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We are
Technologists
who try harder

We deliver Cloud Native Fast Data Intelligence with Functional Programming

At Knoldus, we specialize in digital product engineering. Our cutting-edge, future-ready technology can transform your systems, processes, and applications to achieve maximum business impact in the shortest time possible.

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Area of Expertise

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High Performance Systems

Engineer business systems that scale to millions of operations with millisecond response times.

Data Engineering, Strategy and Analytics

Enabling scale and performance for the data-driven enterprise.

Intelligence Driven Decisioning - AI/ML

Unlock the value of your data assets with Machine Learning and AI.

Cloud Engineering

Enterprise Transformational Change with Cloud platform.

01

High Performance Systems

■ We partner with your delivery teams, or take full ownership as Knoldus engineering team, to build the technology assets needed to solve your most complex business problems, transform your business; be that new products and capabilities, or the modernization of existing, legacy systems.

■ We help you to embrace a modern approach to engineering excellence, ensuring fast, frequent, and high-quality value delivery.

■ We build High Performance Systems architectures that support continual change and fast reactions to new business conditions.

Services

Digital Transformation, Microservices and API, Reactive Products, Cloud Native Development, Legacy platform transformation
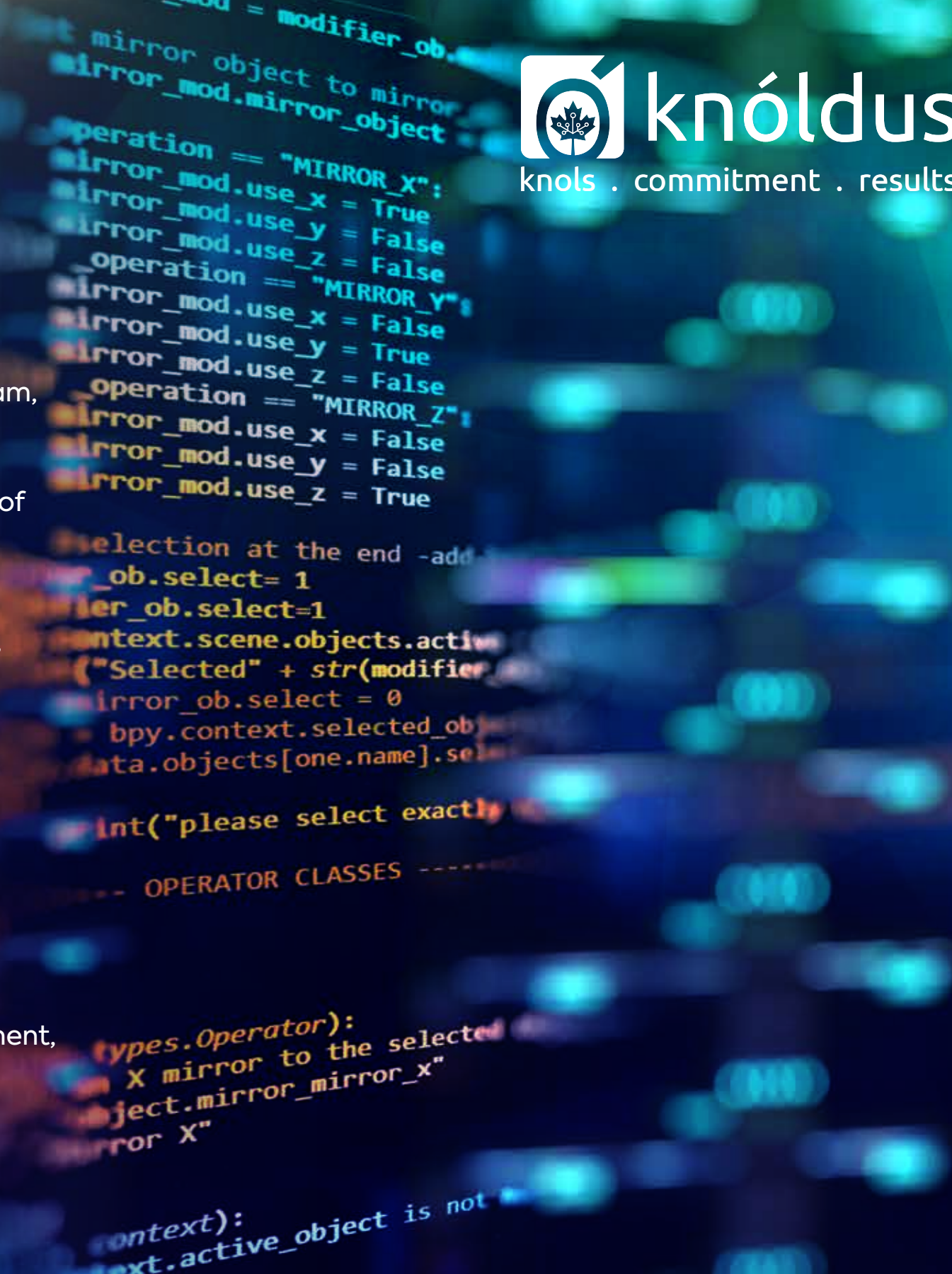
02

Data Engineering, Strategy and Analytics

- We understand your global data goals and concerns and develop a roadmap allowing your organization to garner the greatest benefit from all your data resources.

- We help clients identify and capture the most value and meaningful insights from data, and turn them into competitive advantages.

- Our experienced team of data engineering consultants can help your team develop the strategies for turning vast amounts of data into valuable business assets both with Big Data and Fast Data pipelines.

Services

Data Strategy Services, Data and Digital Platform, Data Engineering, Data Mesh, Data Lake and Warehouse, Advanced Analytics – AI
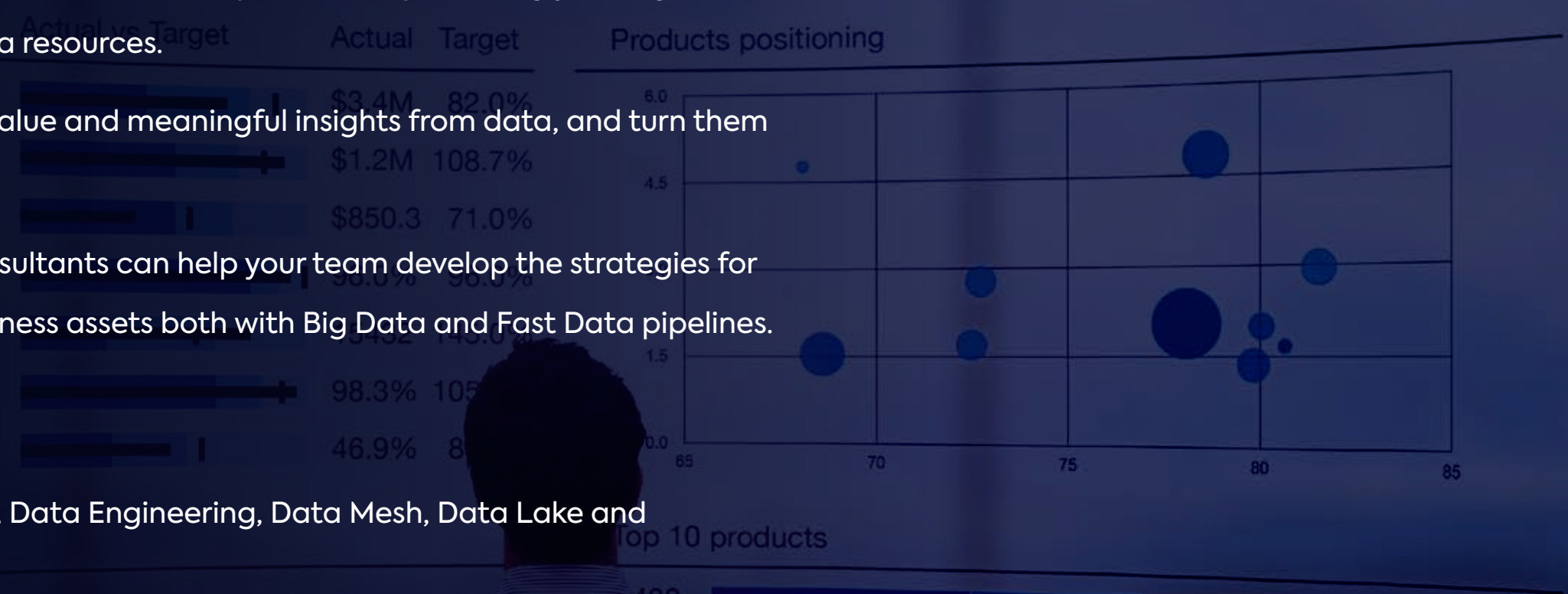
03

Intelligence Driven Decisioning - AI/ML

■ We help your business to leverage your data assets, creating the infrastructure, data culture, and technology ecosystems that allows us to unlock new sources of value in real-time.

■ We partner with you to amplify opportunities for innovation and identify risks, using our expertise in data strategy and insights, artificial intelligence, and machine learning, combined with 10+ years of software engineering excellence.

Services

Machine Learning Application, Artificial Intelligence, Data Science, DevOps transformations, Pipeline optimization

04

Cloud Engineering

■ Businesses are quickly adopting the Cloud Platform due to its multi-variant characteristics, such as zero disruption Live Migration, lucrative integrated tools, and unique pricing models.

■ Cloud Engineering offers innovation, agility, cost savings, and operational effectiveness. By utilizing Knoldus' expertise with Cloud, you can quickly absorb and process fresh data so that you can start to reap its benefits.

■ Knoldus has 100+ certified Cloud specialists who will collaborate with you to construct, move, protect, run, and optimize your cloud data environment.

Services

Cloud Strategy & Architecture Consulting, Application Modernization, CloudOps, Cost Engineering and Security

We are aware of the risks involved, and we care about doing it well and creating the best possible result.

Engagement Models

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01

BLEND IN

Engineers from Knoldus blending in with the clients engineering team to add value to the business.

02

PDAAS
(Product Development As A Service)

Delegating all engineering requirements to Knoldus. Knoldus is completely responsible for the success of the platform from SLAs to production.

03

EXPERT SOLUTION

Expert solution to a subset of engineering Practices like Audit, prototyping, Streaming solutions, security compliance management etc.

04

TRAINING AND MENTORING

Knoldus Academy for clients interested in upskilling their teams.

The recipe for our success depends upon the core practices we follow

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PAIR PROGRAMMING

Two heads are better than one, so we write code in pairs. Pair Programming provides a higher degree of quality assurance, encourages diversity of thought, and ultimately produces better software.

TEST DRIVEN DEVELOPMENT

We leverage tests to ensure our coding behaves correctly. This increases the accuracy, efficiency, and effectiveness of our coding.This help get your product to market on time and on budget.

ITERATIONS

We build software in short, one-week release cycles called iterations. This method provides built-in quality checkpoints, which allows our team to adopt the change requirements and continually improve the end product.

QUANTIFIABLE CODE QUALITY

We build software using a glasshouse concept. In each sprint, the objective quality of the code, including but not limited to test coverage, code smells, application security, and technical debt, is demonstrated as a part of the sprint retrospective.

CONTINUOUS INTEGRATION

Continuous Integration is the corner-stone of daily activities. Our diligent dedication to Continuous Integration results in immense confidence in the software we deliver to be robust and defect-free.

CUSTOMER CENTRIC COMMUNICATION

One of the keys to successful Agile development is open and consistent communication with our customers. This ensures our team stays on target with the customer's objectives, encourages customer involvement at every step, & builds a partnering relationship that focuses on mutual success.

Our Roadmap

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1

Ideation

Understanding the strategic intent and stakeholder needs to develop a shared vision.

Research & Prototyping

We move from "thought" to "thing" via rapid prototyping and proof of concept.

2

3

MVP

Deploy MVP to launch the product in the most efficient & expedient manner possible.

Enterprise Rollout

Activate an ecosystem to deliver at scale with CI/CD to support your requirements.

4

5

Run & Maintain

Keep the production humming with 24*7 SRE support and new feature edition as per the Knolway process.

Knolway Process

Knolway is a Knoldus proprietary process to develop high-quality software. It strives to be the optimal combination of People, Process, and Technology, thus leading to a way to develop software that succeeds and is delivered within the price and schedule constraints with high quality, thereby delivering business value.
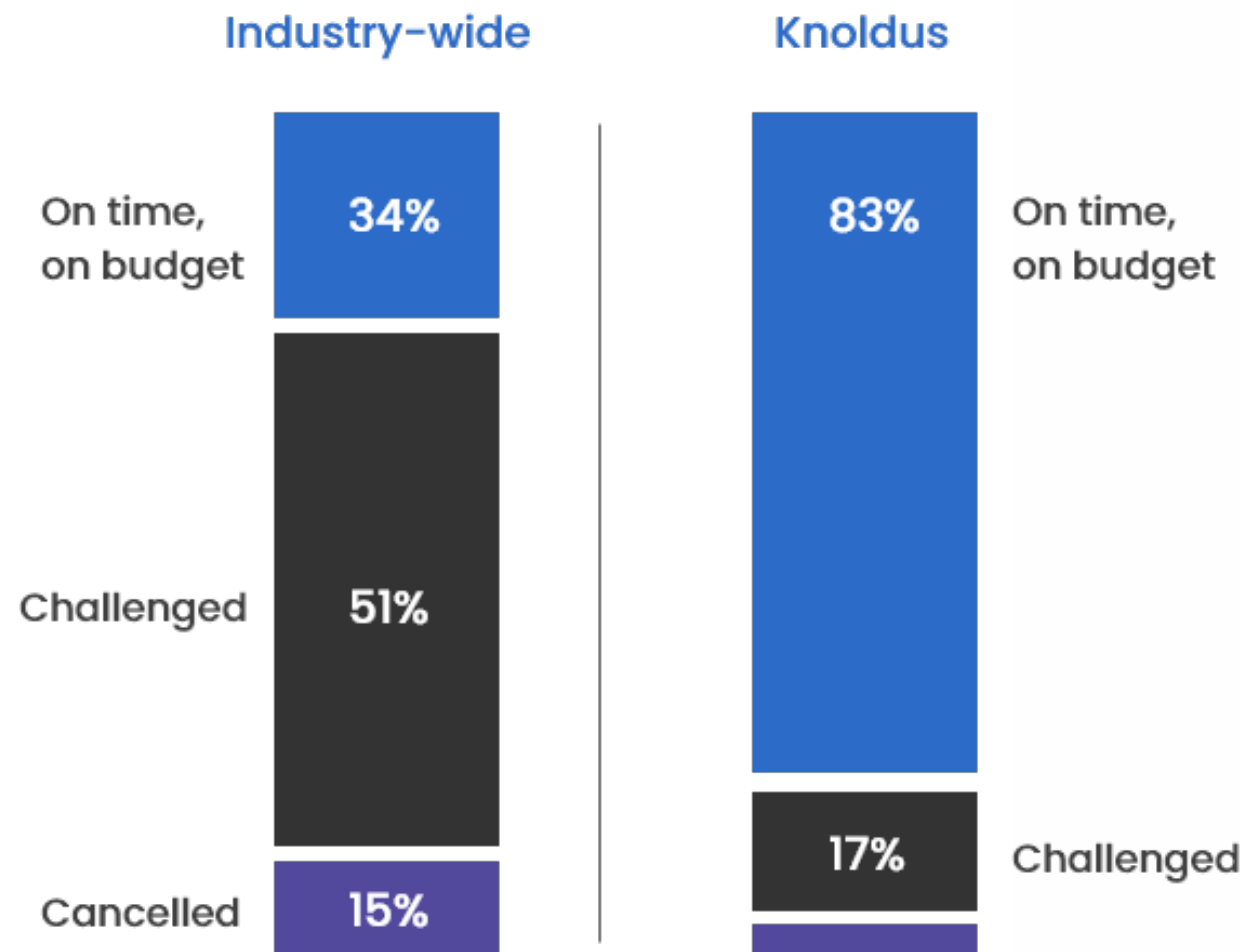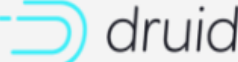
Challenged (Industry-wide)	Challenges (Knoldus)
Average Cost overrun is 43%	No cost overruns to direct per fixed price, fixed time agreement
Average time overrun is 82%	Average time overrun is less than 20%
Projects delivered with 42% of the planned capability	All delivered with 100% planned capability

Projects cancelled midstream — <1% of Knoldus engagements

Our Technology

Ingredients For Your Business Success

Functional Ecosystem	Fast Data Ecosystem	Kafka Ecosystem	Deployment & Monitoring	Continuous Integration	Cloud Capabilities
Scala	Spark	kafka	DC/OS	CODESHIP	Azure
akka	DataStax Enterprise Graph	nifi	docker	Jenkins	Google Cloud Platform
Rust	GraphX	akka streams	MESOS	Travis CI	amazon web services
Java8 play	Spark Streaming druid	RabbitMQ	yarn DATADOG	Terraform	ORACLE CLOUD
lagom	neo4j Dgraph		kubernetes		
			puppet OPENSHIFT		

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We are trusted by innovative organizations, big and small from a wide range of industries and stages of growth

Our Partners

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Kerb is a small, technology-driven AI company. It has been clear to us that our main challenge was to forge a link between the Java/Scala/Spark Big Data world of horizontally extensible databases and analytics, with the C++ world of AI and the mixed technologies of IoT. Finding a partner for this formidable challenge was not easy for a small startup. Knoldus, particularly the Architectural talents of Mr. Bhavya Aggarwal as well as the programming and DevOps expertise of the team he put together, gave us a platform at the cutting edge for us to layer in our technology and produce both a cost-competitive and responsive product for our customers.

Richard Burg

Chief Technology Officer (CTO) Kerb Technologies

Our Work

Many of the enterprise organizations we work with have spent years investing in new business capabilities, integrating acquisitions, and modernizing technology stacks, essential to bringing best-of-breed solutions to market. These strategic investments could, however, result in a tangled mess of legacy technology, skill sets, processes, and culture. We bring more than a decade of global software delivery experience to every partnership. We help our clients to remove technology roadblocks and leverage their core assets. From big banks and global retailers to revolutionary healthcare start-ups, we've built the software behind some of the world's most successful businesses.

Finance

The Financial Services and Insurance industry is in the middle of a perfect storm. Complex, accelerating forces are transforming the value chain of every financial market.

Some of our Clients

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Case study

Knoldus provides a reactive architecture to improve the efficiency and extend the business benefits to a leading Bank in America.

CHALLENGES

→ Migrating Application to Common Messaging Platform.

→ Improving the Security Infrastructure.

→ Making the system compliant with regulatory requirements (MiFID II).

→ Edge cases in trade processing leaking revenue opportunities .

SOLUTIONS

→ Knoldus re-engineered the complete infrastructure (legacy systems and applications) that the client had been using previously, with a reactive system. The new system provides unlimited scalability, along with additional features and functionalities.

RESULTS

→ Automated edge cases in trade settlement process for large volume trade processing thus resulting in 130% increase in revenue.

→ Automated monitoring and issue tracking system. Thereby, Improved efficiency by 40%.

→ Increased the client onboarding by 58% without system failure.

Hi-Tech & IoT

The fast-paced global Hi-tech industry is transforming and rapidly characterized by continuous product innovation and compliance adherence, shortening product life cycles, changing market needs, and complex circuitry due to rapid advancement & innovation in technology.

Some of our Clients

Case study

Knoldus helps an American multinational IT organization not only build customer value, also gain momentum for analytics transformation.

CHALLENGES

→ Over 20 billion sensors deployed in data centers all around the globe sending trillions of metrics each day to InfoSight, providing analytics on petabytes of telemetry data. The challenge is to provide insights in the real-time to deliver customer value.

SOLUTIONS

→ Enhance the customer experience with the near real-time insights with streaming applications and closes the gap between data and insights.

RESULTS

→ Knoldus provides a complete streaming architecture, including microservices, multiple streaming engines, cluster management, monitoring, and security. With all this the company's revenue increased by 200% and customer satisfaction increased by 5 folds.

Consumer Internet

In the new age, digital customers ask for information anytime, anywhere.

They demand superior multi-channel experiences and look for personalized,

contextual engagements, hence putting pressure on businesses to implement

cutting-edge technology to transform the consumer experience.

Some of our Clients

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As we were searching for a professional, experienced partner capable of managing a complex and continuously evolving development process, Knoldus convinced us from the beginning with a comprehensive concept exactly hitting our requirements in architecture and design. The highly motivated team assigned to us shows not only the level of commitment we expected, they also anticipate development steps and come up with own ideas regarding product improvement and the integration of new technologies. As recommendations are our business, we definitely say: Yes, we recommend Knoldus!

Matthias Fenz
CEO & Co-Founder : Recommendo

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Case study

Improved Inventory Management and accelerated time to insight for one of the largest delivery partner

CHALLENGES

→ Replacing an Inefficient, Cumbersome, Manual Process.

→ A scalable, flexible, transparent, and easy-to-update solution was needed.

SOLUTIONS

→ An End-to-End Data pipeline and automated Data Science Solution for Inventory Forecasting.

→ Faster, flexible processing with big data.

→ Accuracy measurement, measuring the accuracy of the forecast following the principles of machine learning systems.

RESULTS

→ Knoldus developed a Guided Analytics application that creates data visualization, interactive and scheduled dashboards, and inventory forecasting models, as well as generates forecasting for their business intelligently and collaboratively.

Travel

We work with some of the world's largest airlines, the hospitality sector, major transport industry vendors, airports, and online travel giants. Together we help our clients transform their customer experience, enable innovation, and drive operational efficiencies and revenue growth.

Some of our Clients

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It feels like they are part of our team. While the project is ongoing, the results thus far have met the expectations of the internal team. Knoldus Inc. utilizes best practices to achieve results and successfully integrates with the internal team. The team is dedicated, hard-working, and knowledgeable.

Alex Dizengof
Co-Founder & CTO : Carbyne

Case study

Knoldus helps a Global Cruise Company to migrate their legacy system to microservices by leveraging the Apigee Edge platform.

CHALLENGES

→ Legacy and Bulky system, and unable to scale and innovate.

→ Details made available to guests on a day to day basis. No way to disseminate knowledge beforehand.

→ Lack of Multi language support for international guests.

→ Not optimized for Pre and post cruise upsell.

→ Getting behind each day on new technology advancements, stifling innovation.

→ Zero personalization and micro segmentation.

SOLUTIONS

→ Lagom based microservices, with Kafka as the integration backbone for transferring real time data across ship and shore. Kafka based CDC solution to expose the legacy systems as microservices.

RESULTS

→ Delivered over 50 microservices and launched a mobile app.

→ Customers get unified guest experience across ship and shore.

→ Customers are on the way to eventually decommission the legacy platform.

Retail

Our retail strategies are being shaped by a new generation of customers, who think and shop significantly differently, where technology is a differentiator, not a constraint. Modern retailers must be nimble, engaging, and relevant to the changing needs and want of tomorrow's customers; at both a functional and emotional level.

Some of our Clients

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We engaged with Knoldus for complete re-write of our existing system using Scala and Akka. The Knoldus team demonstrated professionalism and great work ethic delivering on commitments, sometimes working long hours and weekends to meet production deadlines. The team was capable, very flexible and responsive to our needs and always available to help address any issues. I highly recommend the Knoldus team and hope to use their services in the future projects.

Devshi Pindoria
Sr. Director : Service Source

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Case study

Knoldus helps a Global Retail Giant boost conversions by 20% with Akka Services.

CHALLENGES

→ Need for a more flexible and iterative development environment.

→ Need to reduce its dependency on specific infrastructure.

→ Need to improve scalability and performance.

→ Need for a solution that would be easy to integrate into its existing infrastructure with minimal downtime.

SOLUTIONS

→ Since Scala runs Java code natively, the organization would be able to gently transition away from its legacy stack and towards a modern environment.

→ By harnessing Lightbend's Akka Platform reactive programming paradigm, it can leverage modern multi-core architecture capabilities to handle massive numbers of concurrent users without requiring cumbersome multi-threaded Java programming.

RESULTS

→ With its newly optimized backend architecture, the company saw a 20% boost in conversions on web traffic and a 98% increase in mobile orders in the four weeks after launch and enjoyed its most responsive Black Friday ever.

→ The rebuilt backend handled roughly 400,000 page views per hour at peak load times and millions of simultaneous requests from its web frontend. This contributed to a 36% reduction in page load times for its visitors.

Media & Publishing

Digital-first companies have turned the traditional media industry on its head.

Today's tech-driven audience controls when they consume content, where it is, and on what device. We help our Media and Publishing clients remove technology barriers, modernize their applications and deliver superior products and services from concept to market speed.

Some of our Clients

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>
> We initially engaged Vikas and his team to initially do an audit on our platform and right after that, we quickly realized that we needed to transition over the entire development to Knoldus because of their expert knowledge of Scala and the professionalism of their entire team. Their engineering team has been able to transform our system into a world class system in a very short period of time and they continue to make it better as we continue working with them. We are always impressed and grateful with their constant support and dedication to the success of the system and the business overall.
>
> **Carlos Yong**
> *CTO : 3TierLogic Inc*

Case study

Build A Platform To Find And Analyze Content Across Traditional Data Silos To Derive New Value-Driven Insights for a world-leading provider of information solutions.

CHALLENGES

→ The need for a platform that can join knowledge from different domains. Make it searchable, and the search engine reacts as if it's a human by understanding the question, phrasing it into a machine-readable query, crawling through the databases, and bringing results along with the accuracy of the answer is likely to answer the customer's questions.

SOLUTIONS

→ Build a platform ELSSIE that connects information from multiple sources stored in the format of a knowledge graph and maintained by organizations' Subject Matter Experts (SMEs). ELSSIE enables users to find and analyze content across traditional data silos to derive new value-driven insights.

RESULTS

→ ELSSIE saves a lot of manual effort and time while fetching the relevant data from the research papers.

Healthcare

Coordinating care across a health system is a complex business. New systems have to be deployed without any disruption to the existing ones. Emerging technologies need to be leveraged for competitive advantage without losing track of privacy and compliance. We deliver custom solutions and consulting to provide immediate, tangible benefits to our clients and their patients.

Some of our Clients

PHILIPS
Healthcare

fitfÿles

/ZILLION®
Behavior. Architected.

COTIVITI

"

Working with Knoldus on two separate occasions have both been the best offshore experience I have had in my career. Both teams have been exceptionally knowledgeable and professional in everything they have done. Vikas and his team has really taught us how to develop more effective Spark code and has been a pleasure to work with. I would not hesitate to work with Knoldus anytime.

Larry Presswood
Lead Architect : Zillion Inc

Case study

A Health Technology Company Digitizes The Aging And Caregiving Platform With The Help Of Knoldus Api Solution.

CHALLENGES

→ The manual onboarding process took days to integrate a new customer.

→ Customers could not make changes independently.

→ No common platform for the current solutions built on the old technology stack.

→ Users could not track medical alerts, notifications, and device status.

→ No personalized recommendations to patients based on the medical conditions.

SOLUTIONS

→ Automated onboarding process.

→ Personalized promotional recommendations are now possible on the basis of the user's medical history & profile.

→ Family members can share notes about the health of their loved ones and upload pictures & videos within the application.

→ Medical profiles are well-maintained with live tracking of the aging person's well-being.

RESULTS

→ Automated onboarding process, reduced time from 15 days to 2 mins thus resulting in 170% increase in revenue

→ Increase the customer engagement by 87% with real-time notifications and personalized recommendations.

→ Entire application was built on the principles of reactive programming thus improving the efficiency by 58%.

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Ready to gain a competitive advantage with Future Ready Emerging Technologies?

Contact us on **Info@knoldus.com** and we would be excited to Implement your Aspirations!