Innoplexus Capabilities, Technology and Differentiators

For:

PPD

By: Innoplexus

Vatsal Agarwal, Vice president - Artificial intelligence & computational linguistics

Jackie Jordan, Vice President, Global Accounts

INNOPLEXUS™

Approach, Technology and Differentiators

Innoplexus AI understands the language of life sciences

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Innoplexus Evolution at a Glance

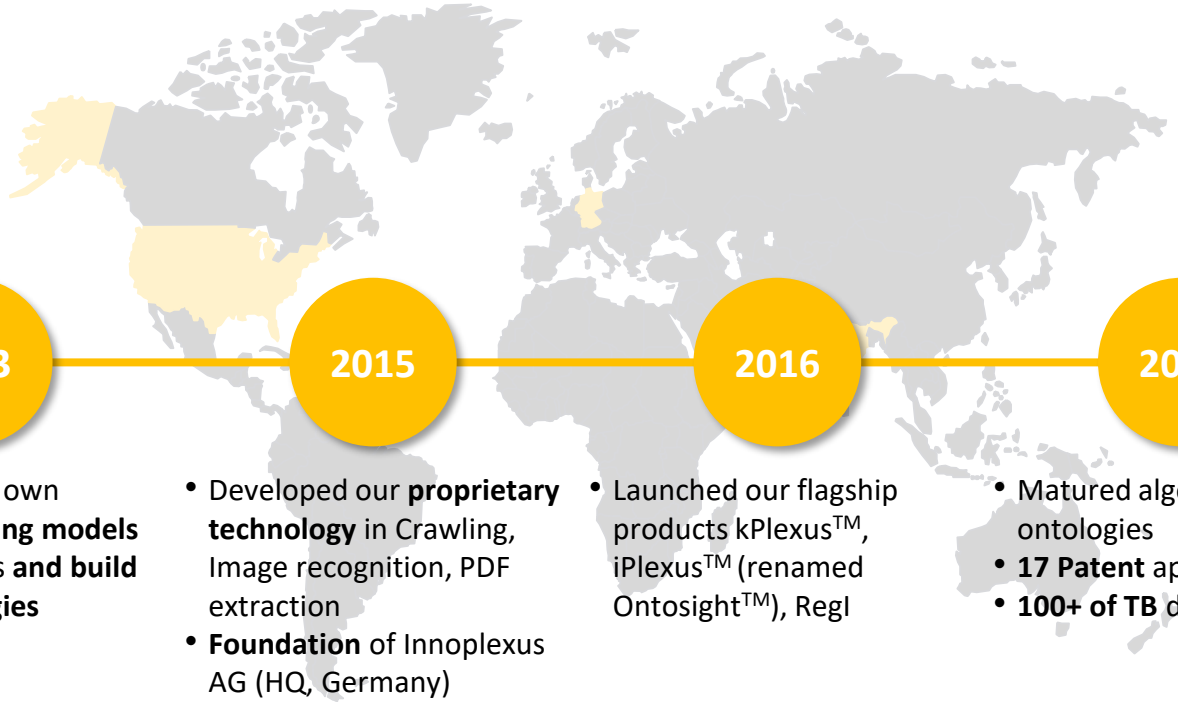
300+ top talents from leading universities and Institutes globally such as Max Planck Institute, Johns Hopkins and Indian Institutes of Technology

35 data scientists

9 UX

73 engineers

19 PhDs



2011

- **Foundation** of Innoplexus Ltd in Pune (India)

2013

- Developed our own **machine learning models** & text analytics **and build up our ontologies**

2015

- Developed our **proprietary technology** in Crawling, Image recognition, PDF extraction
- **Foundation** of Innoplexus AG (HQ, Germany)

2016

- Launched our flagship products kPlexus™, iPlexus™ (renamed Ontosight™), RegI

2017

- Matured algorithm and ontologies
- **17 Patent** applications
- **100+ of TB** data

2018

- **300+ people** experienced in Pharma, Life Sciences, Data Science, Software Development, Consulting
- **77+ Patent** applications
- **3 locations** in Germany, India, USA
- Launch of **blockchain** platform for **research**
- **20 global customers**

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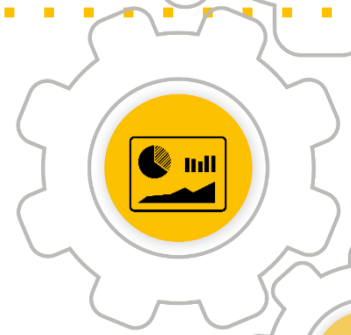
Innoplexus Believes Data Analytics Should be a Core Competency for our Clients

Higher Cognitive Tasks

Interpret Insights, apply company context and judgement; make strategic decisions

Lower Cognitive Tasks



Visualize data, build reports, create dashboards

Collect, structure, and analyze data

Our business model facilitates clients to build this core competency, rather than outsource it

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Innoplexus Proprietary CAAV™ Framework: AI and Machine Learning Across the Entire Framework

We help organizations move to **continuous decision making** by generating insights from structured, unstructured private and public data using our **CAAV™** framework

Crawl

Data

Crawl and index structured, unstructured financial, regulatory data using proprietary framework and ontologies

Aggregate

Information

Seamless integration and enrichment of enterprise and public data using AI, ML and Life Sciences Language Processing™

Analyze

Knowledge

Removing ambiguity, interpreting entity relationship using advanced Network Analysis techniques

Visualize

Decision

Presenting relevant Insights in intuitive, adaptive interface thereby reducing cognitive load

Innoplexus Key Differentiator: 90+ patent applications[1] across our proprietary CAAV™ framework

1. Patent applications in progress for this financial year

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Innoplexus Scans 95% of the World Wide Web to Develop Actionable Scientific Insights

Life Sciences Data Universe

Public Data

- Publications 35M+
- Congress articles: 3M+
- Theses & dissertations 1M+
- Authors / presenters: 20M+
- Clinical trials: 500K+
- Treatment guidelines: 35K+
- Patents: 26M+
- Grants: 5M+
- News agencies: 10K+
- PR news aggregators: 30+
- Institute & hospital websites: 1.4K+
- Social media: Twitter, physician forums, patient blogs, clinical etc.
- Track all other additional sources i.e. HTA reviews, company pipeline, analyst reports, regulatory bodies and all other public sources

Enterprise Data

- Structured
- Unstructured

Third Party Data

- Market data
- Trial data
- Databases
- API – JSON, XML etc.

Continuous Crawling

Our Proprietary Tech

- AI & Machine Learning
- Ontologies
- Computer Vision
- Entity Normalization
- Blockchain
- Network Analysis

Unique Life Science Data Ocean

Customized Solutions

- Pipeline Prioritization
- New Molecule & Biomarker Identification
- Drug Repurposing
- Patient Stratification
- Trial Protocol Design
- Trial Site Selection & Enrollment
- KOL Discovery & Engagement
- Clinical Guideline Comparison
- Patient & Physician Sentiment Analytics
- Market Intelligence
- Data & Ontologies as a Service

Delivery Options

- Dashboards
- Data Query Engine
- APIs
- Mobile Applications

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Innoplexus Patent Pending Technology Empowers Teams to Achieve Faster and Deeper Relevant Insights

How we differ?	Our Proprietary Tech.	How it works?
 Our Artificial Intelligence understands **Life Sciences**	Artificial Intelligence & Machine Learning Ontologies	**Our ontology is self-learning, creating an auto scaling research graph** • 31+ Million biomedical terms and concepts • 1+ Trillion data connections **We configure AI models over this Ontology creating an unbiased data set** • Life science language processing™ instead of NLP • "Cancer" is big deal in natural language, "Cancer" is a disease in life sciences
 Our systems process **Unstructured data**	Computer Vision / Image Recognition Entity Normalization	**We do not require data in templates** • Extract data from archives, congresses and other data in PDFs/images • Understands page layout, structure and separates tables and graphs **Our algorithms connect records across scattered data sources** • Covers name variations and synonyms. John D Smith vs. Smith, JD • Multiple terms abbreviated i.e. APR
 Our architecture connects **Enterprise data**	Blockchain Network Analysis	**We integrate enterprise data securely** • TruAgent™ makes data searchable without storing the original content • Ability to integrate with all third-party and enterprise data **Our setup generate insights on the fly** • Large scale network of information from public & enterprise • Continuous data integration and real-time insights

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Contact

Frankfurt (Germany):

Innoplexus AG
Frankfurter Strasse 63,
65760 Eschborn

Pune (India):

Innoplexus Consulting
Services Pvt. Ltd.
7th Floor, Midas Tower
Hinjewadi Phase 1, Pune 57

New Jersey (USA):

Innoplexus Holdings, Inc.
258 Newark Street, Suite 301,
Hoboken, NJ 07030

Innoplexus AG offers Data as a Service and Continuous Analytics as a Service products and solutions helping organizations move towards continuous decision-making by generating insights from structured and unstructured private and public data leveraging cutting edge, proprietary Artificial Intelligence, Machine Learning and Blockchain technologies. More than 80 patent applications make Innoplexus to a leading European AI champion. Founded in 2015, INNOPLEXUS AG is headquartered in Eschborn, Germany with offices in Pune, India, and Hoboken, USA.

www.innoplexus.com