



intel® + AIBLE

Case Studies from the
“Impact from AI in 30 Days” Program

www.aible.com/casestudies

Impact from AI in 30 Days

Serverless-First Approach for Data Exploration and Automated Machine Learning Intel® and Aible Performance Benchmark and Case Studies Report

According to MIT-BCG “a mere 10% of Organizations Achieve Significant Financial Benefits With AI”.*

The Gartner report ‘A CTO’s Guide to Top Artificial Intelligence Engineering Practices’ published 29 October 2021 states, “AI projects are characterized by high failure rates and take a long time to move from pilot to production. Slightly more than 50% make it from pilot to production, and those take an average of nine months.”

Reducing the risk and time to value of AI projects is imperative for the success of the AI ecosystem. The Intel® Disruptor Innovation Initiative identified that Aible delivers business value from AI in 30 days, and collaborated with the enterprise AI company to change the “art of the possible” in AI.

Aible: The only enterprise AI solution that guarantees impact in 30 days¹

Aible is rated #1 for the Automated Machine Learning use case in the 2021 Gartner® Critical Capabilities Report for Cloud AI Developer Services. The easy-to-use solution meets business teams where they are with optimized AI predictions and recommendations for a wide variety of use cases. The result? Organizations are enabled to make quicker, better, strategic and tactical decisions that deliver business value quickly.

¹ Intel does not guarantee the performance of 3rd party products. Please consult Aible for more information on their satisfaction guarantee program. More details available at: aible.com/blog/the-aible-payback-guarantee-ai-that-delivers-impact-in-one-month

* www.bcg.com/en-us/press/20october2020-study-finds-significant-financial-benefits-with-ai

The team behind Aible has collectively implemented thousands of successful AI projects over two decades across a wide variety of customers and industry segments. Because the team has a proven history of delivering results, Aible’s offering includes a satisfaction guarantee. To validate the “30 days to AI value” approach, Aible partnered with Intel® and offered 25 organizations access to the AI solution via the Intel and Aible Immediate Impact Program. Each of the participating organizations, which include Fortune 100 firms, defined one business objective they wished to analyze and improve, and published the value they identified from this project directly to Intel. Case studies for these 30-day engagements are available in this report. These include:

- A Fortune 500 technology company used Aible to identify actionable insights for sales opportunities in 29 days
- Another Fortune 500 Healthcare Provider found new insights in Social Determinants of Health (SDoH) data with a 20X improvement in speed to insight in 15 days
- Nova Southeastern University used AI from Aible to potentially improve student retention by 17% in 15 days
- A multinational CPG company used Aible to identify ways to drive \$10M in additional sales in just 17 days
- A global food company identified ways to reduce food wastage by more than 10% in 27 days using Aible
- A global manufacturer identified ways to reduce the impact of late shipments by more than \$4M annually in just 17 days using Aible
- Another leading University used AI from Aible to mitigate student attrition by 12% in 30 days
- A Leading Food & Beverage services company used Aible to identify actionable patterns and ways to improve sales efficiency in 13 days

Some thematic elements are already becoming clear in these case studies that explain why the Aible “30 days to AI value” approach is effective:

No one has perfectly clean data:

In almost every case the original dataset was not perfect and had to be updated a few times before the project could be completed. In minutes, Aible Sense automatically evaluates whether the data has signal and this made it easier for the project teams to “fail fast” and iterate until they got to the right data. Aible Sense also automatically adjusts for many common data quality problems and even automatically recommends derived variables (also called ‘features’) to improve the impact of predictive models.

Business user involvement is key:

In several cases the business users suggested changes to the dataset, requested more focused analysis (country-by-country for example), or even changed the use case (from demand forecasting to overstock prevention in one case). Aible Explore enabled the project teams to engage with the business stakeholders much earlier in the project by collaborating with them around an augmented open world exploration of their data. Because they didn’t have to wait for the predictive modeling to be completed, and could get business stakeholder feedback earlier in the project, the teams avoided having to change the project after investing months of effort.

AI must be grounded in business realities and objectives:

In every project, understanding the business objective was key to delivering value. In one case, the customer’s key focus was helping their salespeople make their first sale as quickly as possible. They also had significant constraints on how much effort they could spend on training their salespeople and thus had to assign the best candidates to the more expensive training. Aible Optimize automatically ensures that the predictive models are optimized to deliver business impact in light of the business objective and the business constraints. This enabled the project team to deliver \$10 Million in business value in 17 days (see Customer Spotlight #4 on page 9).

Components of Cost of AI Training

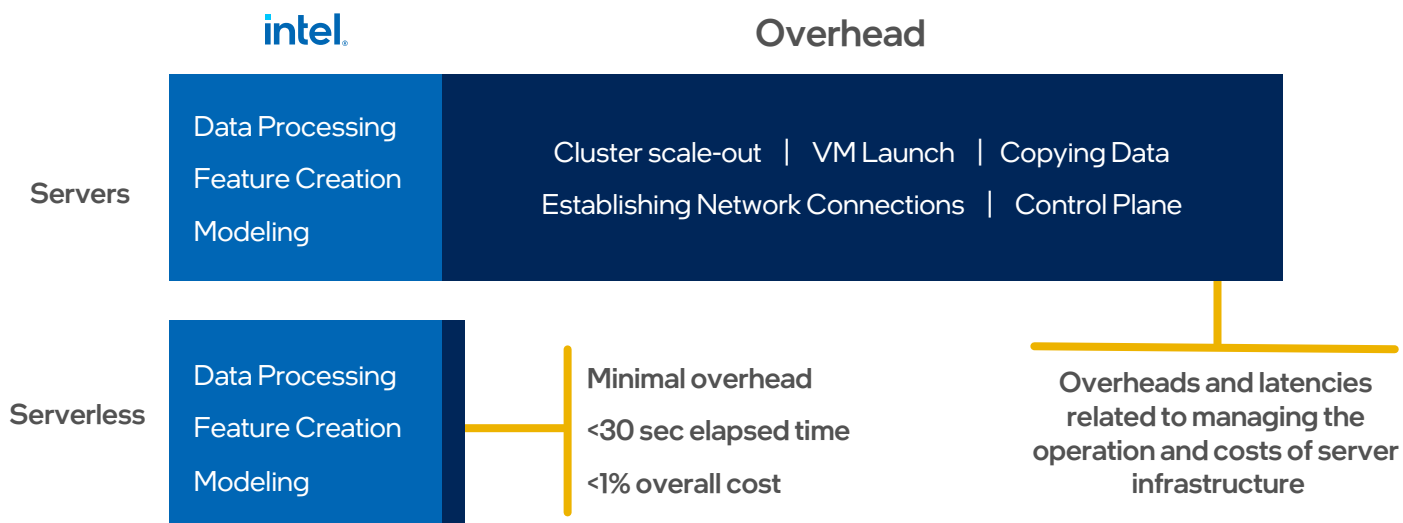


Figure 1

To validate this approach, Aible and Intel benchmarked the performance and total cost of ownership characteristics of serverless computing vs. server architectures for model training.

Benchmark Study initial observations

Organizations like Aible can take advantage of newer Intel technology to improve workload performance and further optimize their applications on serverless. In Aible's case, when using Intel's newer compute platforms, specifically 3rd generation of Intel Xeon Scalable processors, Aible's autoML platform can leverage the wide range of Intel's oneAPI frameworks, such as Tensorflow, Numpy, Scipy, and Scikit-learn optimizations.

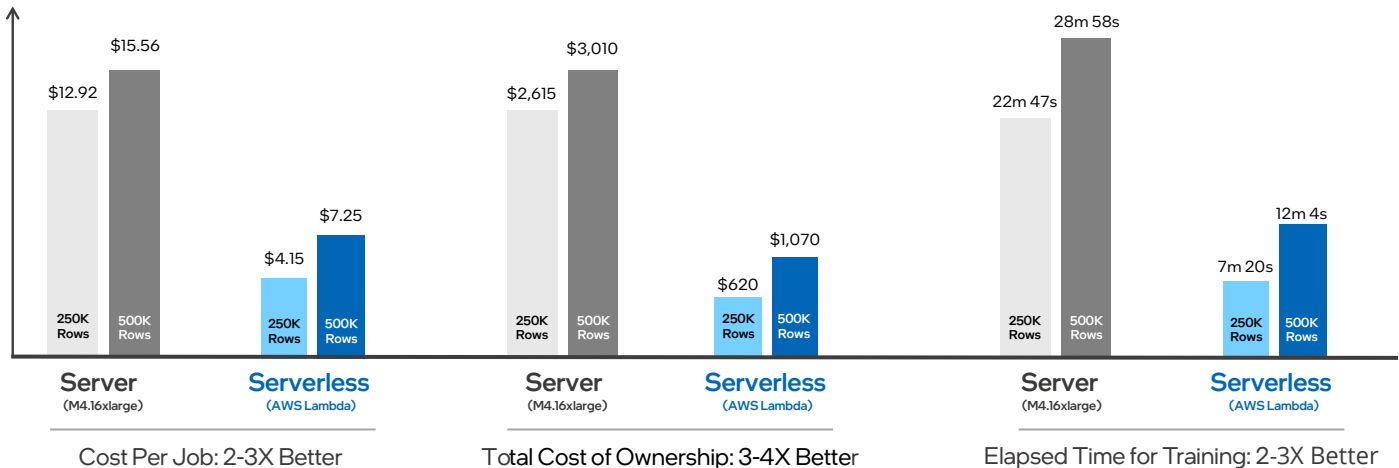
With server-oriented architectures, upwards of 70% of time and costs are tied up in infrastructure overhead which isn't improved by the performance of the processor. These include overheads for cluster scale-out, VM launch, establishing network connections, copying data and other latencies associated with managing the operation and costs of server infrastructure. On serverless these unrelated activities and costs are mostly eliminated and processor performance improvements more directly affect cost, TCO, and elapsed time performance.

The study also demonstrated a better experience on serverless computing compared to traditional server architectures with comparable Intel processors. When deployed to serverless functions the application was:

- 2-3X more cost effective,
- 3-4X lower Total Cost of Ownership (TCO), and
- 2-3X faster

than on server architecture.

Serverless vs. Servers: Results from Intel-Aible Benchmark Study



Serverless computing is 2-3X less expensive than server architectures

The cost of end-to-end model training on server architecture vs. serverless computing using comparable microarchitecture for both assessments was reviewed. Serverless costs were 2-3X more cost effective than server costs: \$4.15 vs. \$12.90 for 250K rows dataset and \$7.25 vs. \$15.50 for 500K rows dataset.

Serverless computing has 3-4X lower TCO than server architectures

These costs only reflect the compute capacity required to actively train models and does not include the infrastructure needed to operate the server cluster. With the assumption that infrastructure cost (Kubernetes backplane, control nodes and networking) is \$675/month and the cluster is used to conduct 150 model training jobs over 30 data sets in a month, then the Total Cost of Ownership (TCO) of this benchmark actually shows that serverless TCO is 3-4X better than server with comparable processors: \$620/month vs. \$2,615/month for 250K rows dataset and \$1,070/month vs. \$3,010/month for 500K rows.

Note that typically most data science organizations process a much smaller number of datasets, conduct fewer model runs and will likely run their training on more expensive server instance configurations. As such, the actual TCO difference is likely to be far greater than outlined above.

Serverless computing is 2-3X faster in terms of elapsed time

After assessing infrastructure cost differences, the study then observed the elapsed time (wallclock time) of the model training.















The wallclock time for exploratory data analysis and model training on serverless vs. server computing, using comparable processors, was 2-3X better: 7 mins 20 secs vs. 22 mins 47 secs for 250K dataset rows and 12 mins 4 secs vs. 28 mins 58 secs for 500K rows. Note that the actual elapsed time from when the model training was started and the first models started returning was less than a minute for serverless. As such, if a mistake had been made, that would become evident within minutes of starting the training. The analyst or data scientist is not beholden to lengthy model processing times to begin reviewing the data.

So what next?

The next section of this report highlights case studies where organizations saw impact in 30 days. Go to: www.aible.com/casestudies to get additional end-customer case studies as they become available. Each case study will talk about how quickly end-customers were able to achieve tangible benefits from AI by using the serverless approach. The final benchmark report will be posted when available, later this year.

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Case Studies from the “Impact from AI in 30 Days” Program

		USE CASES						
								
		Sales Optimization	Logistics Optimization	Customer Retention	Marketing Optimization	Collections Effectiveness	Customer Experience	Health Analytics
INDUSTRIES	 CPG / Manufacturing	Pg. 10, Pg. 23	Pg. 12	Pg. 23	Pg. 23, Pg. 25	Pg. 18		
	 Healthcare	Pg. 22				Pg. 17	Pg. 21	Pg. 8
	 Education			Pg. 9, Pg. 13	Pg. 16		Pg. 24	
	 Software / Technology	Pg. 7, Pg. 19, Pg. 26						
	 Food & Beverage	Pg. 14	Pg. 11					
	 Construction		Pg. 15					
	 Distribution		Pg. 20					

CUSTOMER SPOTLIGHT 1

Fortune 500 technology company uses AI from Aible to identify actionable insights for sales opportunities in days

Company Profile

Fortune 500 technology company

Industry

Communications and IT

Region

Global

Challenge

As the company migrates product offerings from on-prem and perpetual licenses to the cloud with subscription licensing, their global sales team aimed to accelerate business growth by optimizing their sales outreach efforts and better identify the highest value opportunities.

Solution

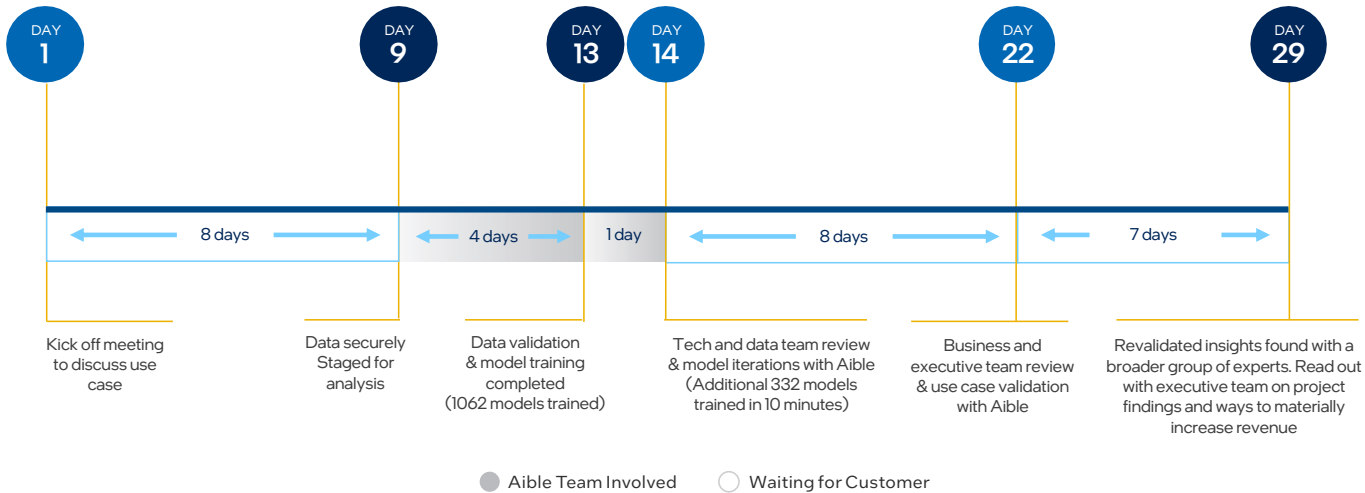
Initial data preparation, data cleansing, and analysis were completed within 5 days. Model training was completed, and analysis was shared with the tech and data teams, with only minor adjustments to the sales use case. In a matter of minutes Aible provided key insights from the data that were validated with the executive team.

Use Case & Project Details

- **Use case analyzed:** Sales opportunity prioritization
- **Potential Project Results:** Actionable insights on sales opportunities
- **Time from data provision to project completion:** 20 days
- **Elapsed time from start of model training to completion of over 1,394 models on serverless infrastructure:** 2 hours total across over 5 project iterations

Outcome

Aible helped the global sales team identify ways to increase revenue materially within days, using serverless AI.



"The fact that in a matter of minutes Aible revealed actionable insights within our data that we were not already aware of was surprising. The way it spanned strategic scenario planning, resource planning, analytics, and opportunity scoring in one single platform can be transformative for the way we manage sales."

- Sales Technology Leader

CUSTOMER SPOTLIGHT 2

Fortune 500 Healthcare Provider finds new insights in Social Determinants of Health (SDoH) data with a **20X** improvement in speed to insight

Company Profile

Fortune 500
healthcare solution
provider

Industry

Healthcare Services

Region

US

Challenge

The business team wanted to leverage Social Determinants of Health (SDoH) insights to improve health outcomes for members including ways to lower emergency room visits, inpatient admissions and inpatient lengths of stay.

Solution

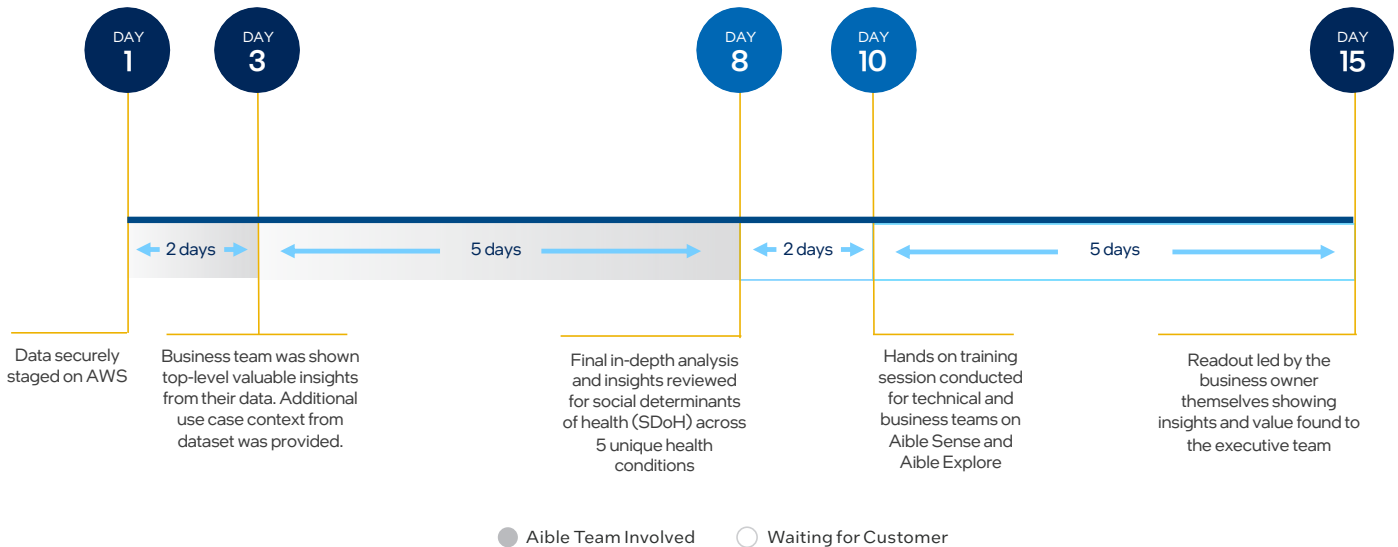
The business team was trained to use Aible and self-sufficiently improve their speed to insights. Aible enabled them to analyze datasets in minutes by just choosing the health condition they wanted to understand. Within days, they were able to perform in-depth analysis of SDoH across 5 unique health conditions by region.

Use Case & Project Details

- **Use case analyzed:** Identify insights from Social Determinants of Health (SDoH)
- **Potential Project Results:** 20X improvement in speed to insight
- **Time from data provision to project completion:** 15 days
- **Elapsed time from start of data evaluation to actionable insights on serverless infrastructure:** 3 minutes per dataset on average

Outcome

20X improvement in speed to insights.



"I absolutely love using Aible. As a Technology Manager I see the best fit for Aible in our organization. Our Business users were able to get into the tool and explore patterns and interactions in our data which seemed impossible to do prior to using Aible."

- Program Director

CUSTOMER SPOTLIGHT 3

Nova Southeastern University uses AI to potentially improve first-time in college student retention by **17%** in **15** days



Company Profile

Largest private, selective research university in Florida

Industry

Higher Education

Region

Southeast US

Challenge

Nova Southeastern University wanted to leverage their data assets to improve student retention and optimize student welfare, particularly aiming at students within their undergraduate program

Solution

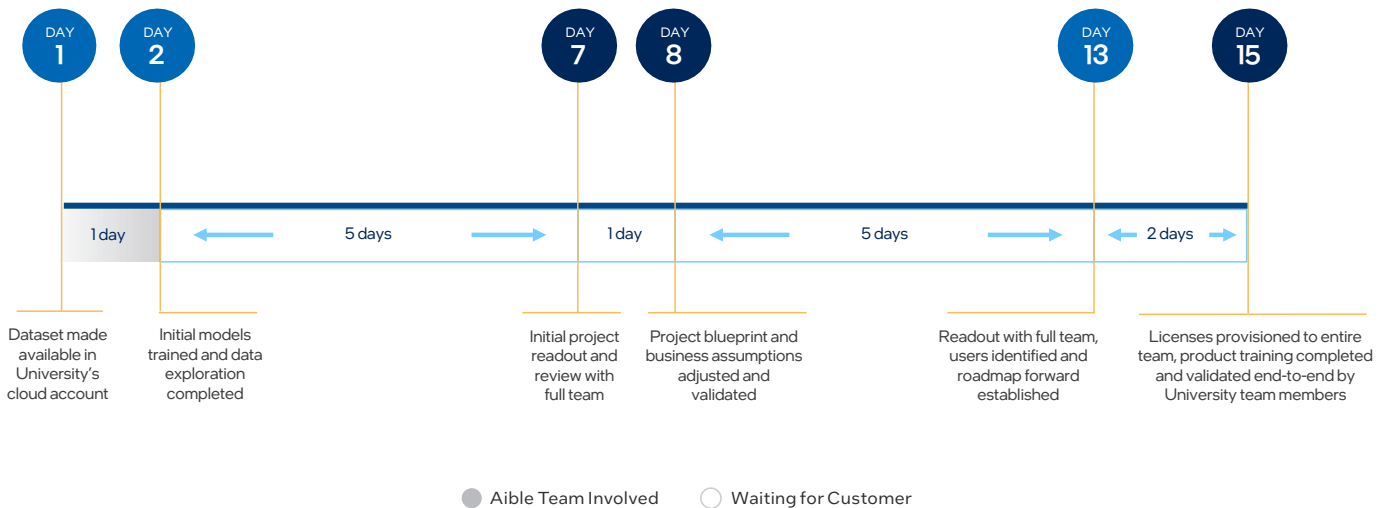
Aible helped identify students who were most likely to leave. This helped the center for academic and student achievement target and prioritize their retention efforts to the most at-risk students.

Use Case & Project Details

- **Use case analyzed:** First-time in college student retention
- **Potential Project Results:** 17% reduction in student attrition
- **Time from data provision to project completion:** 15 days
- **Elapsed time from start of model training to completion of 500+ models on serverless infrastructure:** 6 projects trained in ~25 minutes per project

Outcome

Aible helped identify ways to potentially lower student attrition by 17%.



"During a one hour meeting we went from a raw dataset, to exploring insights in the data automatically highlighted by Aible, to creating and even deploying a predictive model. The collaboration with academic and financial aid advisors helped us further optimize the models and made them more useful - but we went end-to-end from raw data to deployed model in such a short amount of time."

- Don Rudawsky
VP Institutional Effectiveness, Nova Southeastern University

CUSTOMER SPOTLIGHT 4

Multinational CPG company of beauty and cosmetics uses AI to identify ways to drive **\$10M** in additional sales by optimizing first orders in **17** days

Company Profile

Multinational manufacturer and distributor of beauty and cosmetics products

Industry

Consumer Goods and Manufacturing

Region

International

Challenge

A global cosmetics and manufacturing company aimed to improve the rate of consultants closing their first sales order and optimize resources spent for sales consultant recruitment and training.

Solution

Aible identified potential sales consultants who are most likely to close their first order. This helped in determining which candidates to prioritize for in-person training versus less resource-heavy, all-digital training.

Use Case & Project Details

- **Use case analyzed:** Onboarding and first order optimization
- **Project Results:** \$10M revenue
- **Time from data provision to project completion:** 17 days
- **Elapsed time from start of model training to completion of over 7300 models on serverless infrastructure:** 4 hours total across over 30 project iterations

Outcome

Aible helped identify ways to increase revenue by \$10M with serverless AI in 17 days.



"The speed of the Aible product and the rapid iteration it enables is outstanding. I challenged them to train the models live in front of me. The first set of models completed training in less than a minute and several hundred models completed in less than 3 minutes. This was for a significant sized business dataset that had taken us much longer to analyze manually."

– Chief Technology Officer (CTO) & Chief Data Officer (CDO)

CUSTOMER SPOTLIGHT 5

Global food company identified ways to potentially improve point of purchase overstock food wastage by over **10%** in **27** days

Company Profile

Global innovative food company with thousands of locations across 11 countries

Industry

Retail

Region

EMEA

Challenge

A global innovative food company wanted to predict the right quantity of stock to send to stores to minimize food waste.

Solution

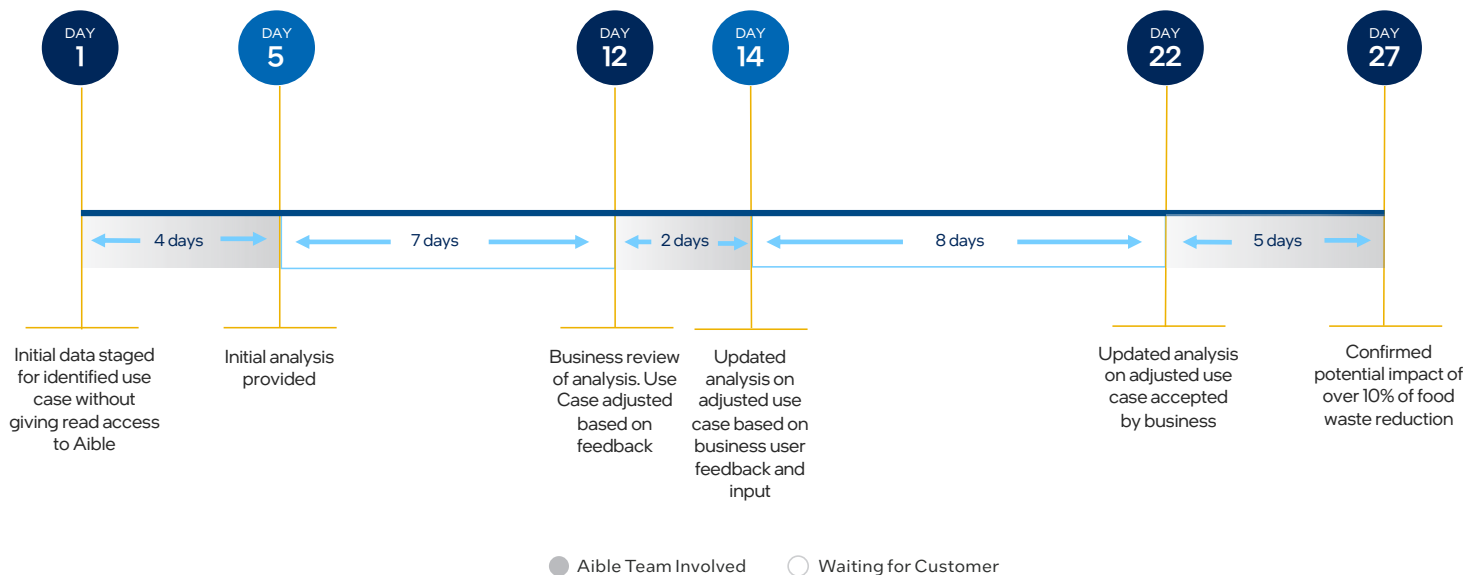
Initial data preparation, data cleansing, and data analysis was delivered within 5 days. Based on business user feedback, the use case was changed from demand forecasting to focus on overstock food wastage. Within 2 days, Aible provided updated analysis on the adjusted use case that was accepted by the business team.

Use Case & Project Details

- **Use case analyzed:** Perishable goods overstock & wastage
- **Project Results:** Reduce overstock point of purchase wastage by over 10%
- **Time from data provision to project completion:** 27 days
- **Elapsed time from start of model training to completion of 747 models on serverless infrastructure:** 105 seconds

Outcome

Aible delivered a model that could potentially reduce food waste by over 10% in 27 days.



"Aible helped us figure out how to potentially improve our food waste by over 10%. Their iterative process helped us dial in our use cases, and drive towards achieving tangible business impact within 3 weeks."

-Business Intelligence Manager

CUSTOMER SPOTLIGHT 6

Global manufacturer identified ways to reduce the impact of late shipments by more than **\$4M** yearly in **17** days

Company Profile

A global leader in manufacturing and distribution of specialized equipment

Industry

Manufacturing

Region

US

Challenge

Surface patterns around why certain shipments are late, and mitigate loss by prioritizing which shipments to expedite or take remedial action on.

Solution

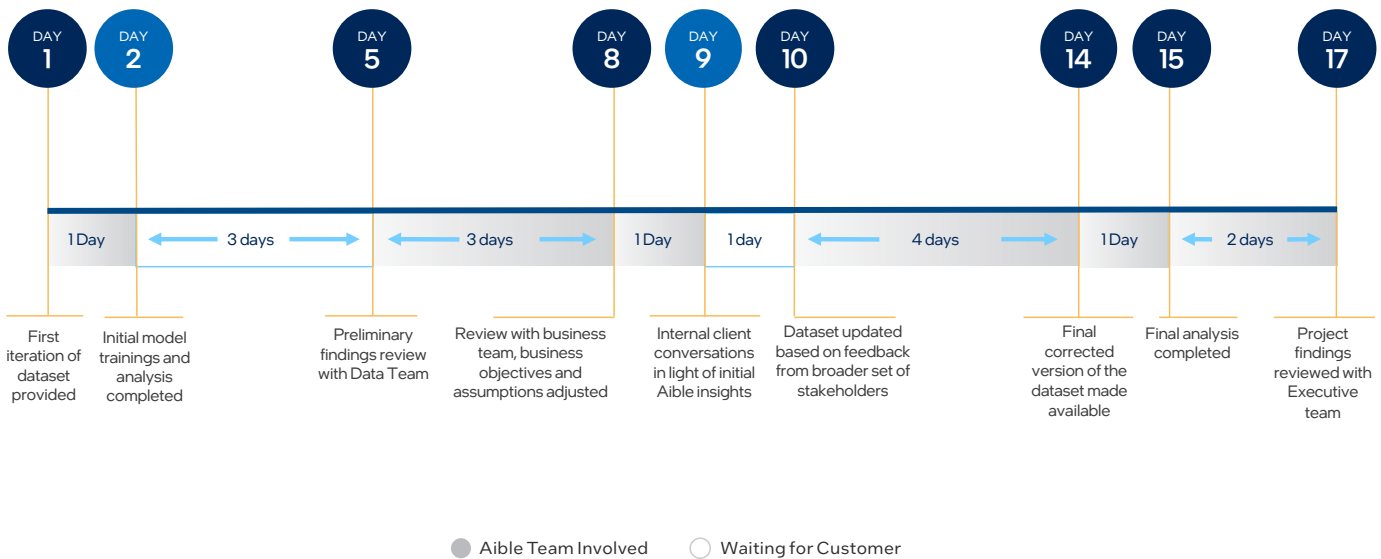
Initial data preparation, data cleansing, and data analysis was delivered within 5 days. Based on business user feedback, the use case was strategically adjusted to incorporate critical business segmentations. Within 7 days, Aible provided updated analysis on the use case that was reviewed and accepted by the business team. Numerous next steps were identified.

Use Case & Project Details

- **Use case analyzed:** Late shipment prediction and expedite optimization
- **Project Results:** \$4M+ cost reduction
- **Time from data provision to project completion:** 17 days
- **Elapsed time from start of model training to completion of over 2,600 models on serverless infrastructure:** Over 10 iterations in less than 10 minutes each

Outcome

Aible helped identify ways to reduce the impact of late shipments by over \$4M yearly, with serverless AI in 17 days.



"Aible showed us how to unlock actionable insights in our data. The speed to insight was way faster than we expected, and the insights found would likely never have been uncovered using traditional analytics."

–VP of Marketing & Analytics

CUSTOMER SPOTLIGHT 7

Leading University uses AI from Aible to mitigate student attrition by **12%** in **30** days

Company Profile

Leading Private University

Industry

Higher Education

Region

US

Challenge

A large private university aimed to improve student retention and optimize student welfare, particularly among undergraduate first-year students.

Solution

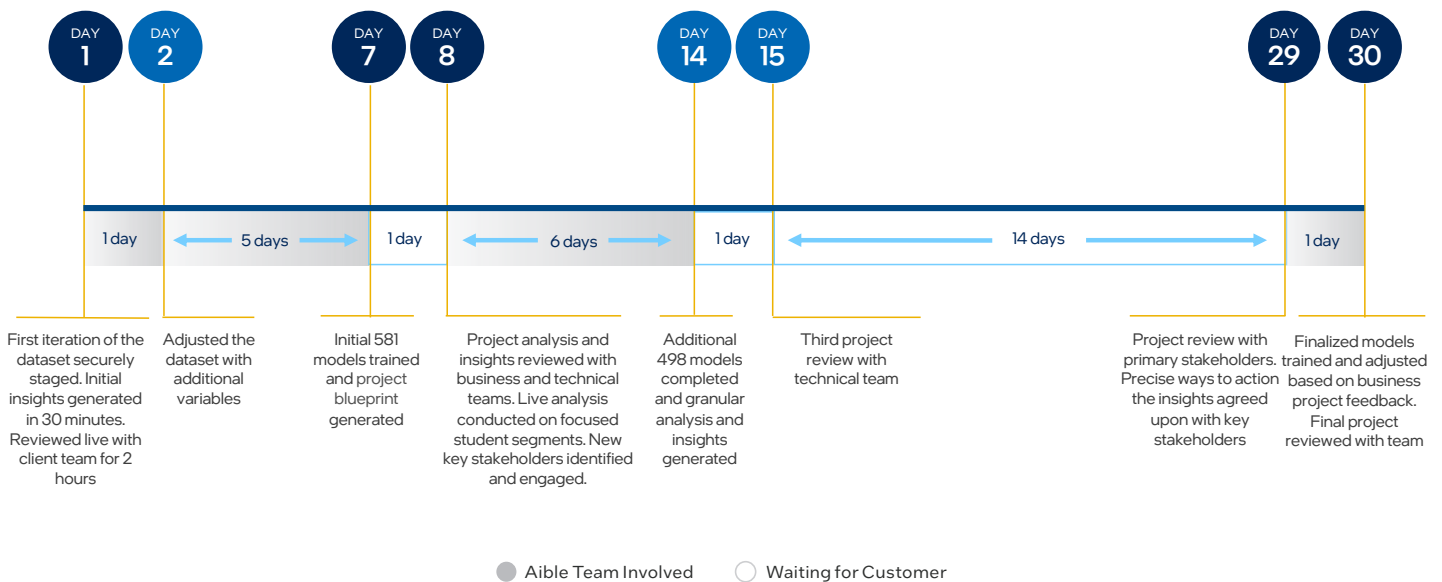
Aible identified students who were most likely to attrit and the best ways to intervene to improve retention. This helped the center for academic and student achievement target and prioritize their retention efforts to the most at-risk students.

Use Case & Project Details

- **Use case analyzed:** First-year student retention
- **Potential Project Results:** 12% reduction in student attrition
- **Time from data provision to project completion:** 30 days
- **Elapsed time from start of model training to completion of over 1,400 models on serverless infrastructure:** 17 projects were trained in ~6 minutes per project with an average of 83 models per project

Outcome

Aible helped identify ways to reduce student attrition by 12%.



"AI doesn't work in a vacuum. Aible's focus on actionable insights made it easy for us to engage with key stake-holders to improve our business outcomes. This single project also sparked new discussions on process improvements in both our admissions and student retention offices."

– Associate CIO for Solutions Development and Data Architecture

CUSTOMER SPOTLIGHT 8

Leading Food & Beverage services company used Aible to identify actionable patterns and ways to improve sales efficiency by 5%

Company Profile

Direct-to-consumer frozen food delivery company

Industry

Food and Beverage Services

Region

US

Challenge

The CIO's team was looking to identify business levers across all functions including sales, marketing and operations, to materially improve overall revenue and profit.

Solution

Within 13 days, Aible identified patterns in data that revealed that when salespeople went to a specific residence type at particular times of day, they saw higher conversion rates.

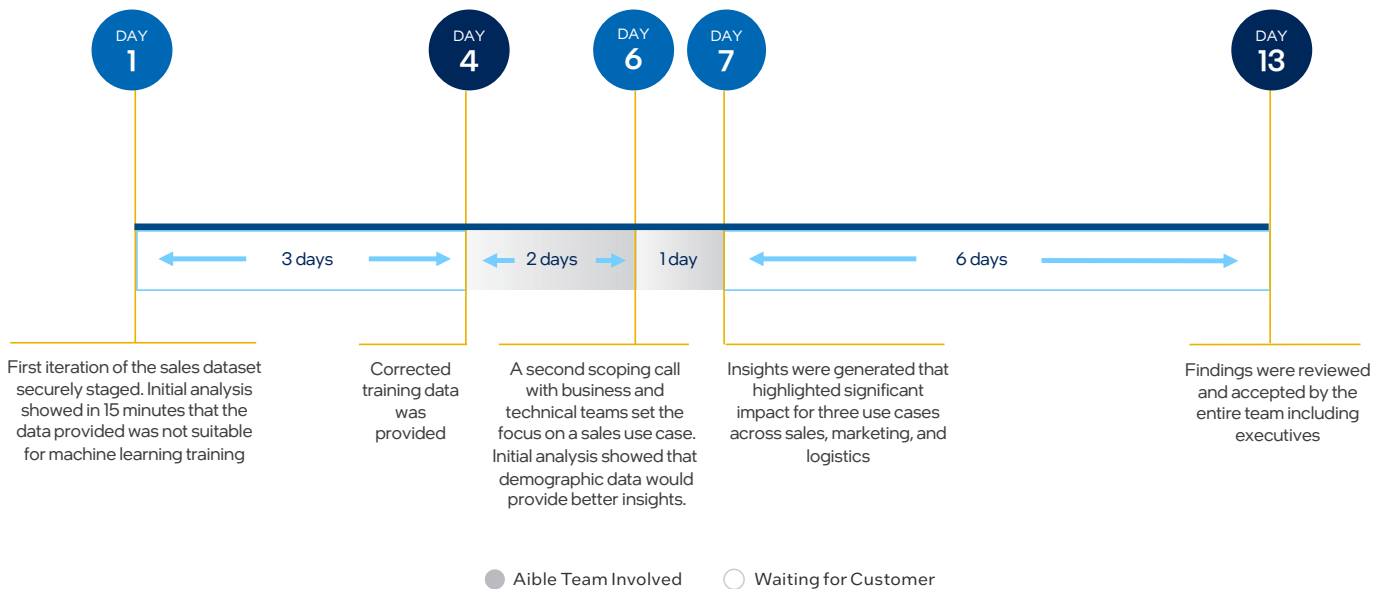
This helped the delivery teams identify which stops to make and when, optimizing their routes to increase sales efficiency.

Use Case & Project Details

- **Use case analyzed:** Sales optimization
- **Potential Project Results:** Identified specific patterns to help increase expected sales efficiency by 5%
- **Time from data provision to project completion:** 13 days
- **Elapsed time from start of model training to completion of 166 models on serverless infrastructure:** 17 minutes

Outcome

Aible identified ways to improve conversion rate with a 5% improvement in sales efficiency.

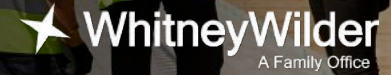


"Just 5 minutes into the Aible presentation, I could already see the immense value we could add to our business. I immediately asked my colleagues to drop other meetings to see the report Aible had created within minutes of receiving the data. I've spent a lot more money and more time with other tools and have achieved far less."

- CIO

CUSTOMER SPOTLIGHT 9

Portfolio company of WhitneyWilder Drives 10% increase in revenue in 16 days by using AI from Aible to optimize field service delivery



Company Profile

WhitneyWilder is an investment firm with a specific focus in building products, construction, and real estate service companies

Industry

Construction, real estate and home services

Region

US

Challenge

A portfolio company of WhitneyWilder aimed to leverage the operational and customer data to optimize service delivery of field technicians and drive bottom line growth. Their primary goal was to predict overtime and unused service hours to increase the overall number of completed jobs and billable hours.

Solution

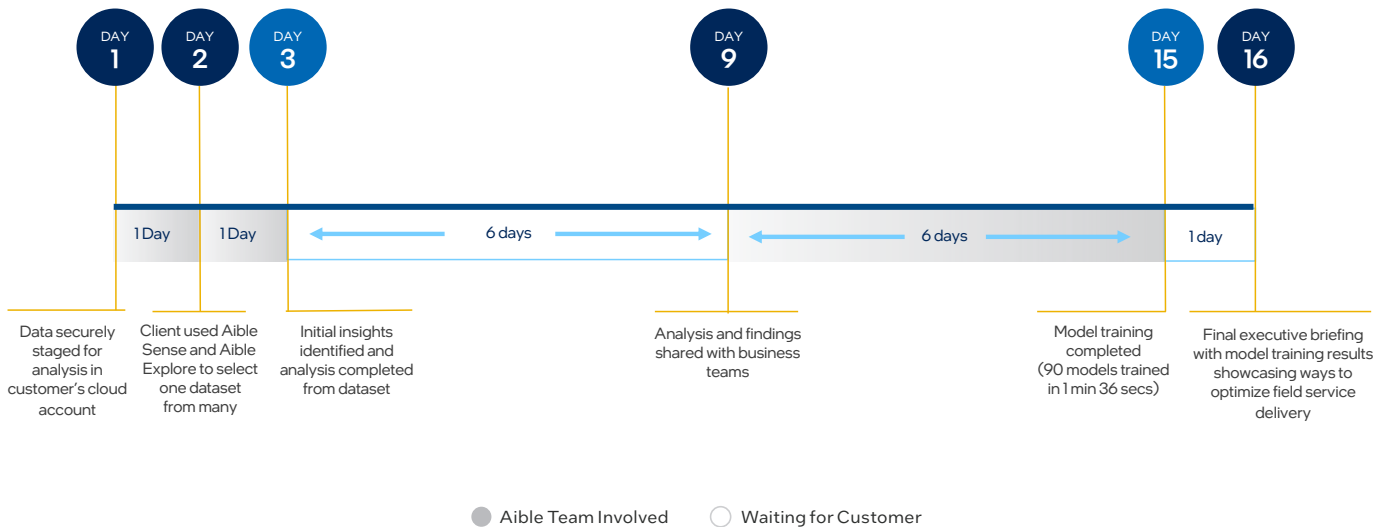
Aible identified specific patterns with service calls that highlighted a need to shift how jobs are scheduled in a given day. This allowed the team to schedule shorter jobs in the morning and defer longer jobs to later in the day. This arrangement helped increase the number of jobs completed in a week and contributed towards higher revenue.

Use Case & Project Details

- **Use case analyzed:** Predict and optimize field technician service delivery
- **Potential Project Results:** 10% increase in service revenue
- **Time from data provision to project completion:** 16 days
- **Elapsed time from start of model training to completion of 90 models on serverless infrastructure:** 1 min 36 secs

Outcome

10% increase in service revenue.



"The Aible analysis will help us schedule smarter and drive more efficiency/revenue in a key portfolio company. We're also very excited to leverage Aible for better informed due diligence in many subsequent acquisitions."

- Tom Birchard, President of Home Services

CUSTOMER SPOTLIGHT 10

Leading education services company drives 50% savings in 17 days by using AI from Aible to improve prospect targeting

Company Profile

Leading global provider of specialist higher education and careers information and solutions.

Industry

Education Administration Programs

Region

Global

Challenge

The Chief Data and Analytics Officer's team aimed to optimize their digital advertising budget allocation and overall marketing spend as they targeted prospects at recruitment events.

Solution

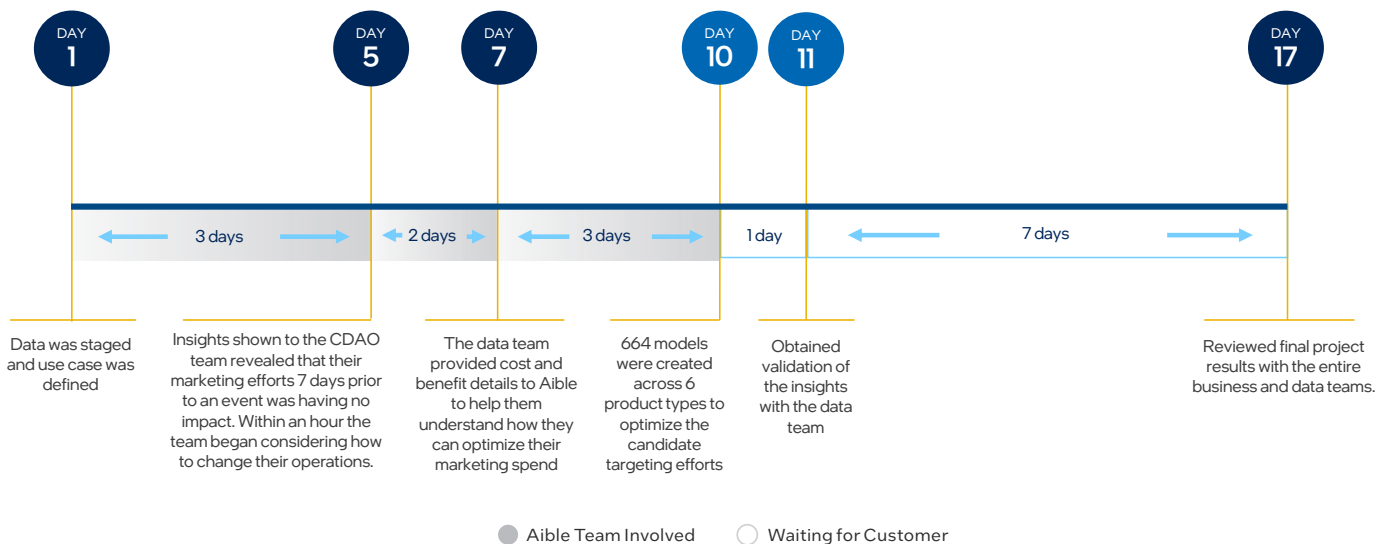
Customer and marketing spend data was staged in a secure AWS data lake. With cost benefit information, Aible identified only those prospects who had not yet made up their decisions, in order to optimize targeting and market spend. Within days, Aible identified patterns including one where their marketing efforts 7 days prior to any event wasn't delivering any business impact.

Use Case & Project Details

- **Use case analyzed:** Marketing spend optimization by targeting prospects (who hadn't made decision)
- **Potential Project Results:** 50% marketing cost savings
- **Time from data provision to project completion:** 17 days
- **Elapsed time from start of data evaluation to actionable insights on serverless infrastructure:** 8 minutes

Outcome

50% decrease in marketing spend without a change in conversion rate.



"Within 3 weeks, Aible demonstrated significant value. We are already spotting opportunities for further cost saving and are looking forward to the roll out."

- Chief Data and Analytics Officer

CUSTOMER SPOTLIGHT 11

Large hospital system uses AI from Aible to increase speed to insight by at least **10x in 10 days**

Company Profile

Large Healthcare and Hospital System

Industry

Healthcare Services

Region

US

Challenge

Explore patterns associated with why a claim may result in an underpayment to enable more targeted collection efforts. Manual efforts were focused only on a few hundred disputed claims instead of many more underpaid claims each month.

Solution

Data engineer / citizen data scientist was able to go from raw data to confirming the data has signal to exploring key underlying patterns and even build a predictive model in 1.5 hours.

Use Case & Project Details

- **Use case analyzed:** Underpaid claims
- **Potential Project Results:** 10X improvement in speed to insight
- **Time from data provision to project completion:** 10 days
- **Elapsed time from start of data evaluation to actionable insights on serverless infrastructure:** 6 minutes per dataset on average

Outcome

10X improvement in speed to insight.



"Data security is crucial to our business. The Aible security architecture allowed us to analyze data in our own cloud instance without giving Aible access to the data. The implementation just took minutes on AWS and essentially only required us to approve one request on our AWS console."

- Technical Director, AI & ML

CUSTOMER SPOTLIGHT 12

Global manufacturer uses AI from Aible to identify **\$2M** potential working capital reductions (semi-annualized smoothing machine) in **15** days

Company Profile

Global industry leader in glass, ceramics and concrete manufacturing.

Industry

Manufacturing

Region

US

Challenge

The executive team at Client aimed to create value from their data assets across their CRM and analytics systems. Using readily available customer invoice data, they zeroed in on a use case to improve their collections effectiveness for customers who had outstanding payments over 30 days.

Solution

Aible identified patterns with clients and invoices where the client is paying late and receiving discounts to sustain the value of business. Aible helped the collections team decide that they needed to advance the payment process and recommended reducing discounts for specific clients.

Use Case & Project Details

- **Use case analyzed:** Collections Effectiveness
- **Potential Project Results:** Potential to reduce Days Outstanding on receivables by 5 to 10 days. Expected value \$2M over the next 2 quarters as collection processes are adjusted.
- **Time from data provision to project completion:** 15 days
- **Elapsed time from start of model training to completion of 415 models on serverless infrastructure:** 9 min 12 sec

Outcome

Expected value \$2M over the next 2 quarters



"When we used Aible Sense to evaluate the data in our new Salesforce and Snowflake instances, we quickly found we were not collecting the data we need to predict sales outcomes. By quickly detecting the problem, we could adjust our underlying processes so that we start collecting the right data. Don't wait to fully implement systems before analyzing data. The analysis will inform your system's design so you don't lose useful data.

- Business Analyst and Aspiring Data Scientist

CUSTOMER SPOTLIGHT 13

Global software company uses Aible to prioritize marketing leads to improve win rates by focusing inside sales reps on the best sales opportunities in **19** days

Company Profile

Leading global provider of software and solutions for project-based businesses

Industry

Software

Region

Global

Challenge

The company was looking to identify patterns related to sales leads turning into sales opportunities. They wanted to figure out how to optimally allocate sales resources to profitably convert sales leads in their customer base to opportunities. They wanted to bring the marketing and IT teams together to solve a problem that otherwise would have taken months to coordinate.

Solution

Aible delivered increased speed to insight tremendously by identifying patterns that otherwise would have been unknowable without the use of AI. Aible identified which leads were worth qualifying with the potential to convert to an opportunity.

Use Case & Project Details

- **Use case analyzed:** Sales opportunity prioritization
- **Potential Project Results:** Increase in Sales Productivity
- **Time from data provision to project completion:** 19 days
- **Elapsed time from start of model training to completion of 415 models on serverless infrastructure:** Less than 45 minutes

Outcome

Identified potential to drastically increase the speed to engage quality inbound leads by allocating more time for outbound activities. Potential is a boost in sales to customer base.



"We were able to go from raw sales data straight from Salesforce to actionable insights to predictive models telling us which leads to prioritize - all within one hour. In these changing market conditions, speed to insight equals relevance. If analysis and model building takes months, you are working on stale insights. We were able to iterate in a matter of minutes to improve our insights from Aible. Aible's speed and ease of iteration is key to getting value out of your data."

– Senior Director of Marketing

CUSTOMER SPOTLIGHT 14

Global Electronics Distributor uses Aible to achieve **15x** improvement in speed to actionable insights in **24** days

Company Profile

Electronics Component Distributor

Industry

Distribution

Region

Global

Challenge

The team wanted to improve the data cleansing process and identify valuable insights in their data. Additionally, the data science and operations teams wanted the ability to quickly analyze data to improve processes and reduce costs.

Solution

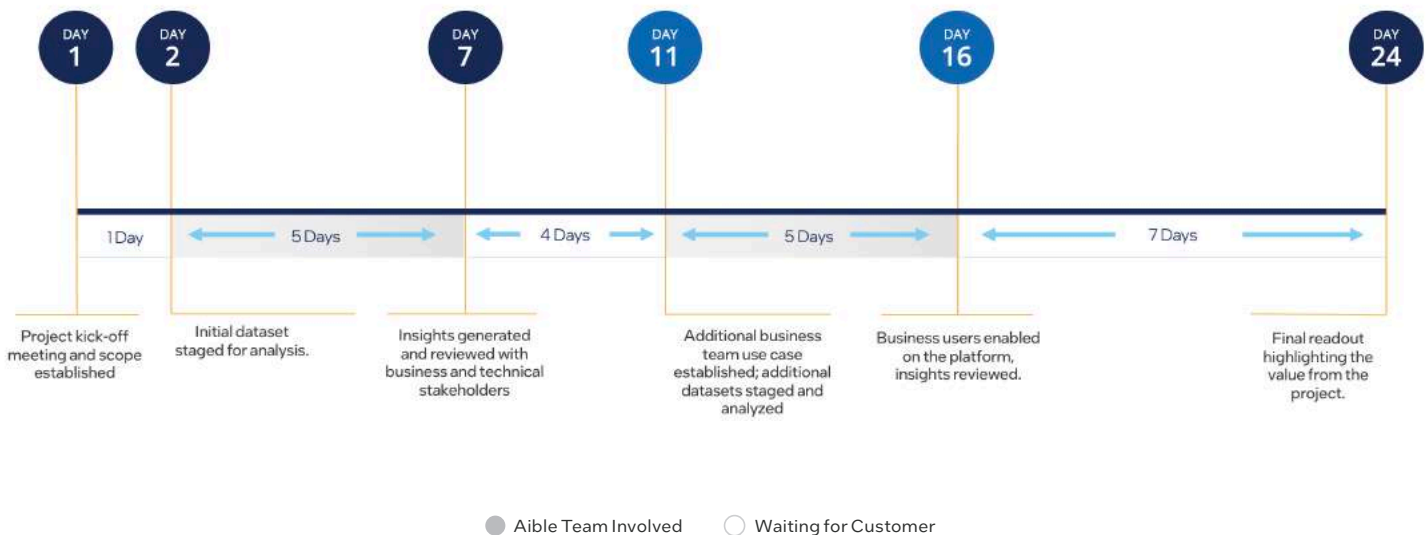
The business team was trained to use Aible, empowering them to discover speed to insights, specifically as they analyzed operational data. The Data Science team used Aible to automatically validate the dataset quality. This dramatically sped up the process and created the potential to take on additional projects.

Use Case & Project Details

- **Use case analyzed:** Inventory management and Operational excellence.
- **Potential Project Results:** 15X improvement in speed to insight.
- **Time from data provision to project completion:** 24 days
- **Elapsed time from start of data evaluation to actionable insights on serverless infrastructure:** 5 minutes for each dataset

Outcome

15X improvement in speed to insights.



"The speed in which Aible performs the heavy lifting of analyzing our data is incredible. Aible replaced our current manual processes with spreadsheets that took weeks to find insights with automation that now only takes minutes."

- Operations Manager

CUSTOMER SPOTLIGHT 15

Anytime Fitness uses AI from Aible to identify patterns around achieving fitness goals and improving member experience in **12 days**



Company Profile

Large fitness and wellness franchise

Industry

Health + Fitness Services

Region

Global

Challenge

The project purpose was to investigate what factors led to certain members being able to achieve their fitness goals – including the member’s physical profile as well as the member’s exercise activities.

Solution

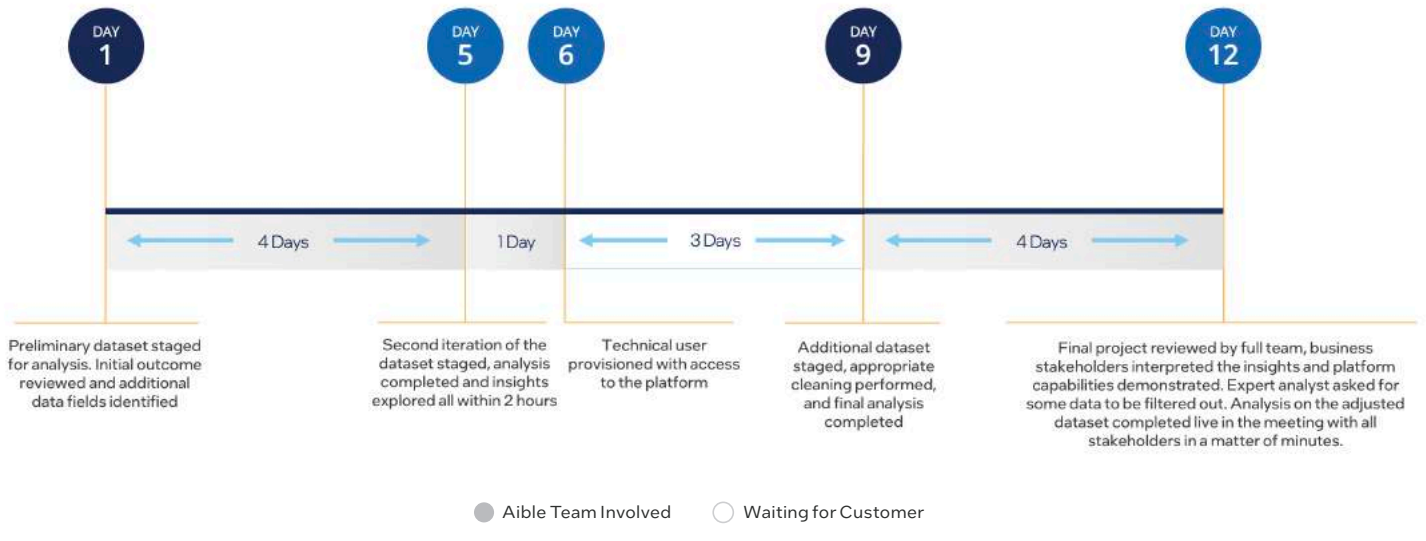
Utilizing Aible Sense and Explore, the organization was able to quickly identify patterns related to members achieving certain fitness goals. This allowed the organization to potentially target consultations in a more effective manner, and improve member experience and outcomes. The analysis showed the actual benefit of exercise visits net of all other factors. It also showed the importance of proper hydration.

Use Case & Project Details

- **Use case analyzed:** Fitness goal achievement
- **Potential Project Results:** New insights generated around member behavior and the achievement of fitness goals
- **Time from data provision to project completion:** 12 days
- **Elapsed time from raw data to evaluation of 572,850 variable combinations on serverless infrastructure:** Less than 10 mins

Outcome

Aible was able to immediately identify patterns related to member success, thus potentially improving member experience and outcomes



"The time to insight and the fact we can push a couple of buttons to get there was extremely impressive. The platform showed us some patterns we knew and many we didn't. The insights allow us to provide more curated experiences for our members and more effective and targeted recommendations to improve their chance of success – most notably of which was to make sure to stay hydrated."

– Chris Sullivan, VP Enterprise Data and Security, Anytime Fitness

CUSTOMER SPOTLIGHT 16

National healthcare intelligence company uses AI from Aible to shorten sales cycles and improve win rates



Company Profile

Technology company that supports electronic transmission of prescriptions and general health information

Industry

Healthcare Technology

Region

US

Challenge

The company wanted to identify patterns and leading indicators related to improving sales, and identify which opportunities were likely to be successful.

Solution

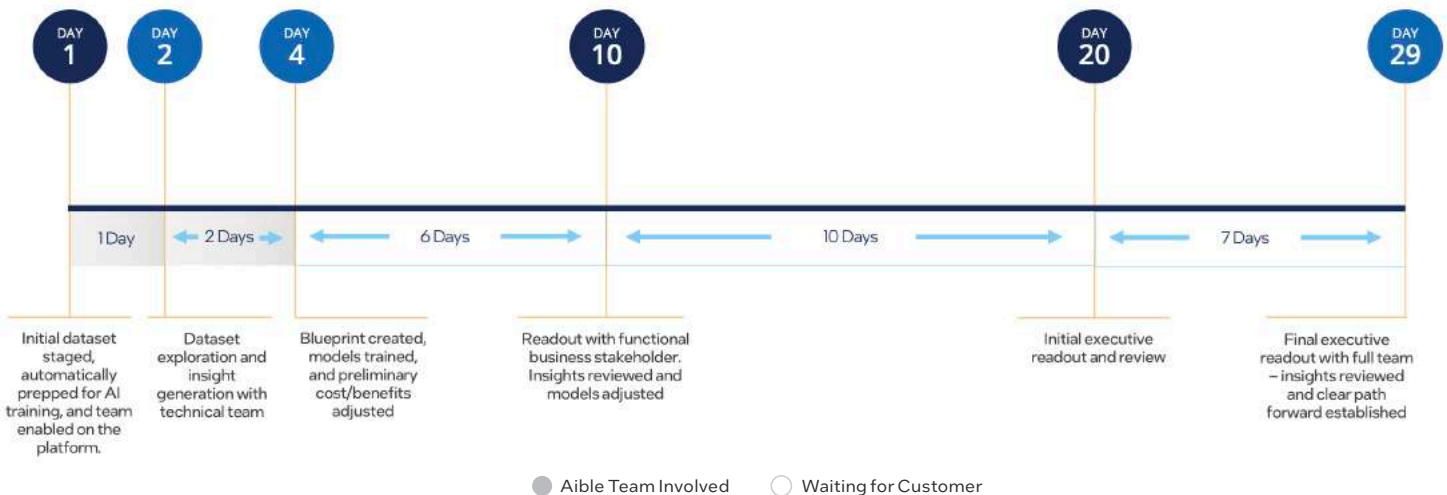
Aible “cuts through the noise in our data” to find new, meaningful customer insights. Aible identified which opportunities should be pursued and which should be deprioritized, while achieving the overall business strategy of increasing revenue while keeping sales resourcing constant.

Use Case & Project Details

- **Use case analyzed:** Sales Optimization
- **Potential Project Results:** Upper 6-figures increase in annual revenue and profits.
- **Time from data provision to project completion:** 29 days
- **Elapsed time from start of model training to completion of 800+ models on serverless infrastructure:** More than 800 models were trained in ~1.5 hours

Outcome

Potential for upper 6-figures annual increase in revenue and profits.

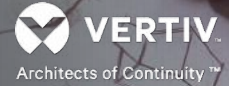


“Aible quickly identified our close ratios by customer type which will help us with our sales strategy. Our sales teams live in Salesforce, so the ability to integrate Aible’s predictions in Salesforce and monitor the outcomes will help us prioritize our pipeline opportunities and new business targets”

- Director of Sales Operations

CUSTOMER SPOTLIGHT 17

Vertiv delivered **4 analytics and AI projects** in **28** days and proved out solution for a scalable Center of Excellence for Data Science teams



Company Profile

Brings together hardware, software, analytics and ongoing services to enable its customers' vital applications

Industry

Appliances, Electrical, and Electronics Manufacturing

Region

Global

Challenge

Vertiv aimed to leapfrog their competitor's approach in establishing a Center of Excellence for Data Science, encompassing large teams of data scientists at low-cost offshore locations. They wanted to use Aible to show success rapidly on a wide variety of use cases to prove a different approach to establishing a scalable CoE.

Solution

Aible delivered results for multiple use cases: partner sales optimization, churn prevention, marketing spend optimization and global sales optimization.

Use Case & Project Details

- Use cases analyzed:
 - Channel partner churn prevention
 - Channel partner sales optimization
 - Global sales optimization
 - Marketing spend optimization
- Project Results: Delivered results across 4 different use cases
- Time from data provision to project completion: 28 days
- Elapsed time for model training to completion of 987 models on serverless infrastructure: 22 min

Outcome

Delivered recommendations for all 4 use cases in 30 days.



“AI is key to delivering our corporate strategy. We need something fast that will help us adjust our actions in line with our strategy based on latest market conditions. Throwing a lot of people at the problem was not the solution. Aible showed us a different scalable way of achieving the same goals at a far lower overall cost than alternative approaches.”

- Martin Coulthard, Senior Global Director, Digital Customer Experience, Vertiv

CUSTOMER SPOTLIGHT 18

Leading UK University uses AI from Aible to gain **10X** increase in speed to insight

Company Profile

Leading UK University

Industry

Higher Education

Region

EMEA

Challenge

The Employability Services Team wished to understand which of their activities have the biggest impact on high skilled employment outcomes across different student groups. They wanted to improve employment outcomes by identifying and acting on students, based on insights learnt about their behavioral and demographic characteristics.

Solution

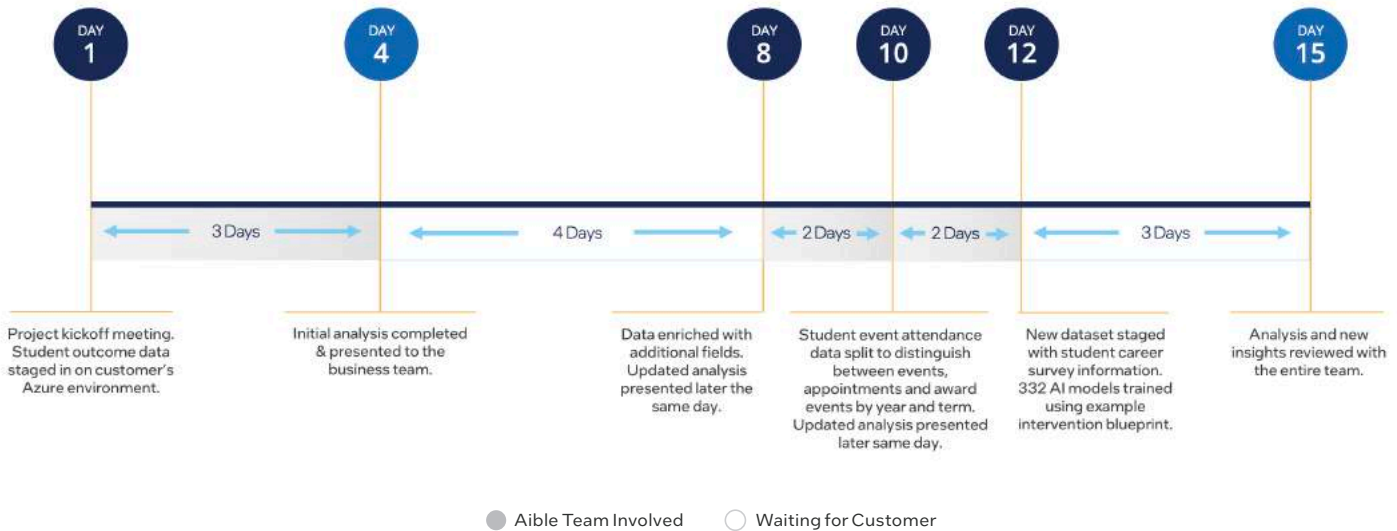
The data and analytics team was able to conduct in-depth analysis of student outcomes with Aible Sense & Explore. Within minutes, they uncovered previously unknown factors and behaviors that drive employment outcomes for various student groups. The analysis also identified areas of information gaps, helping steer future data collection efforts.

Use Case & Project Details

- **Use case analyzed:** student employment outcomes
- **Potential Project Results:** 10x speed to insight
- **Time from data provision to project completion:** 15 days
- **Average elapsed time from start of data evaluation to actionable insights on serverless infrastructure:** 5 mins

Outcome

10x improvement in speed to insights.



"Aible is impressive. It has helped our teams achieve a new level of confidence when we look at data by fueling deeper discussions around insights in an unbiased manner. Our business users were wowed by the speed to insights with Aible and I have no doubt that this is going to be transformative in the way we operate.

- Data & Analytics Leader

CUSTOMER SPOTLIGHT 19

Global CPG Company used Aible to deliver rich AI-generated insights for category growth ideas within four weeks.

Company Profile

Leading CPG firm that produces and markets Health, Hygiene and Nutrition Products

Industry

Consumer Packaged Goods

Region

Global

Challenge

The company wanted to understand product line growth opportunities by geography from their complex datasets. They wanted to understand key macroeconomic and social determinants of success, as well as how marketing investments influence success in their markets.

Solution

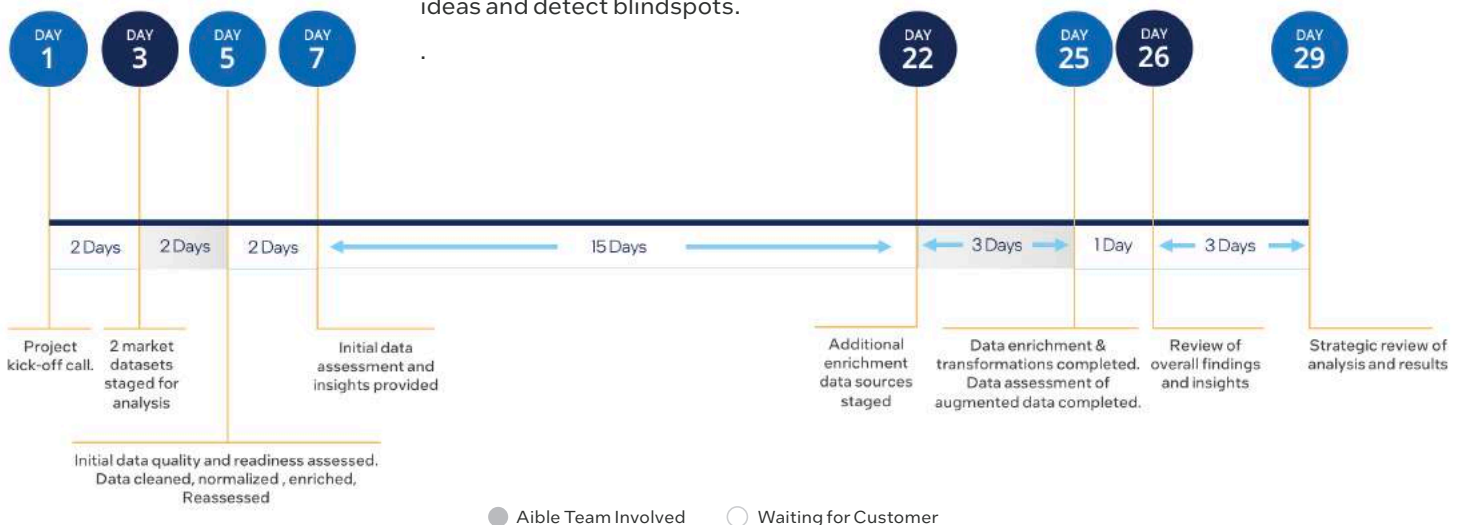
Across four large data sets, the Aible Professional Services team was able to rapidly and iteratively assess data readiness for this AI initiative using Aible software. The data was transformed, combined and augmented to improve insights within one day. The speed and agility of the platform provided insights rapidly while reducing drudgery and avoiding dead-ends. By automatically ranking and surfacing key determinants and patterns in the data, the team was able to, in record time, spot new ideas and detect blindspots.

Use Case & Project Details

- **Use case analyzed:** Understand key drivers / determinants of market, category, and product success.
- **Results:** Delivered analysis and results across 4 large datasets in days.
- **Time from data provision to project completion:** 29 days
- **Average elapsed time from start of Data readiness assessment in under 5 minutes and training of 83 models in under 5 minutes.**

Outcome

Delivered insights to support growth ideas and identify important trends, opportunities and threats.



“Thank you so much for your team’s effort in helping us discover new insights. The speed to dataprep and the speed to insight was surprising. I was genuinely surprised that the project effectively got done in 15 days despite the multiple dataset changes. In my opinion the platform is a breakthrough.”

- Global Head of Category and Insights

CUSTOMER SPOTLIGHT 20

Global technology company uses AI from Aible to templatize the ability to identify meaningful sales patterns in just **28** days



Company Profile

SaaS Data Protection Platform

Industry

Software

Region

Global

Challenge

The company needed to easily identify sales patterns across a variety of different potential datasets in a rapid, low-touch, and reproducible manner.

Solution

Utilizing Aible Sense & Explore, the organization was able to improve the speed to insight substantially with automated data preparation, cleansing and analysis. Only minor adjustments were made to create replicable blueprints for additional projects.

Use Case & Project Details

- **Use case analyzed:** Sales Optimization
- **Potential Project Results:** Vast improvement in efficiency
- **Time from data provision to project completion:** 28 days
- **Elapsed time from start of model training to completion of ~600 models on serverless infrastructure:** Less than 1.5 hours

Outcome

The platform was able to identify the important variables related to a sale as well as highlight variables that should be excluded from future iterations



"We needed a platform that could easily automate and templatize the identification of which data elements were important to consider in an analysis – and show us those patterns. Aible demonstrated it can do just that, faster than we ever thought possible."

- Senior Vice President, Product Management

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Performance, Cost, TCO (Est.) Claims	Related Config
AWS Serverless based on Intel(R) Xeon(R) Processor @ 2.50GHz Model 63 (Haswell) provides up to 3.1x and 2.4x speedup in model training time vs. AWS Server m4.16xlarge instances based on Intel(R) Xeon(R) CPU E5-2686 v4 @ 2.30GHz for 250k rows and 500k rows datasets, respectively.	Comparing AWS Lambda us-east-1 region, with 6x vCPU, Intel(R) Xeon(R) Processor @ 2.50GHz Model 63 (Haswell), 10 GB containers, Amazon Linux 2, 4.14.165-102.205.amzn2.x86_64, running Aible Model Training with 70 TensorFlow 2.7 models over a range of network topologies and custom loss functions, numpy==1.21.4, pandas==1.3.5, scikit-learn==1.0.2, scikit-learn-intelex==2021.5.3, scipy==1.7.3, tensorflow==2.7.0, python:3.7.12 test by Intel on 02/22/2022 vs. autoscaling 0-8VMs, us-east-2, m4.16xlarge instance with 64x vCPU, Intel(R) Xeon(R) CPU E5-2686 v4 @ 2.30GHz, 256 GB total DDR4 memory, (launching containers with 6vcpu/10GB memory), Debian GNU/Linux 11 (bullseye), 5.4.156-83.273.amzn2.x86_64, running Aible Model Training with 70 TensorFlow 2.7 models over a range of network topologies and custom loss functions, numpy==1.21.4, pandas==1.3.5, scikit-learn==1.0.2, scikit-learn-intelex==2021.5.3, scipy==1.7.3, tensorflow==2.7.0, python:3.7.12 test by Intel on 02/22/2022 with https://www.kaggle.com/ankitkalauni/bank-loan-defaulter-prediction-hackathon dataset.
AWS Serverless based on Intel(R) Xeon(R) Processor @ 2.50GHz Model 63 (Haswell) is 3.11x and 2.14x more cost effective (training jobs) vs. AWS Server m4.16xlarge instances based on Intel(R) Xeon(R) CPU E5-2686 v4 @ 2.30GHz for 250k rows and 500k rows datasets, respectively.	Comparing AWS Lambda us-east-1 region (\$0.00016670000 \$/s/instance), with 6x vCPU, Intel(R) Xeon(R) Processor @ 2.50GHz Model 63 (Haswell), 10 GB containers, Amazon Linux 2, 4.14.165-102.205.amzn2.x86_64, running Aible Model Training with 70 TensorFlow 2.7 models over a range of network topologies and custom loss functions, numpy==1.21.4, pandas==1.3.5, scikit-learn==1.0.2, scikit-learn-intelex==2021.5.3, scipy==1.7.3, tensorflow==2.7.0, python:3.7.12 test by Intel on 02/22/2022 vs. autoscaling 0-8VMs, us-east-2, m4.16xlarge instance (\$0.000888888889 \$/s/instance) with 64x vCPU, Intel(R) Xeon(R) CPU E5-2686 v4 @ 2.30GHz, 256 GB total DDR4 memory, (launching containers with 6vcpu/10GB memory), Debian GNU/Linux 11 (bullseye), 5.4.156-83.273.amzn2.x86_64, running Aible Model Training with 70 TensorFlow 2.7 models over a range of network topologies and custom loss functions, numpy==1.21.4, pandas==1.3.5, scikit-learn==1.0.2, scikit-learn-intelex==2021.5.3, scipy==1.7.3, tensorflow==2.7.0, python:3.7.12 test by Intel on 02/22/2022 with https://www.kaggle.com/ankitkalauni/bank-loan-defaulter-prediction-hackathon dataset.
AWS Serverless based on Intel(R) Xeon(R) Processor @ 2.50GHz Model 63 (Haswell) is 4.21x and 2.8x more TCO effective vs. AWS Server m4.16xlarge instances based on Intel(R) Xeon(R) CPU E5-2686 v4 @ 2.30GHz for 250k rows and 500k rows datasets, respectively.	Comparing AWS Lambda us-east-1 region (\$620 for 250k dataset and \$1070 for 500k dataset incl. total processing time and \$0 backplane cost), with 6x vCPU, Intel(R) Xeon(R) Processor @ 2.50GHz Model 63 (Haswell), 10 GB containers, Amazon Linux 2, 4.14.165-102.205.amzn2.x86_64, running Aible Model Training with 70 TensorFlow 2.7 models over a range of network topologies and custom loss functions, numpy==1.21.4, pandas==1.3.5, scikit-learn==1.0.2, scikit-learn-intelex==2021.5.3, scipy==1.7.3, tensorflow==2.7.0, python:3.7.12 test by Intel on 02/22/2022 vs. autoscaling 0-8VMs, us-east-2, m4.16xlarge instance (\$2615 for 250k dataset and \$3010 for 500k dataset incl. total processing time and \$675 backplane cost), with 64x vCPU, Intel(R) Xeon(R) CPU E5-2686 v4 @ 2.30GHz, 256 GB total DDR4 memory, (launching containers with 6vcpu/10GB memory), Debian GNU/Linux 11 (bullseye), 5.4.156-83.273.amzn2.x86_64, running Aible Model Training with 70 TensorFlow 2.7 models over a range of network topologies and custom loss functions, numpy==1.21.4, pandas==1.3.5, scikit-learn==1.0.2, scikit-learn-intelex==2021.5.3, scipy==1.7.3, tensorflow==2.7.0, python:3.7.12 test by Intel on 02/22/2022 with https://www.kaggle.com/ankitkalauni/bank-loan-defaulter-prediction-hackathon dataset.
AWS Server m6i.16xlarge instances-based Intel(R) Xeon(R) Platinum 8375C CPU @ 2.90GHz provides up to 2.24x and 2.16x speedup in model training time vs. AWS Server m4.16xlarge instances based on Intel(R) Xeon(R) CPU E5-2686 v4 @ 2.30GHz for 250k rows and 500k rows datasets, respectively.	Comparing autoscaling 0-8VMs, us-east-2, m6i.16xlarge instance with 64x vCPU, Intel(R) Xeon(R) Platinum 8375C CPU @ 2.90GHz, 256 GB total DDR4 memory, (launching containers with 6vcpu/10GB memory), vs. autoscaling 0-8VMs, us-east-2, m4.16xlarge instance with 64x vCPU, Intel(R) Xeon(R) CPU E5-2686 v4 @ 2.30GHz, 256 GB total DDR4 memory, (launching containers with 6vcpu/10GB memory), running Debian GNU/Linux 11 (bullseye), 5.4.156-83.273.amzn2.x86_64, average Model training time is the geometric mean of notebook runtime from 3 runs over 11 representative TensorFlow models, numpy==1.21.4, pandas==1.3.5, scikit-learn==1.0.2, scikit-learn-intelex==2021.5.3, scipy==1.7.3, tensorflow==2.7.0, python:3.7.12 test by Intel on 02/22/2022 with https://www.kaggle.com/ankitkalauni/bank-loan-defaulter-prediction-hackathon dataset.

Gartner Disclaimers

Gartner, Critical Capabilities for Cloud AI Developer Services, 19 October 2021, Van Baker et. Al.

Gartner, A CTO's Guide to Top Artificial Intelligence Engineering Practices, 29 October 2021, Arun Chandrasekaran et. Al.

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Example Case Studies from the "Impact from AI in 30 Days" Program

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Pg. 7	 Fortune 500 Healthcare SPEED TO HEALTH INSIGHTS	↑ 20X  15 DAYS	Pg. 15	 Portfolio of Whitney Wilder FIELD SERVICE OPTIMIZATION	↑ 10%  16 DAYS
Pg. 8	 NSU Florida STUDENT RETENTION with DELL Technologies	↑ 17%  15 DAYS	Pg. 16	 Leading Education Services MARKETING SPEND OPTIMIZATION	↓ 50%  17 DAYS
Pg. 10	 Multinational CPG Company SALES OPTIMIZATION	↑ \$10M  17 DAYS	Pg. 17	 Large Hospital System SPEED TO CLAIM INSIGHTS	↑ 10X  10 DAYS
Pg. 11	 Global Food Company FOOD OVERSTOCK & WASTAGE	↓ 10%  27 DAYS	Pg. 18	 Concrete Manufacturer COLLECTIONS EFFECTIVENESS	↑ \$2M  15 DAYS
Pg. 12	 Global Manufacturer LATE SHIPMENT OPTIMIZATION	↑ \$4M  17 DAYS	Pg. 20	 Global Electronics Distributor SPEED TO INVENTORY INSIGHTS with frissential	↑ 15X  24 DAYS
Pg. 13	 Leading University STUDENT RETENTION with boomi	↑ 12%  30 DAYS	Pg. 23	 VERTIV. ANALYTICS / AI CENTER OF EXCELLENCE	4  28 DAYS PROJECTS
Pg. 14	 Leading F & B Services SALES EFFICIENCY with frissential	↑ 5%  13 DAYS	Pg. 24	 Leading UK University SPEED TO EMPLOYMENT INSIGHTS	↑ 10X  15 DAYS