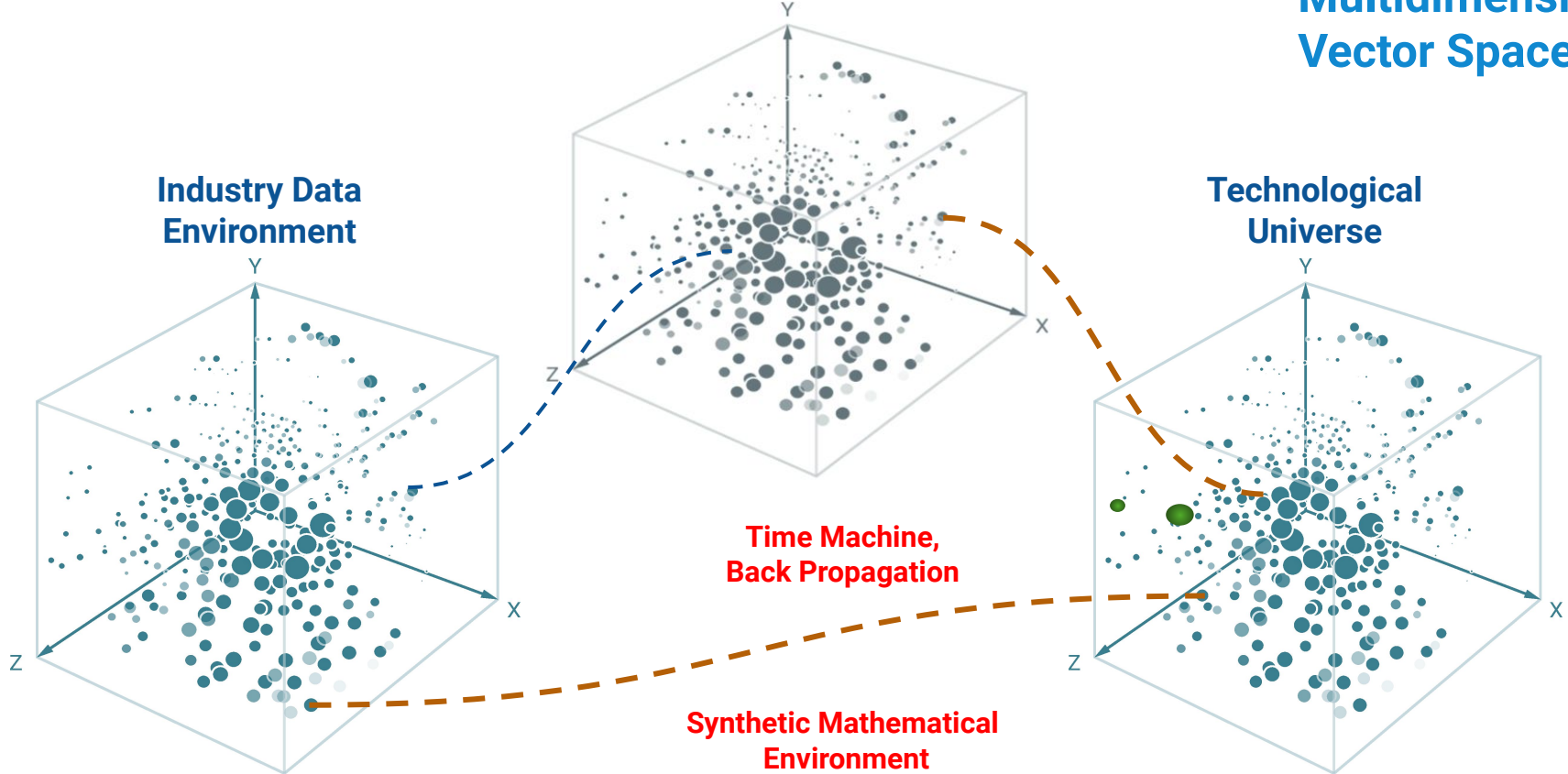
Tailor-Made Market Intelligence System: Summary

Market-specific IT-platform focusing on data and solutions that are relevant to the market specialist

More than a database: a set of intelligence AI-driven tools providing unique insights on the industry dynamics

Meaningful tools for any type of goals: combination of interpretable analytics and raw-data for the internal research

Cloud-based platform allowing optimal up-time and seamless models update and implementation

Tailor-Made Market Intelligence System
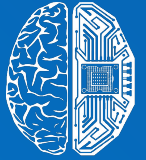
Data-focused Tools and Solutions

Advanced Visualization of Industry Ecosystem (Mindmaps)

UK Artificial Intelligence Industry Landscape

Network links visualization
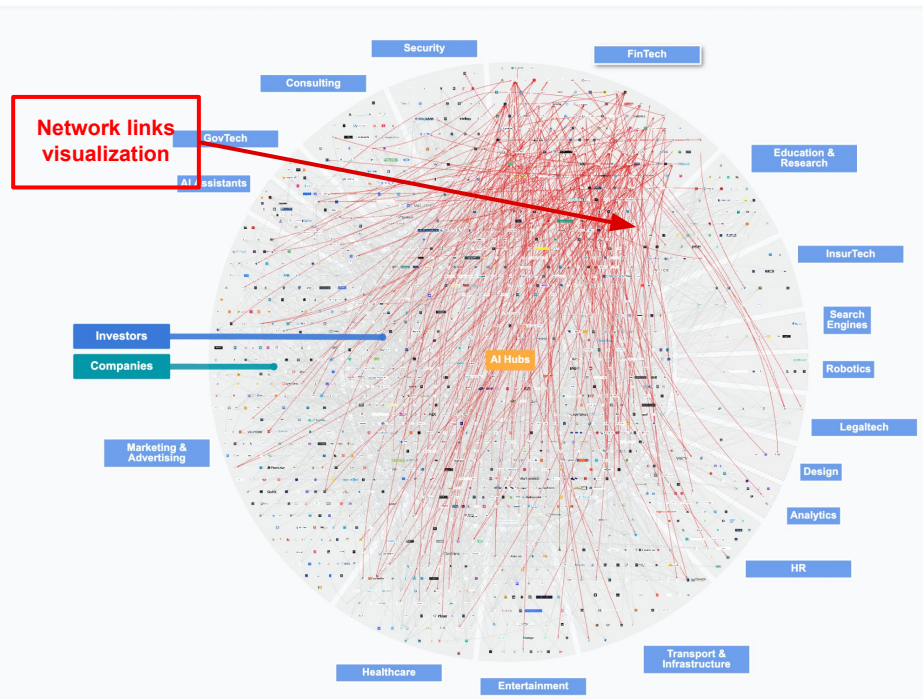
Mindmaps allow users to demystify the complexity of the markets by visualizing the connections between the market players. Mindmaps provide the right means to conduct more efficient business development, finding new allocation targets, co-investors and competitors.

- Big Data Design

- 30+ Covered Markets

- 100+ Analysed Sectors

- 50000+ Represented Entities

- 5+ Entities Layers Types

- Interactive Linkage Between Entities

Advanced Visualization.
Interactive Chart Builder
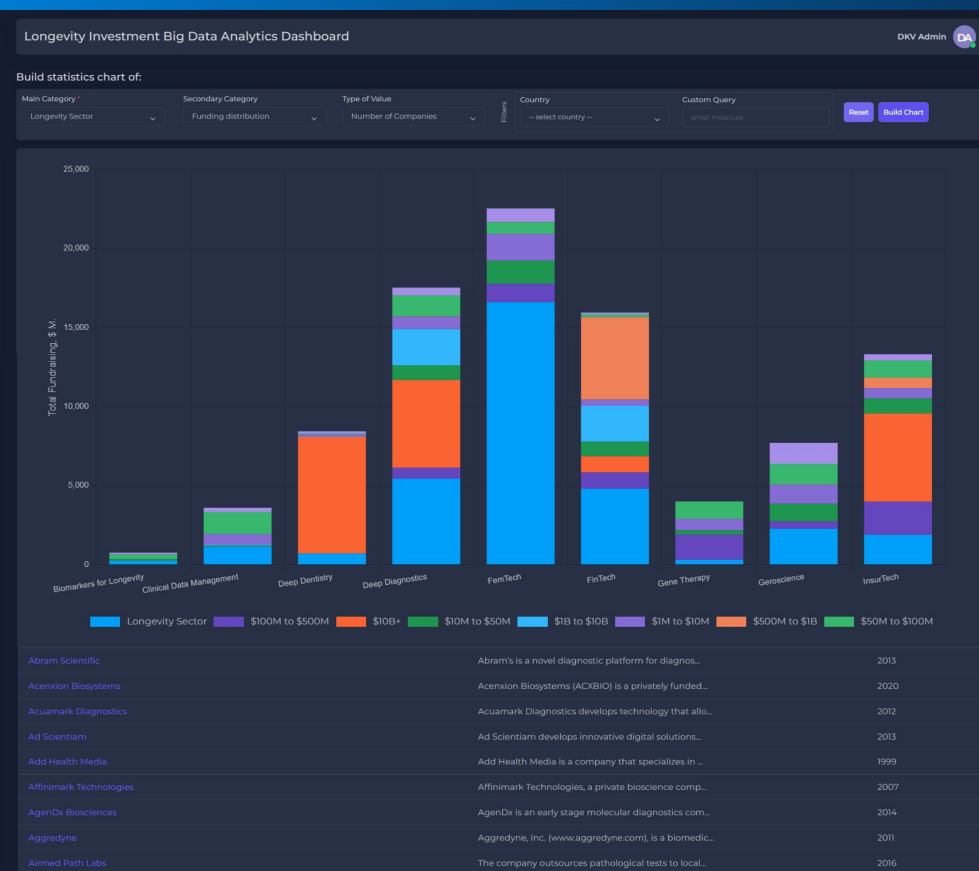
- Interactive market coverage

- Custom queries for maximum personalization of industry outlook

- 50,000+ represented entities

- 5+ entity layers types

Advanced Visualisation. Three.Js Implementation for Diagrams Constructor
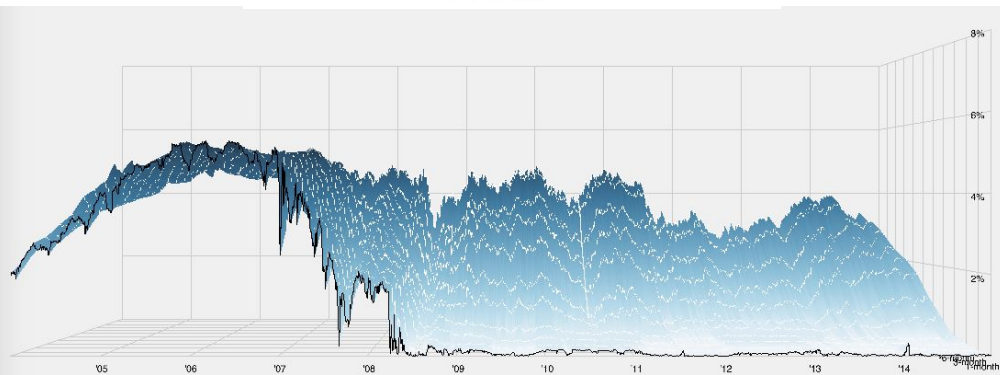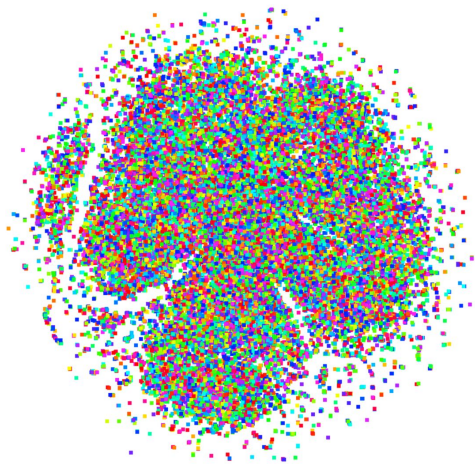
Key Features

P — Personalized approach for data visualization

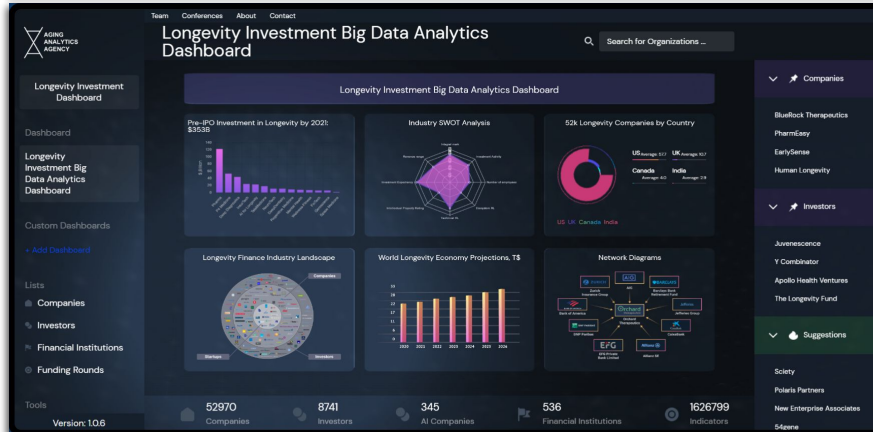**L** — Less time – more results. Achieve your goals with a low-code solution

A — All features and visualization approaches in one place

Y — Your vision = our solution. Analyse, present and pitch without limits

Advanced Visualization.
Dashboards Constructor

E — Enables the creation of tailored and personalized analytical dashboards in a matter of minutes

A — All features that are available on other dashboards are already enabled

S — Save time and money on analyst training with a low-code solution

Y — You are the one who decides - purchase a white label solution or request creation-on-demand

Advanced Visualization.
3D Mindmaps Enhancement

Key Features
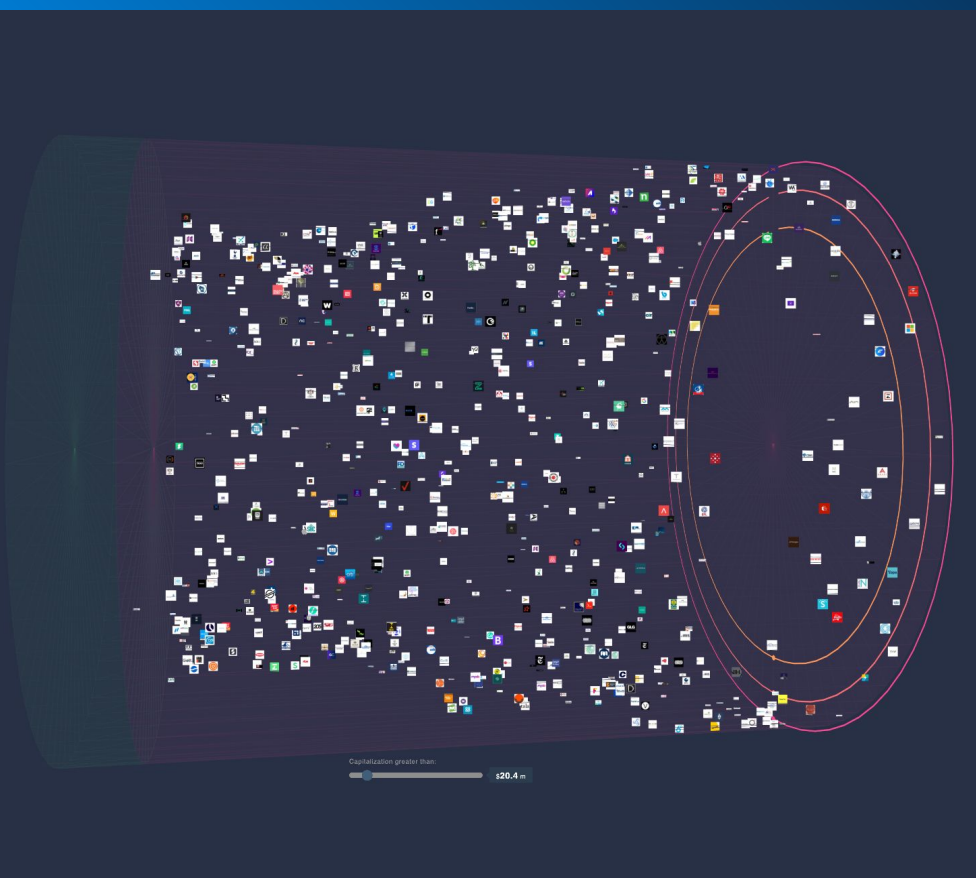
T — Think in a multi-dimensional way

U — Uniqueness is what valued across the industries. Make your data stand-out

B — Bring the future you are heading for closer, by making right decisions about the market

E — Evolve with the state-of-the-art technological solutions for alternative data analytics

Services and Solutions Database

Data type used for modelling

☐ Chemical notations and molecular fingerprints

☐ Ehrs/lab notebook/databases (structured data mining)

☐ HTS and HCS data

☐ Imaging data

☐ Network biology analysis (omics)

☐ Publications / patents (unstructured data mining)

K — Kick-start the solution with the same DSSM approach, allowing data management optimization

N — Nested tagging approach for in-depth search

O — Oftenly-updated and curated database to keep-up with the companies' changes

VV — Vertical Value chain: B2B focus

Data-focused Tools and Solutions: Summary

Data visualization solutions to bring more clarity to the raw data

Intellectual Property and scientific-related data to indicate the actual company background

Investors and companies brought together to illustrate the under- and over-invested areas of the industry

Market stratification through the solutions and service the companies are currently offering

Data-focused Tools and Solutions
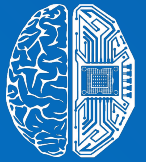
Market Intelligence Tools and Solutions

www.deep-pharma.tech

Automized SWOT Analysis

Our Approach

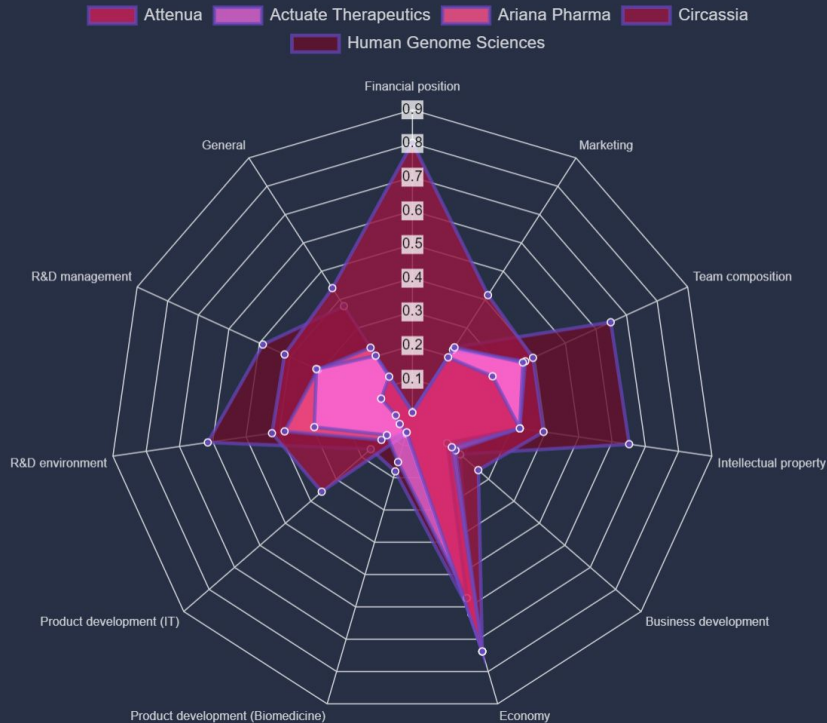### Radial Analysis of a Longevity-Related Company
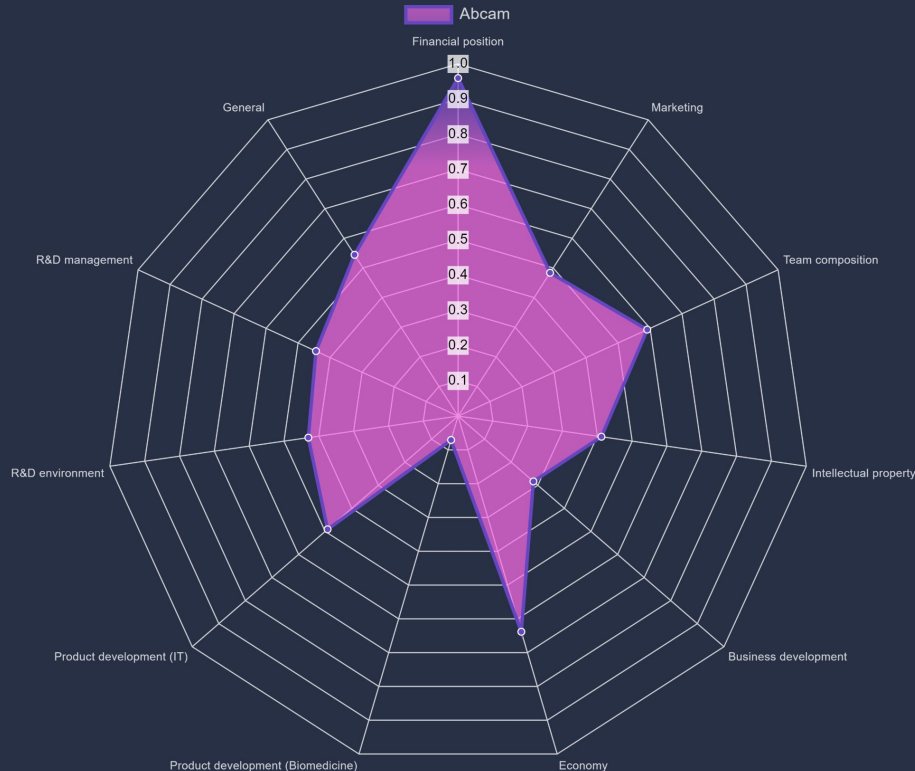
The tool is developed to visualize the overall ranking of an individual company

- 170 unique parameters
- Public and Private companies
- Any types of entities

- Due diligence
- Market intelligence
- Portfolio optimization

Gather | Define | Analyse | Apply
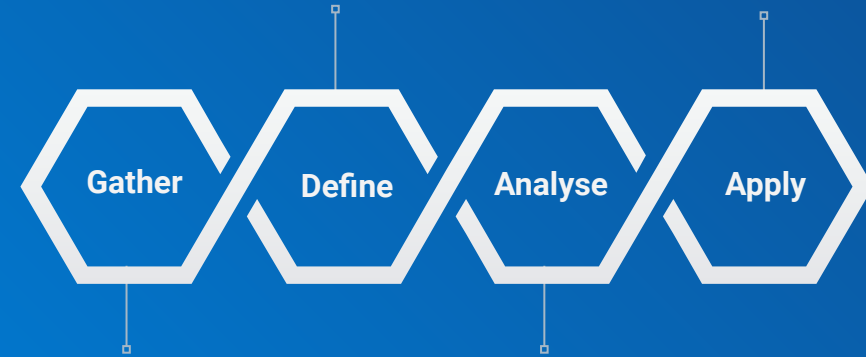
- Structured data
- Unstructured data
- Mixed data
- Alternative data

- Cutting-edge Natural Language Processing algorithms
- Cross-validation made by experts
- Industry-adjusted, as well as gross average constants

Automated Comparative Analysis

Radial Analysis of Five Longevity Related Companies

Legend: Attenua · Actuate Therapeutics · Ariana Pharma · Circassia · Human Genome Sciences

The tool is developed to compare a few selected companies by several hundred parameters

- Unlimited number of compared companies

- Entities from all industries and markets

- On-demand analytics and due diligence for one or multiple companies
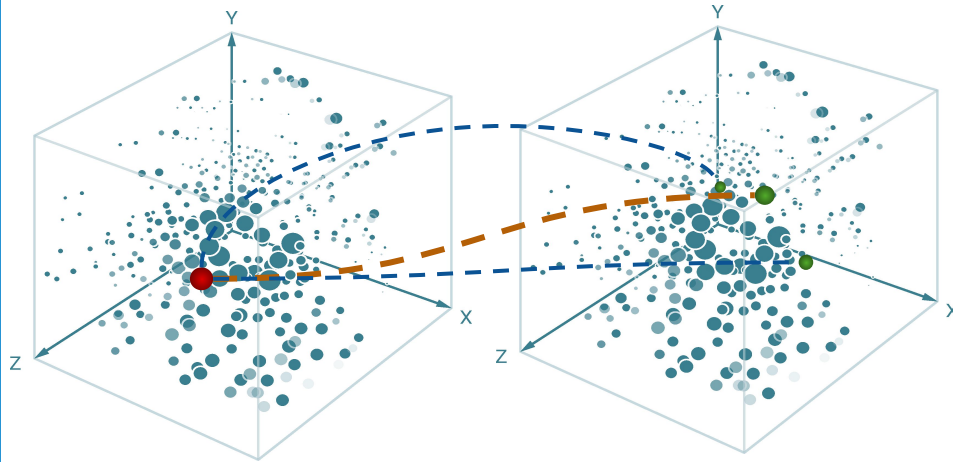
- Comparison of hundreds of parameters in a matter of seconds

B2B AI-driven Matching Tool

Universe of Client's Competitors

Universe of Partners Candidates

B2B Matching tools allows finding B2B partners for a given entity to meet the business needs (legal, financial services, marketing etc).

- 5 areas of cooperation analysed

- Constantly updated database of entities and labels

- Best matches and recommendation based on AI algorithms

- Integration with Automated Investor Relationship Management (IRM) System*

*Under development**

Matching Tool for Investors

- Investors matching tool allows investors find their peers for portfolio comparison, as well as new co-investors for investment syndicates.

- Companies can leverage this tool for expansion of their investors' universe, looking for investors who are interested in the similar companies.

- Multiparametric comparison

- ML-based approach, enabling high recommendation precision

- Constantly updated database of entities and labels

- Integration with Automated Investor Relationship Management (IRM) System*

*Under development**

Financial Portfolio Constructor

Key Features
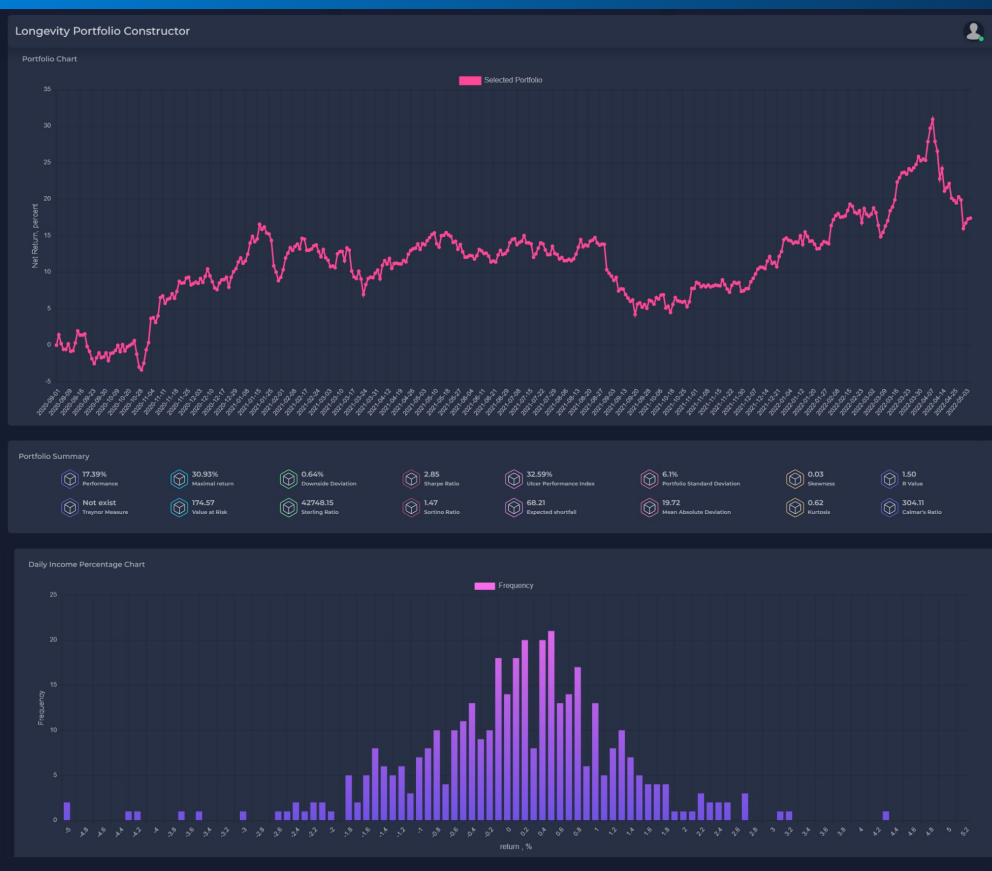
- 16 performance parameters

- 6 predefined ways to optimize your portfolio, along with custom weights

- 3000+ Longevity and BioTech public companies

- 2000+ DeepTech public companies

Public Companies' Stock Price Forecasting

Longevity Investment Big Data Analytics Dashboard

Key Features

- 4 Prediction types:
  Wiener-based
  Adjusted GBM*
  Prophet Model
  LSTM

- Unlimited number of compared companies

- 8 Performance Parameters

- 5000+ Public companies

*Geometric Brownian Motion**

Public Companies Ranking

Key Features
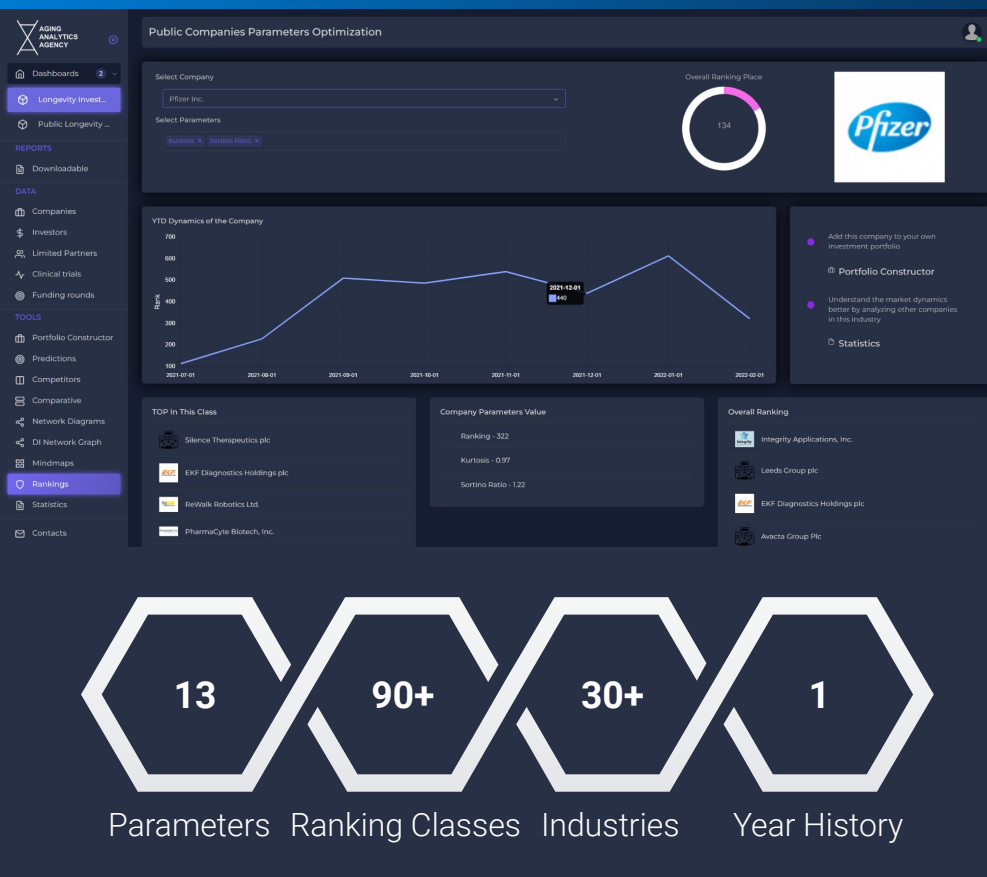
R — Rate companies based on their comparative historical performance

A — Access clear data insights on the companies that fit your framework

N — Navigate yourself across 5000+ public companies

K — Keep the best companies for your portfolio backtesting

13 Parameters

90+ Ranking Classes

30+ Industries

1 Year History

Hedging and Option Analysis

S — Stand out by being ahead of your competitors
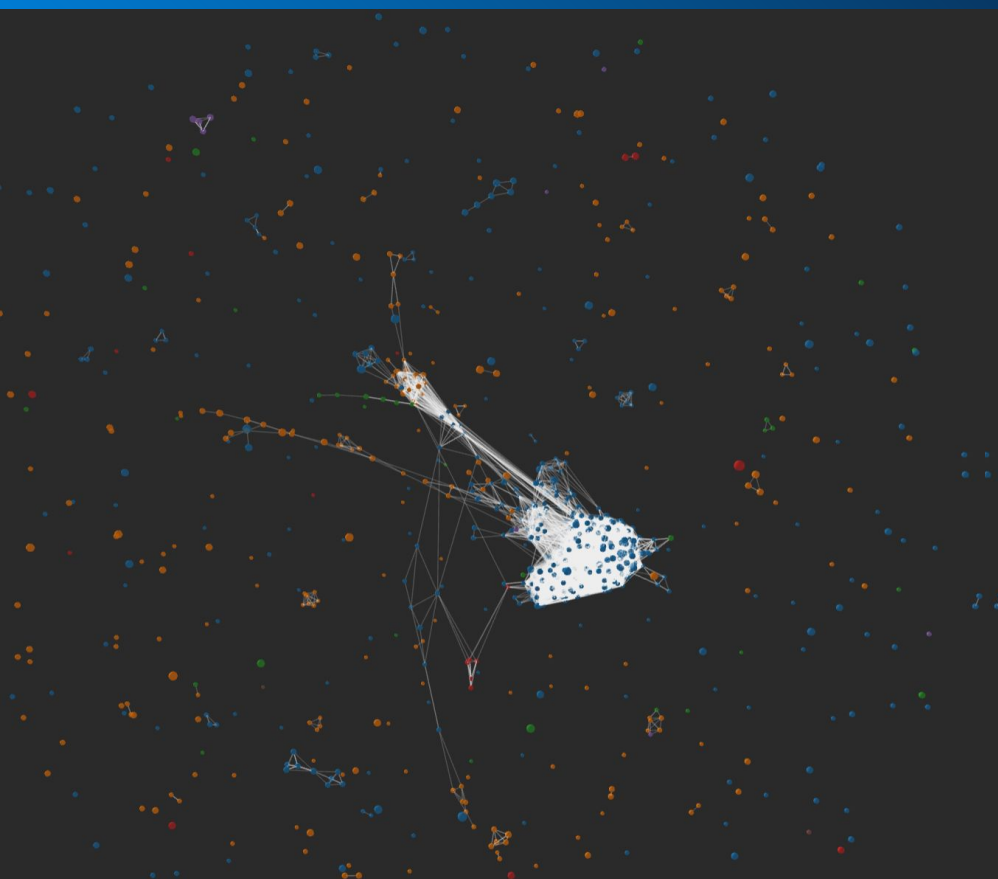
E — Enter the era of the all-in-one solutions that allow you to work in a stable data framework

L — Lower the error rate by accessing the analytics that make sense

L — Learn more about the development of the markets you are interested in

News and Entities NLP Analysis

N — Novel approach in alternative data analysis, allowing for the harvesting of data insights without limits

E — Establish market intelligence based on quantifiable results, not opinions

W — Waste no more time on data comparison and aggregation

S — Steer your company toward the new epoch of meaningful Machine Learning solutions

Trading Recommendation System
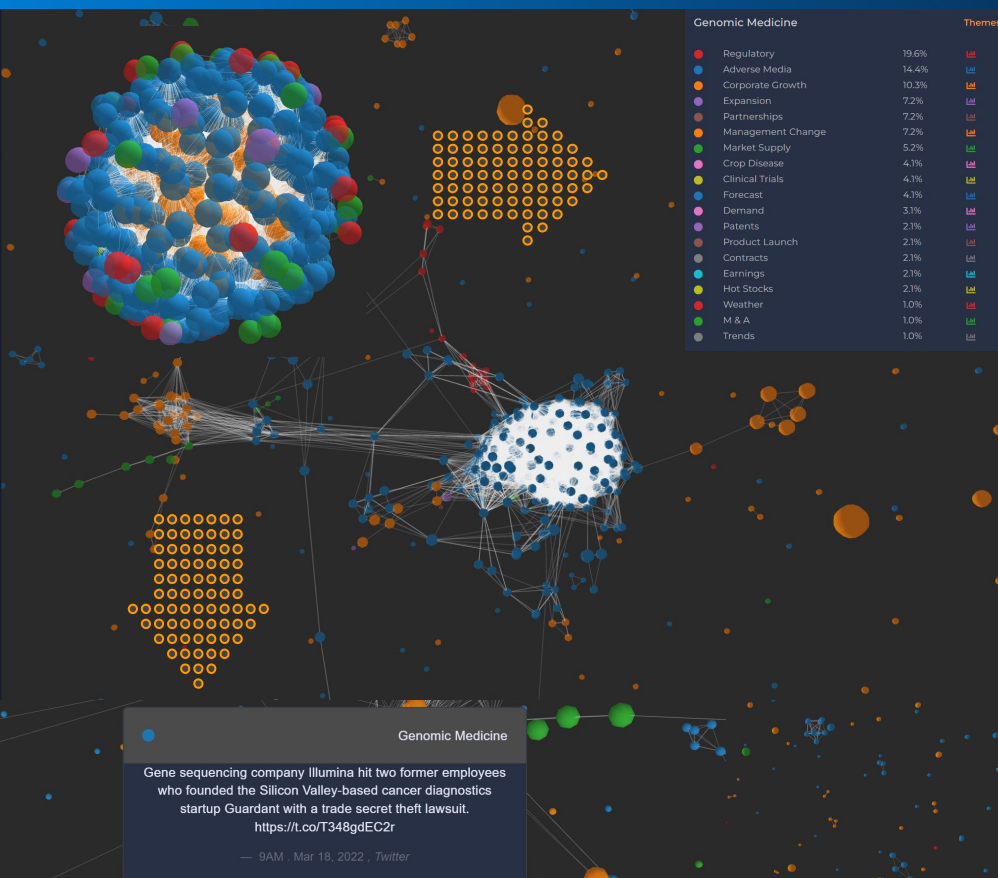
C — Create a data-based trading approach that will navigate your decisions

A — Access the opinions with thousands of experts on the topic

L — Learn about hot topics and current developments of the industry, market, or a given entity

L — Leverage Artificial Intelligence support to track changes unseen by human eyes

Technology Forecasting

IP & Scientific Data

Industry Data

Sentiment Data

Technology Forecasting

Technology Metrics

Industry Metrics

Technology Forecasting
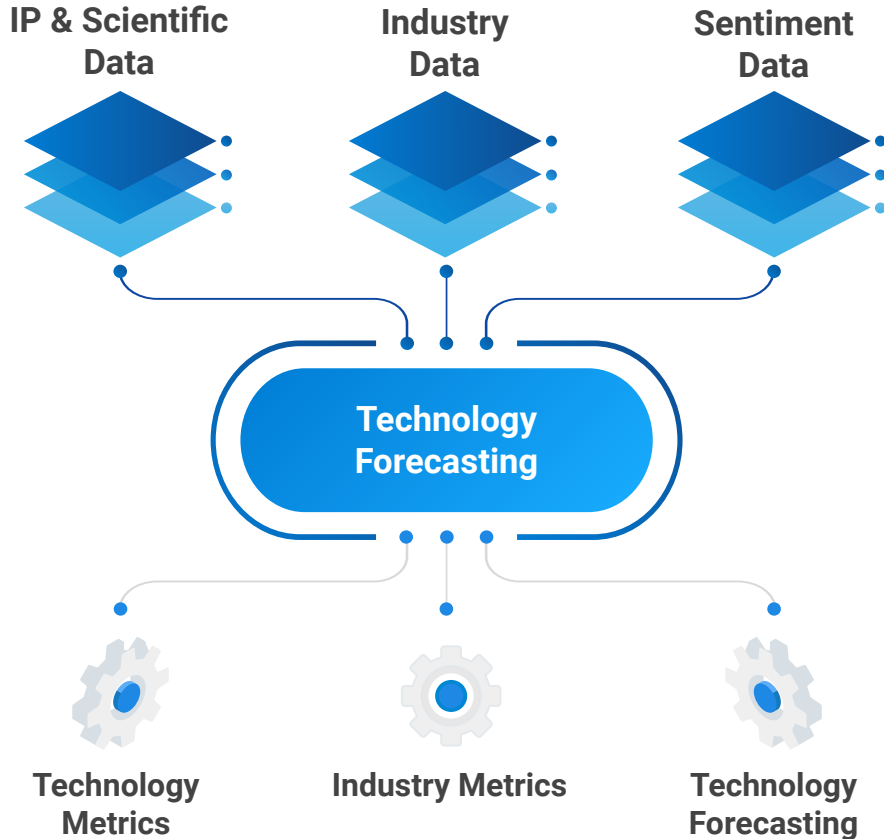
S — Source tangible analytical results covering the most cutting-edge technologies out there

C — Continuous assessment of new technologies across the different areas

A — Analyze technologies from different areas with tailored metrics and find perspective startups for M&A

N — Navigate yourself across complex industries as guru

Private & Public Companies Cross Analysis

Private Company Data

Similar Public Companies' Data
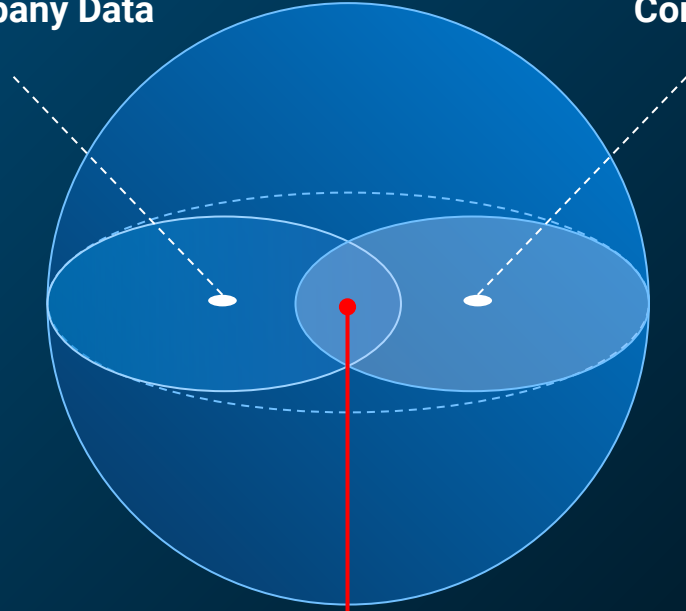
Precise Private Company Evaluation

R — Reverse the data scarcity among private companies for adequate assessment

A — Accelerate private companies due diligence

T — Trace the trends of private and public markets for specific sectors

E — Estimate the growth potential of the late-stage companies

Cross-Industrial Comparative Analysis

How?
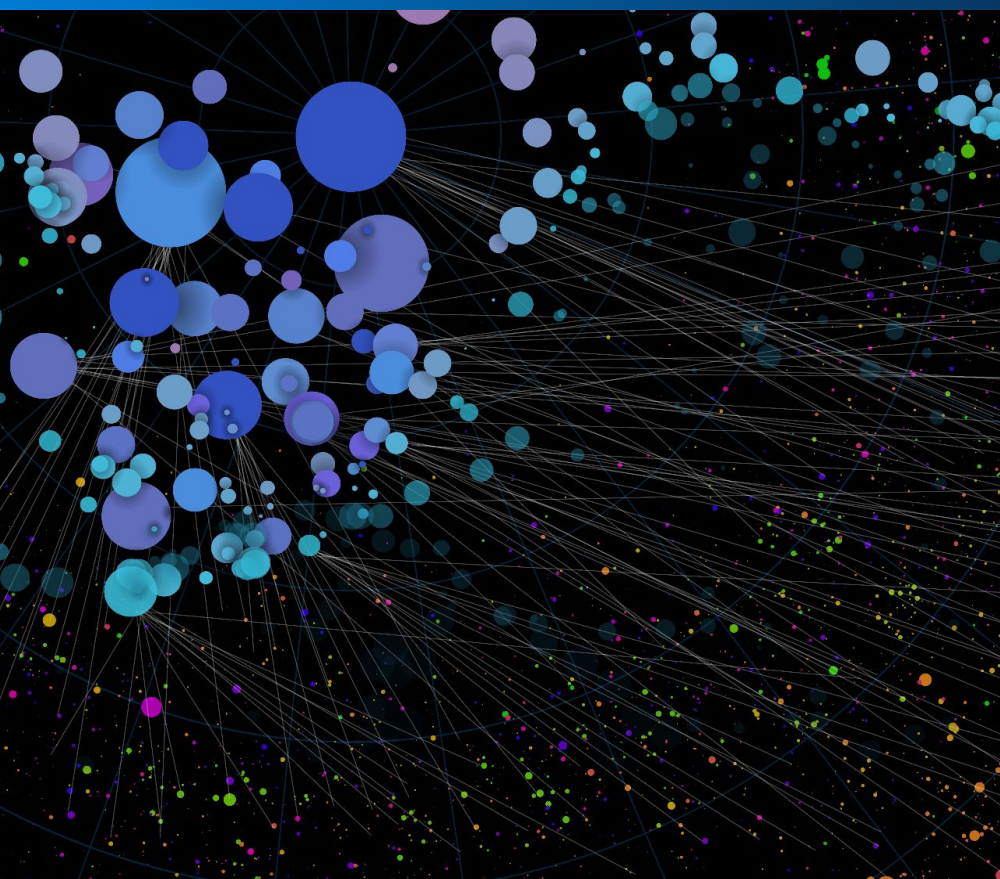
V — Variety of parameters brought together to provide the meaningful market intelligence

I — Intersectoral and cross-sectoral entities assessment

E — Entry and advanced levels of analysis suited for different types of users

W — Weekly-curated database for the latest news analysis across different topics

Platform User Guide Decision Tree

Private

Public

Equity type

Intelligence

Data

Research focus

Intelligence

Data

Research focus

Features Set 1

Features Set 2

Features Set 1

Features Set 2

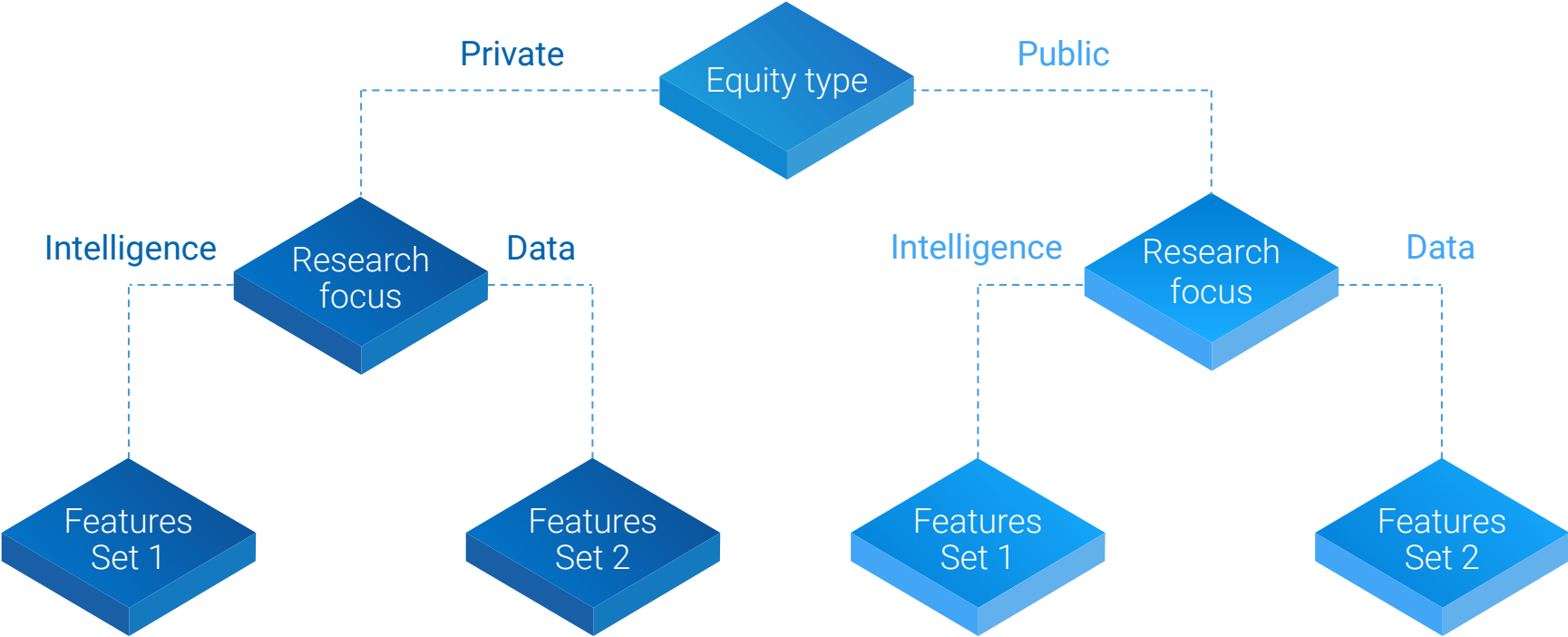# Platform User Guide Feature Sets 1 and 2

Feature Set 1

NLP-driven SWOT analysis and comparison

News and Entities NLP Analysis

Technology Forecasting

Private & Public Companies Cross Analysis

Cross-Industrial Comparative Analysis

Cross-Industrial Comparative Analysis

Public Companies Ranking, along with Predictions and Portfolio analysis

Feature Set 2

NLP-driven SWOT analysis and comparison

Services and Solutions Database

Custom Chart Builder and 3js library

Services and Solutions Database

Automatic Generation of the Asia Digital Ecosystem Analytical Case Study

Market Intelligence Tools and Solutions: Summary

Private equity through the lens of data-driven solutions, showing the unique industry's insights
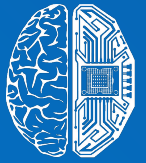
AI-driven competitors analysis for the companies assessment

AI-driven investors matching approach to form the most efficient syndicate for your allocations

Public equity-based benchmarking to understand the future perspectives of the new market players

Market Intelligence Tools and Solutions

Proposition Summary

Proposition Summary: Your Needs and Our Solutions

Your Needs

- Up-to-Date and Reliable Data Need
- Sustainability Assessment
- Companies Comparison
- Customizable Analysis and Visualization Needs
- Acquisition Expediency Assessment
- Market Trends Analysis
- Intellectual Property Trends
- Investment Market Dynamics

Our Solutions

- Asia Digital Ecosystem Database
- ML-based Competitiveness Assessment
- ML-based Companies Analysis and Comparison
- NLP-based Tagging
- Cross-industrial Comparative Assessment
- Deals, M&As and News Analysis
- ML-powered Articles and Patents Analysis
- Deals, M&As and Investors Analysis

Proposition Summary

The Asia Digital Ecosystem Big Data Analytics Dashboard is robust and data-driven, designed to provide users with a comprehensive and customizable view of statistics related to Asia Digital Ecosystem companies and funding rounds. This feature offers two distinct views: Companies and Funding Rounds. Users can generate dynamic bar charts based on their custom selections of round types, main categories, secondary categories, and the type of value they want to analyze. By enabling users to tailor their data visualizations, this feature promotes deeper insights and informed decision-making within the AI industry.
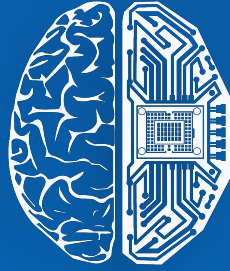
The Asia Digital Ecosystem Dashboard enables users to explore and visualize essential statistics related to Asia Digital Ecosystem companies and funding rounds. By offering customization options and dynamic bar charts, this feature empowers stakeholders to gain deeper insights into the Asia Digital Ecosystem industry, make informed decisions, and stay ahead of industry trends. It serves as an indispensable resource for anyone seeking to thrive in this dynamic and rapidly evolving field.

We are open to a mutually beneficial cooperation

Core Business Models

1. <u>End-to-End White Label Solution</u>: This comprehensive solution allows clients to leverage our advanced infrastructure while maintaining their own branding. It encompasses the full spectrum of services required for seamless integration and operation.
<u>Pricing</u>: £2,000,000

2. Bespoke Thematic Blueprints (SaaS): Our SaaS offering provides tailored thematic blueprints designed to meet specific industry needs. These blueprints facilitate streamlined operations, enhanced compliance, and strategic growth.
<u>Annual Subscription Pricing</u>: £250,000 - £500,000

3. <u>Advanced Analytics Services</u>: We offer cutting-edge analytics services to drive data-driven decision-making. Each project is customized to address unique client challenges, delivering actionable insights and measurable outcomes.
<u>Project-Based Pricing</u>: £25,000 - £150,000

We are open to a mutually beneficial cooperation

Asia Digital Ecosystem
Big Data Analytics Dashboard

Deep Knowledge Analytics Overview

Deep Knowledge Analytics is a DeepTech focused agency producing advanced analytics on DeepTech and frontier-technology industries using sophisticated multi-dimensional frameworks and algorithmic methods that combine hundreds of specially-designed and specifically-weighted metrics and parameters to deliver insightful market intelligence, pragmatic forecasting and tangible industry benchmarking.

Deep Knowledge Analytics can engage with strategic partners via several different approaches, including:

- Conduct customised case studies, research and analytics for internal (organizational) use, tailored to the precise needs of specific clients;
- Production of analytical reports for open source use (freely accessible);
- Perform customised solutions using specialised software, industry and technology databases, interactive IT-platforms.

Major Sectors of Expertise

| AI | DeepTech | GovTech | Blockchain | FinTech | Invest Tech |

Joint Reports with UK All-Party Parliamentary Groups Deep Knowledge Analytics specializes in conducting special case studies and producing advanced industry analytical reports on the topics of Artificial Intelligence, GovTech, Blockchain, FinTech and Invest-Tech. It has produced a number of comprehensive analytical reports in coordination with the UK All-Parties Parliamentary Groups on AI and on Blockchain, including its AI in UK Landscape Overview 2018 and Blockchain in UK Landscape Overview 2018, unprecedented in their scope and length, and collectively more than 3000 pages.

Deep Knowledge Analytics, in coordination with the All-Party Parliamentary Group on AI and Blockchain, produced and presented specialized analytical reports in the House of Lords.

DeepTech Focused Analytical Subsidiary
of <u>Deep Knowledge Group</u>

Deep Knowledge Group is a consortium of commercial and non-profit organizations active on many fronts in the realm of DeepTech and Frontier Technologies (AI, Longevity, FinTech, GovTech, InvestTech), ranging from scientific research to investment, entrepreneurship, analytics, media, philanthropy and more.

Analytical Departments of Deep Knowledge Analytics

Deep Pharma Intelligence	GovTech E-Governance Analytics	COVID-19 Analytics	Innovation Eye	Interactive MindMaps	SpaceTech Analytics

Joint Projects & Strategic Partners