Crayon

AI Business at Crayon

June 1st, 2023

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ABOUT US

Crayon at a glance

Global market coverage with over 50 offices across 45 countries

Strong relationships and strategic partnerships with leading technology vendors and cloud partners

Publicly listed on the Oslo Stock Exchange with a market cap of NOK 12.6 billion

21 years of expertise in software and cloud advisory.
9 years of experience in Data & AI

3800 employees
who are experts in their field

~8,000 certifications on a wide range of technology solutions

~70,000 customers from SMB to enterprise across all industries with a high share of public sector

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CRAYON'S KEY SERVICE PILLARS

Our Services

The power of technology to drive the greater good

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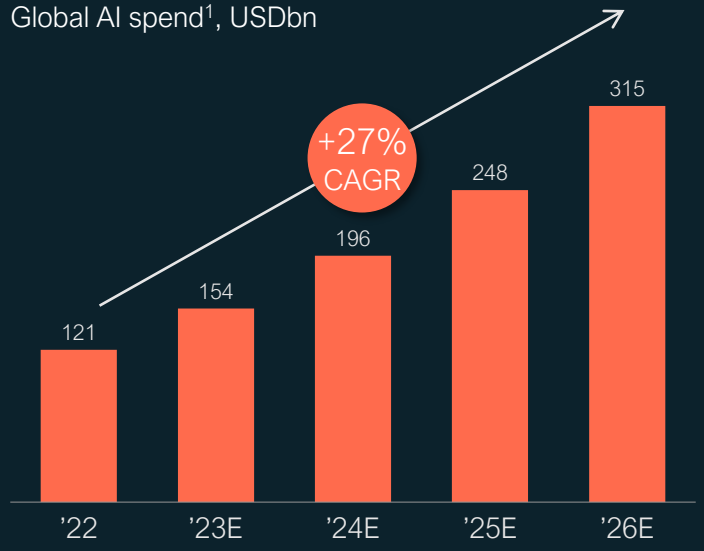
Market Trends

MARKET DYNAMICS AND DIFFERENTIATION

Data & AI is accelerating, opening a major market for services that help enterprises realize business value

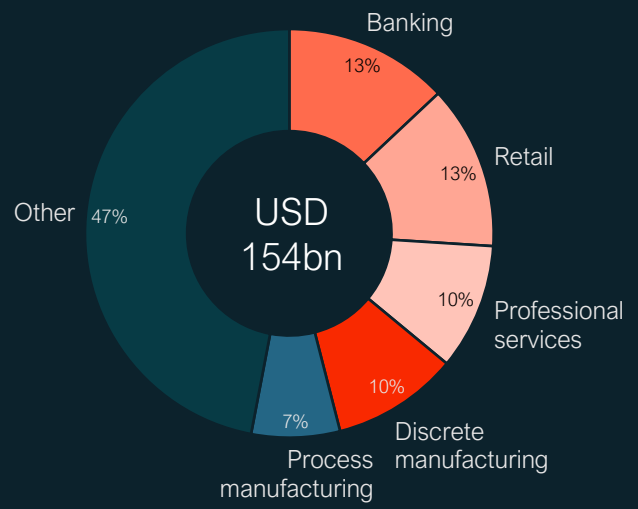
AI spend to grow at a rapid pace

Global AI spend[1], USDbn



Spend diversified across industries

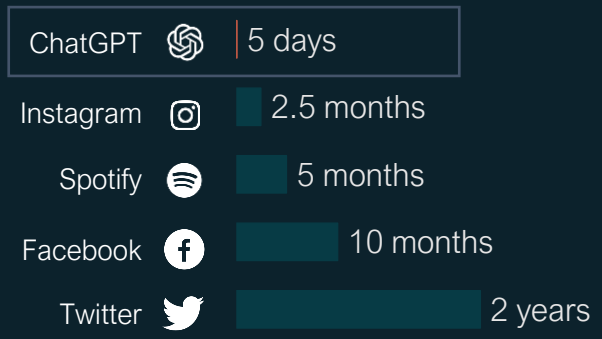
Share of global AI spend[1], 2023E



It is happening as we speak

Google Trends, "AI", L10Y

Days to one million users



Source: IDC, Google Trends. Gartner

1. Includes software, hardware and services for AI-centric systems

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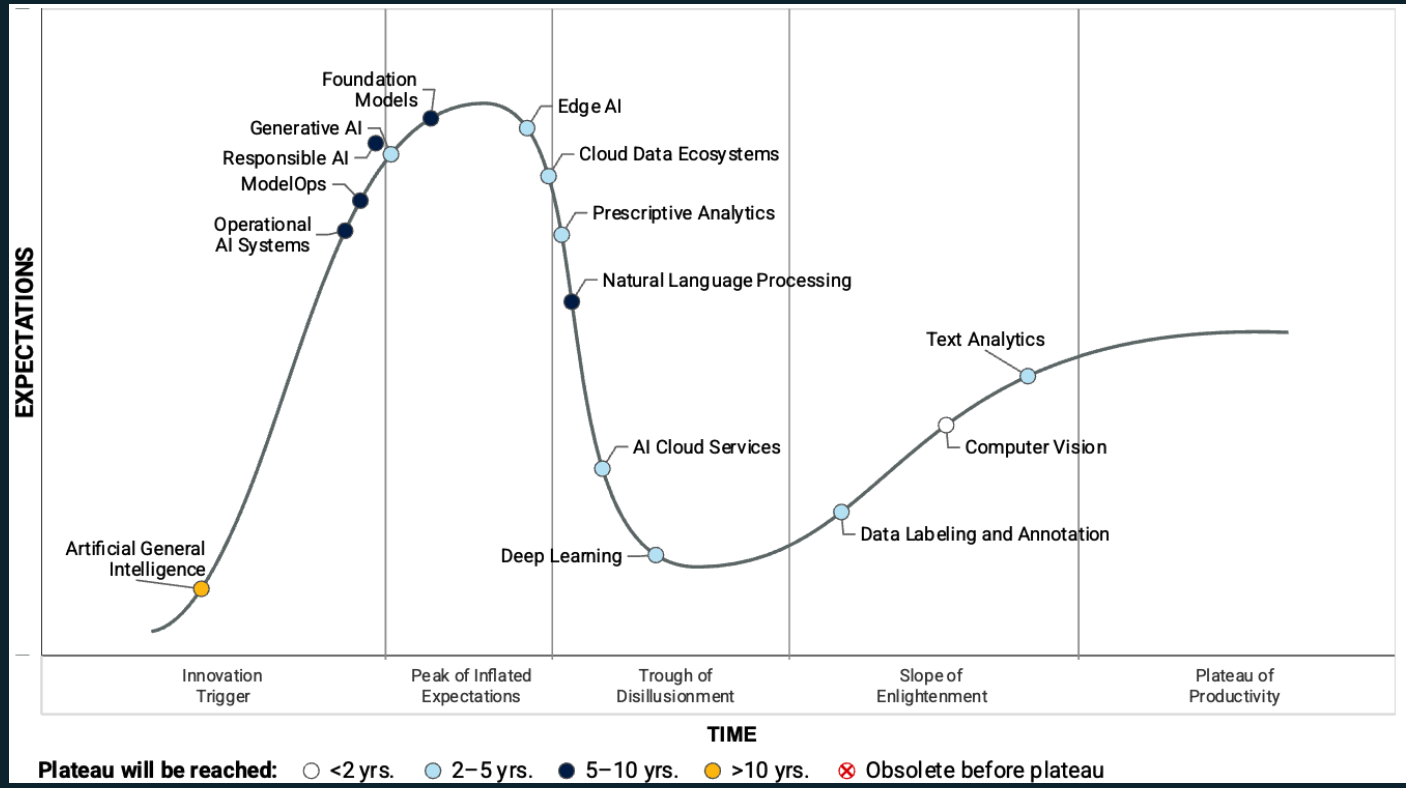
AI MARKET TRENDS

Gartner Hype Cycle

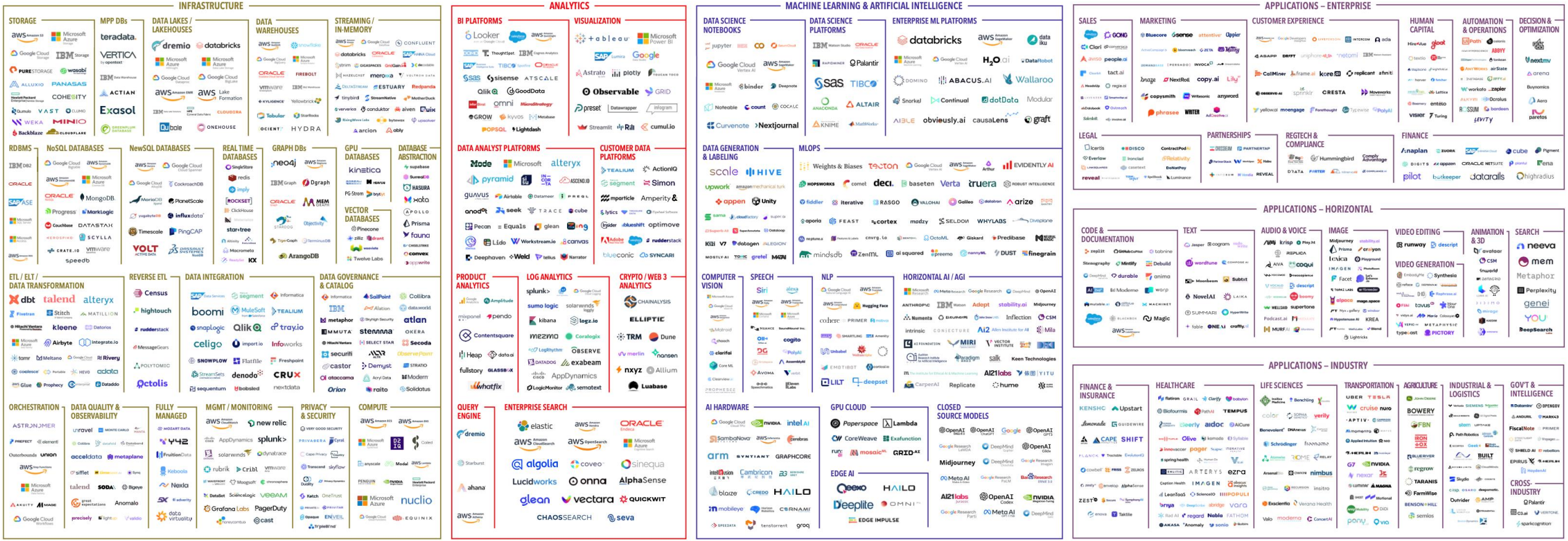
Reflects what we currently see on the market with the projects that we deliver to our customers:

- Computer Vision reaching industry maturity with use cases such as Visual Quality Inspection
- Opportunity for large-scale adoption of language technologies to generate business value
  - Large Language Models (LLMs),
  - OpenAI, ChatGPT

Nevertheless, Artificial General Intelligence (AGI) has a long way to go.



THE 2023 MAD (MACHINE LEARNING, ARTIFICIAL INTELLIGENCE & DATA) LANDSCAPE



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Data & AI Services

Our Global Data & AI Practice

Mission

We enable our customers to become data-driven enterprises by generating value from data with scalable data platforms and AI powered solutions!

Purpose

The Crayon Data & AI Practice was established to serve the increasing global demand on data-driven business.

Delivery Setup

Specialized sales in local subsidiaries.

Delivery is executed through a globally managed Center of Excellence.

Crayon Differentiators

- Close relationship to customers
- Proven, industry-specific solutions
- Certified, highest quality services
- Managed services

Our Experience in Numbers

140 FTEs dedicated resources

~300 Projects successfully delivered

10 Years experience in the field

4 Locations:

- Oslo
- Vienna
- Singapore
- Saudi Arabia

Vendor Independent

ISO certified delivery blueprint with responsible AI at its core

120+ Customer

~80 Dedicated certifications

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CRAYON WANTS TO BE KNOWN AS THE DATA & AI SERVICES SUPPLIER

Strategy Roadmap

Subject to change based on board approval

DATA & AI CENTER OF EXCELLENCE – TEAM STRUCTURE

Enable deep competency in strategic areas

Computer Vision

End-to-end AI solutions using image & video data

Language Technologies

End-to-end AI solutions using text & speech data

Data Platforms & Engineering

Data estate modernization, data pipeline engineering, MLOps

Decision Intelligence

End-to-end AI solutions using structured data

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DATA & AI CENTER OF EXCELLENCE – TEAM STRUCTURE

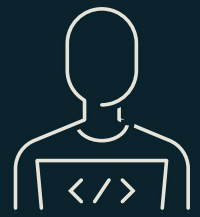
Roles and responsibilities

Solution Architect

Technical **engagement lead, design solution architecture**

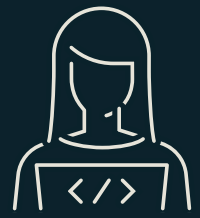
Data Scientist

Analyze data, build AI models and evaluate performance



Data Engineer

Build pipelines for data **ingest, transformation and storage**

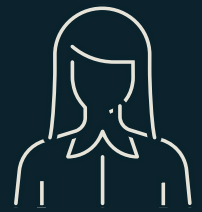


ML Engineer

Deploy ML models to production and manage ML model **lifecycle**

Infra Engineer

Deploy infrastructure and maintain reusability and scale



Project manager

Project delivery coordination and communication

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DATA & AI SERVICES

Services Overview

Data & AI Platforms

- Cloud Data Platform Advisory
- Cloud Data Platforms Delivery
- Machine Learning Operations (MLOps)

Purpose-built AI Solutions

- Decision Intelligence
- Computer Vision
- Language Technologies

Industry-specific Solutions

- Manufacturing Visual Quality Inspection
- Data-driven Maintenance for Production
- Agricultural Remote Sensing
- Enterprise fact-based QA "Ask your data"

Maintenance and Support

- Production Start
- Technical Updates
- Bug Fixing
- Operations
- Change Management

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DATA & AI SERVICES

Offering: Data & AI Platforms

Cloud Data Platform Advisory

- Assessment, solution architecture design & review
- Technology stack comparison & consulting
- Well Architected Reviews (WAR)
- Data governance, data lineage and asset management

Cloud Data Platforms Delivery

- Landing zones for cloud-scale analytics
- Modernize existing cloud data warehouse setups
- Data extraction and ingest, scalable data preprocessing
- Democratize data with multiple access layers

Machine Learning Operations (MLOps)

- Multi-cloud, end-to-end ML pipelines
- ML model lifecycle management
- ML model deployment and serving at scale
- ML pipeline blueprints for reproducibility and scale

Technology Expertise

databricks · snowflake · mlflow · Informatica · Apache Airflow

Cloud Providers

Azure · aws · Google Cloud

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DATA & AI SERVICES

Offering: Purpose-built AI Solutions

Decision Intelligence

Supply Chain Optimization

Increase your profits through lean inventory and optimized logistics processes, maintain customer loyalty by avoiding stockout.

Production Process Optimization

Leverage historical production data using innovative AI solutions to continuously reduce production delays and optimize your production process.

Customer Insights

Derive insights from data to boost customer engagement, lifetime value and improve customers' loyalty.

Computer Vision

Scene Analysis & Inspection

Automate, speed-up, and reduce cost for inspection, quality control, and detection processes using innovative and scalable AI solutions.

Human Recognition

Increase safety & security and optimize processes by counting people, analyzing human behavior using novel human body pose and face recognition.

OCR / Document Analysis

Use AI to automatically extract valuable information from digital documents, reduce the manual work, speed up

Language Technologies

Customer Service Insights

Enhance customer service through actionable insights using speech recognition (speech-to-text), transcription, text summarization and question answering.

Document Processing

Automatically extract specific information even from irregular documents. Transform unstructured textual data into structured information and provide insights.

Cognitive Search

Enhance search capabilities via semantics and historical information. Identify text similarities.

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DATA & AI SERVICES

Offering: Industry-specific Solutions

Manufacturing Visual Quality Inspection

We customize your own AI-based solution to perform quality inspection on different products or assets.

Data-driven Maintenance for Production

We provide you with a customized end-to-end solution with real-time insights to optimize asset maintenance.

Agricultural Remote Sensing

We provide a customized end-to-end solution to automatically generate insights for your agriculture production using satellite image data.

Enterprise fact-based QA
"Ask your data"

We provide you with a customized solution to democratize quick and fast access to valuable data (documents, emails, SharePoint, etc.).

Industry focus

- Manufacturing
- Energy, oil & gas
- Contact centers
- Finance & Insurance
- Agriculture

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Selected customer success story

Delivering impactful AI projects

CUSTOMER SUCCESS STORY

Disruptive AI solutions for a large global kitchen manufacturer

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CUSTOMER SUCCESS STORY

AI-powered kitchen planning

Explore existing planning processes and historical data to implement AI solutions that optimize and enhance the kitchen planning process.

Business Challenge

- Customer has a lot of data in scattered data sources which could potentially be combined and leveraged to increase planning efficiency and create new products.
- Workflow of manufacture order processing needs to be more automated in order to enable increased throughput during high demand phases.
- Customer wants to identify potential AI solutions to boost core business.

Business Solution

- Set up a close-knit delivery team with customer key resources and stakeholders.
- Continuous exploration of potential AI use cases and development of AI prototypes to showcase the business value.
- Delivery of end-to-end AI solutions which can be integrated into customer's IT ecosystem.

Outcome

- Continuous creation and maintenance of an AI tool stack based on customer's data from which different AI products can be branched off.
- Shaping together with customer the AI vision of the company and enable them to leverage their data in various ways.

Commercial Setup:

- Framework agreement in place
- Fixed core team: 2 FTE shared by 3 roles
- Additional scaling on demand based on use case / product development needs

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CREATING BUSINESS VALUE WITH AI

The Successful Blueprint of AI Projects

Agile use case exploration and delivery with well defined decision gates

Start with open-ended exploration to identify use cases that address concrete business problems, validate AI solutions in short iterations, show value. Shape AI vision together with business.

Engagement model

- Core team of two / three (Ownership)
- Support via additional Crayon specialists on demand (Scale)
- Regular / Daily alignments on scope and tasks (Agile)

Crayon roles:

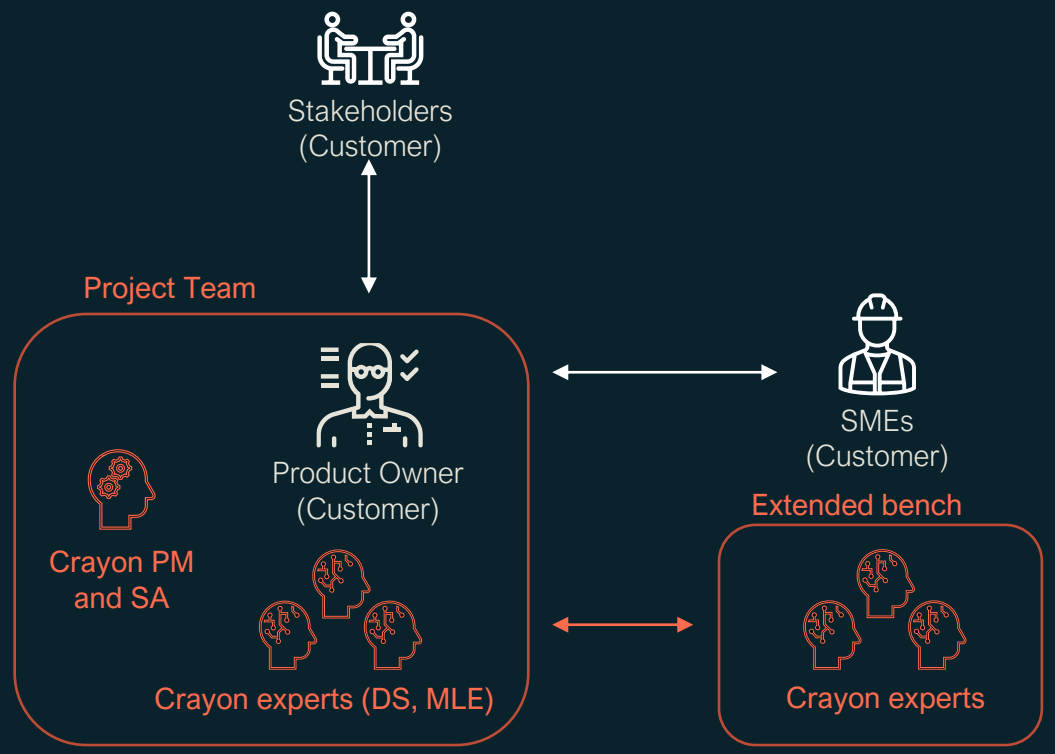
- Data Scientists
- Machine Learning Engineers
- Project Manager and Solution Architect

Crayon responsibilities

- Helping customer's PO to shape the AI product and business vision
- Exploration of data and AI possibilities, AI demos for stakeholder buy-in
- Deliver end-to-end AI solutions

Customer

- Willing for continuous engagement (no fixed scope)
- Willing to fund open ended data exploration (budget)
- Willing to test and fail on AI PoCs to showcase potential (fail fast approach)



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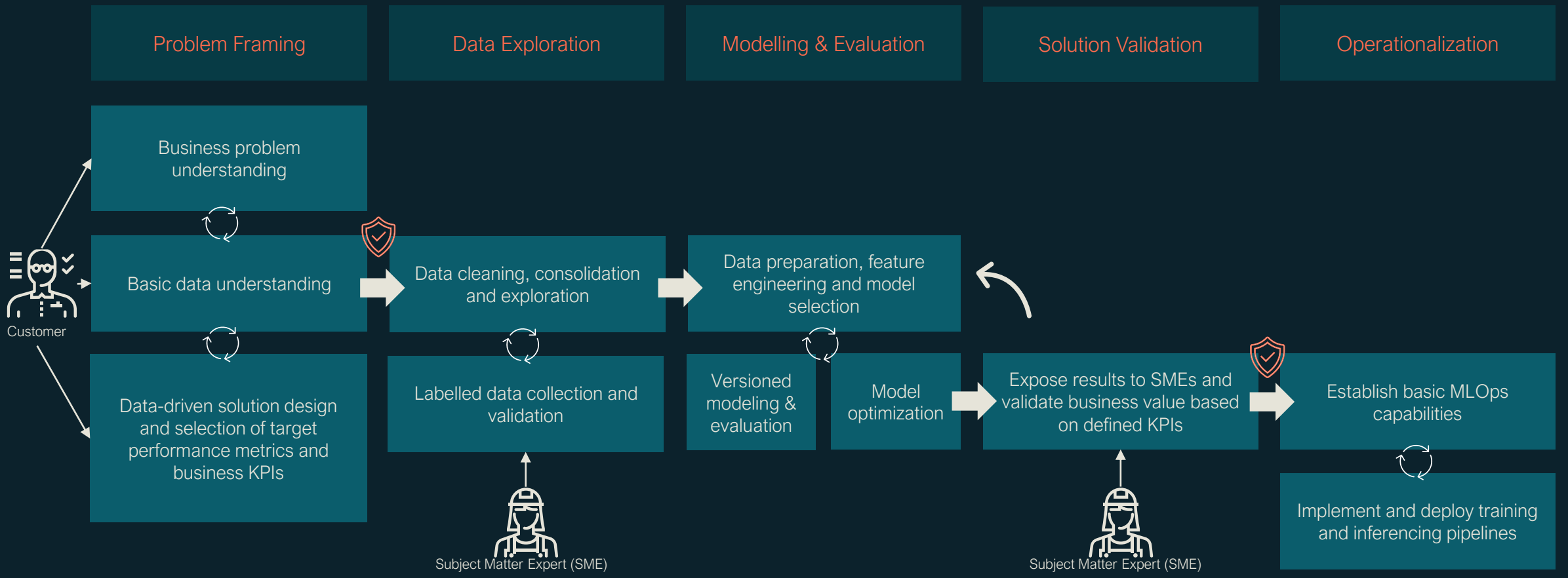
BUILDING AN IMPACTFUL AI SOLUTION THAT GENERATES TRUE BUSINESS VALUE

Our end-to-end delivery approach for AI-powered solutions

Microsoft Solutions Partner
Data & AI
Azure

Specialist
AI and Machine Learning
Modernization of Web Applications
Infra and Database Migration



Decision gate

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Industry-specific solutions & selected use cases

DATA & AI SERVICES

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- Finance & Insurance
- Agriculture

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ENTERPRISE FACT-BASED QUESTION ANSWERING

Ask your data

„What was the total value of the contract with customer X?“

Employee searches different data sources for specific information

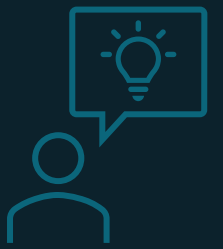
Employee has to click and manually search through all documents for the information

Employees are enabled to easily find information in the companies data

Crayon AI finds specific information and provides the answer

Cognitive Search + Azure OpenAI

„The total value was 20.000€. See customer_x_contract.doc for reference“



Enterprise fact-based question answering - „Ask your data“

Build a ChatGPT-like solution that uses your own industry-specific and business domain data

Search any company data with a single natural language query and get an accurate, human-like answer with sources.

With our solution, you will be able to democratize quick and fast access to valuable data (documents, emails, databases, SharePoint, etc.), thanks to natural language queries and semantic search.

The Offer Package

Business Value

- Data-driven decisions. Eliminate organizational data silos, ingest and query every kind of data, more than 80% of data in their businesses is unstructured.
- Managing security and governance of sensitive data while retrieving it fast.
- Digitize and automate legacy documents and processes extracting every kind of entity from receipts, invoices, bills, and tax forms. Chatting with your documents.

Deliverables

- User-friendly interface
- **Improved employee productivity:** Reduce the time required for information search by 70-90% → improving employee satisfaction → Reducing Burnout rate.
- Many of them were able to reduce outsourcing costs by 40-55% thanks to AI-Powered process automation.

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SOLUTION EXAMPLE

Automatic Visual Quality Inspection

Automate the quality inspection of products or assets, leading to increased scalability and cost savings.

Visual quality inspection is essential for asset monitoring and industries with production lines. It is a crucial part of quality management and helps to ensure that products meet high standards. By identifying and addressing defects, visual inspection saves time, money, and reputation.

The Offer Package

Business Value

- **Improved quality**: Automated inspection reduces defects and improves customer satisfaction.
- **Increased efficiency**: Faster with reduced labor costs.
- **Cost savings**: Automation reduces manual inspection
- **Scalability**: Cloud-based solutions enable easy scaling.
- **Flexibility**: Tailored solutions provide flexibility to customize inspection processes.

Deliverables

- ✓ Data acquisition system evaluation and consultancy
- ✓ Tailoring an AI solution for visual quality inspection
- ✓ Deployment of the AI solution into production environment
- ✓ Continuous evaluation and model management for long-term performance.

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COMPUTER VISION EXAMPLES

Defect detection for insurance

An insurance tech company wants to automate the detection of damages or cracks in smartphone screens using AI.

Business Problem

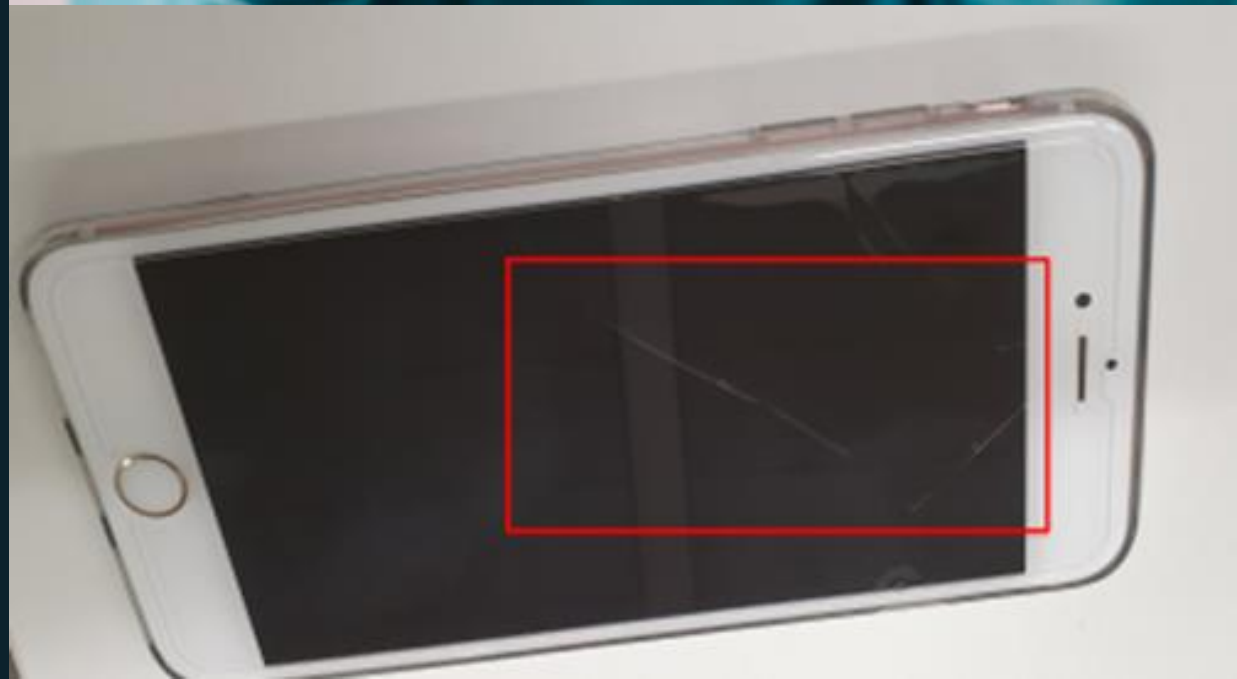
- For a long time, insurance companies were relying on physical presence of their subject matter experts to evaluate damages or defects.
- Even being able to access the images of the insured item remotely, still manual inspection of multiple images is slow, subjective and involves a long waiting time for consumers.
- The efforts and costs are high on insurance side.

Business Solution

- Automated defect inspection for claim processing by developing an AI solution using previous existing data on the cloud.
- The solution should support experts in the decision-making process.
- Automatic actions were set for reimbursement.

Outcome

- Delivered a fast, accurate, and scalable quality inspection solution.
- Reduced the staff cost and increased profit.
- Led to higher customer satisfaction and higher 1st level incident resolution rate.



COMPUTER VISION EXAMPLES

Pavement Inspection and Monitoring

A global ISV provider for landmark inspection wanted to automate the pavement defect detection.

Business Problem

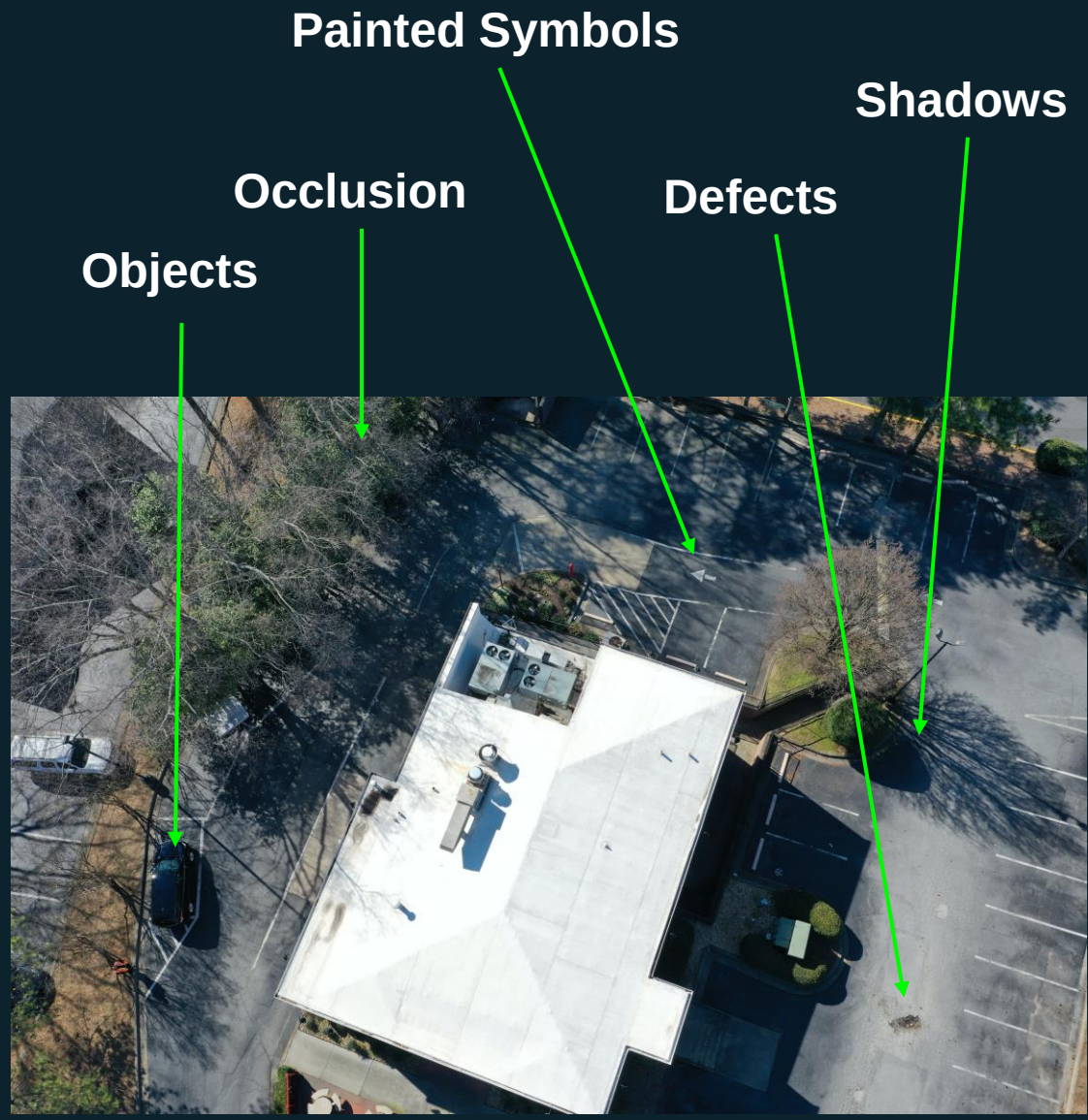
- Manual inspection of pavement (e.g., a parking lot) is time consuming, biased and sometimes only limited access is possible.
- Automating this process is a difficult task, due to occlusions, shadows and noise in the images (e.g., road signs).

Business Solution

- Developed an AI solution using imaging data collected from drones and applying Computer Vision and ML to automatically detect pavement defects.
- The solution should support experts in the decision-making process.

Outcome

- Reduced time in pavement inspection, while increasing coverage of analyzed area.
- Increased accuracy and objectivity due to AI solution.



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COMPUTER VISION EXAMPLES

Quality inspection for food processing

A fish processing company wants to perform automated quality inspection on fish processing pipelines.

Business Problem

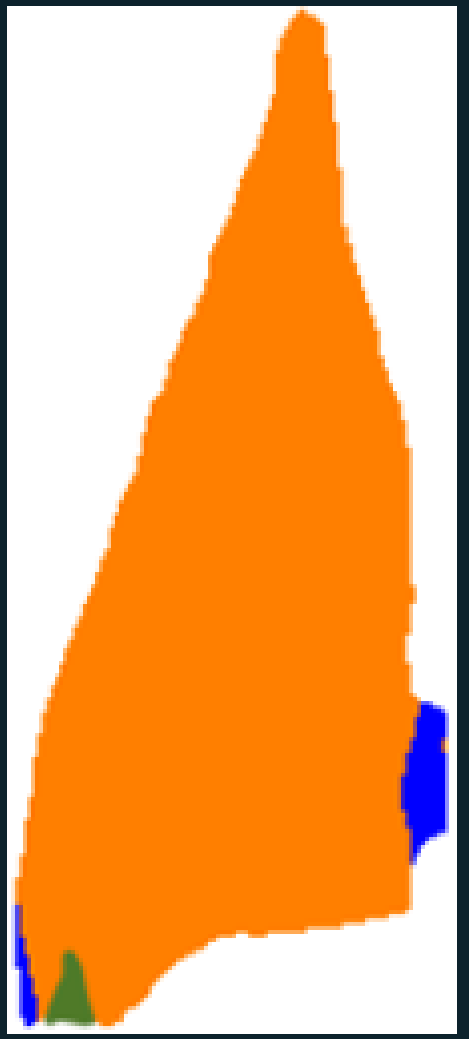
- Visible quality deviations occur during fish processing which can be resolved by adjusting the equipment.
- Sometimes fish gets stuck and piles up on the processing line.

Business Solution

- Developed a camera-based AI solution to monitor fish quality deviations.
- Notification when fish is stuck on the processing line.
- Dashboard visualizing statistics and metrics.

Outcome

- Reduced waste.
- Increased efficiency on the processing line.



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SOLUTION EXAMPLE

Agricultural Remote Sensing

Optimize agricultural yield and land usage using actionable data-driven insights.

We provide you with a customized end-to-end computer vision solution, from satellite data ingestion and collection of baseline data to machine learning model deployment and automatically generated insights on predefined geospatial regions.

The Offer Package

Business Value

- Insights on quality and quantity of agricultural produce, detecting of change and geospatial boundaries on a large geospatial region
- Early and evidence-based (data-driven) decisions on expected yield, fertilizer usage and market trends.
- Increased revenue, cost savings, optimized yield and land use, less waste and reduced carbon footprint.

Deliverables

- ✓ High frequency (up to daily) insights for a specific geospatial region and products:
  - ✓ What is the expected yield?
  - ✓ What is the expected quality of the produce?
  - ✓ Are there any indications of exogenous events that impact my yield?
- ✓ Based on insights into your data:
  - ✓ React to deviations in quality/quantity of product.
  - ✓ Preventive measures (e.g., fertilizers, plant protection etc.)

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COMPUTER VISION EXAMPLES

Deforestation & illegal plantation detection

An NGO and Crayon joined forces to utilize AI to protect a unique habitat in Vietnam for future generations.

Business Problem

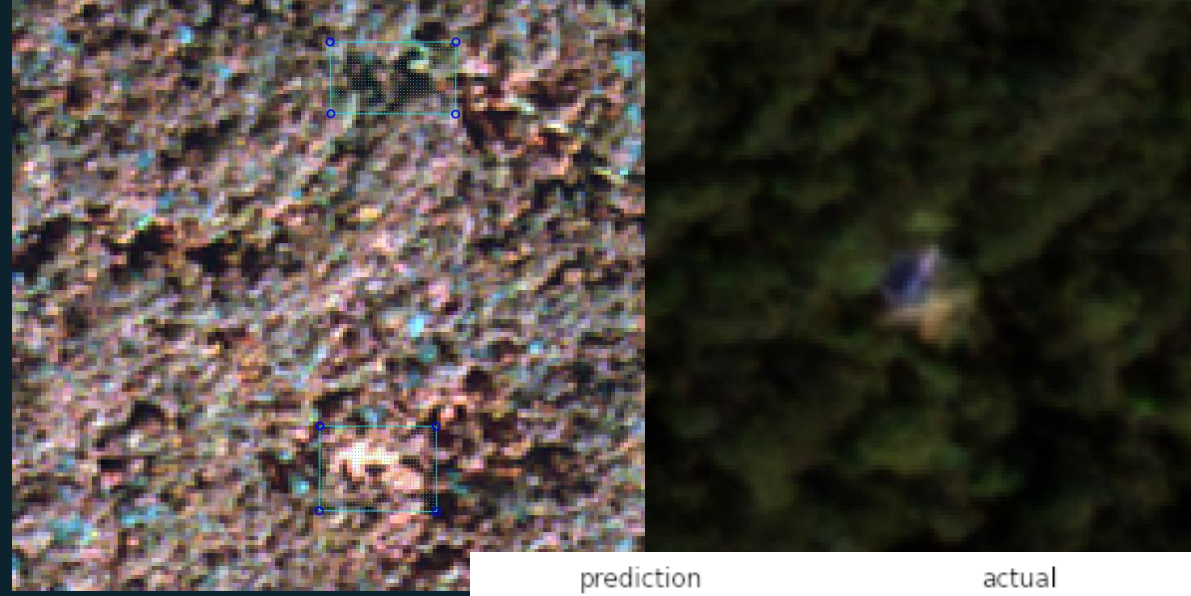
- The result of deforestation caused by illegal plantations is not discovered until the destruction of plant and wild-life is irreversible.
- The current control mechanisms to discover, track, and prevent deforestation is inefficient and time consuming.

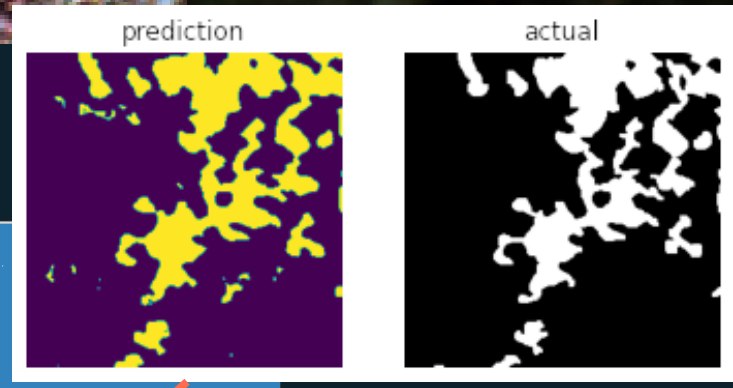
Business Solution

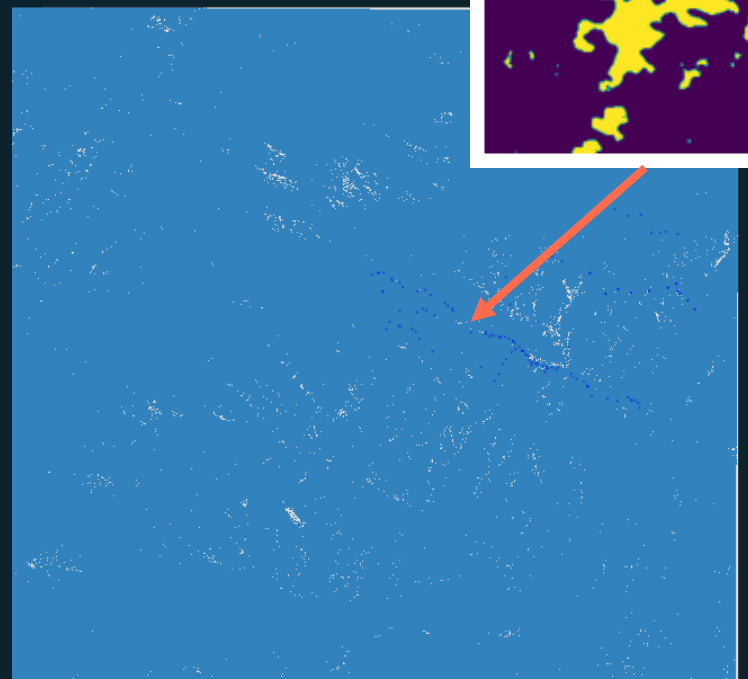
- Collected various types of satellite and UAV imagery data.
- Used Computer Vision algorithms and machine learning to identify:
  - Cardamon plantations
  - Human constructions
- Provided results in a GIS application to highlight human activities.

Outcome

- Visualized the extend of human activities in protected areas.
- Visualized the severity of the problem.
- Highlight the extend of deforestation to officials.
- Raise additional funds.
- Leverage the technology for similar problems.







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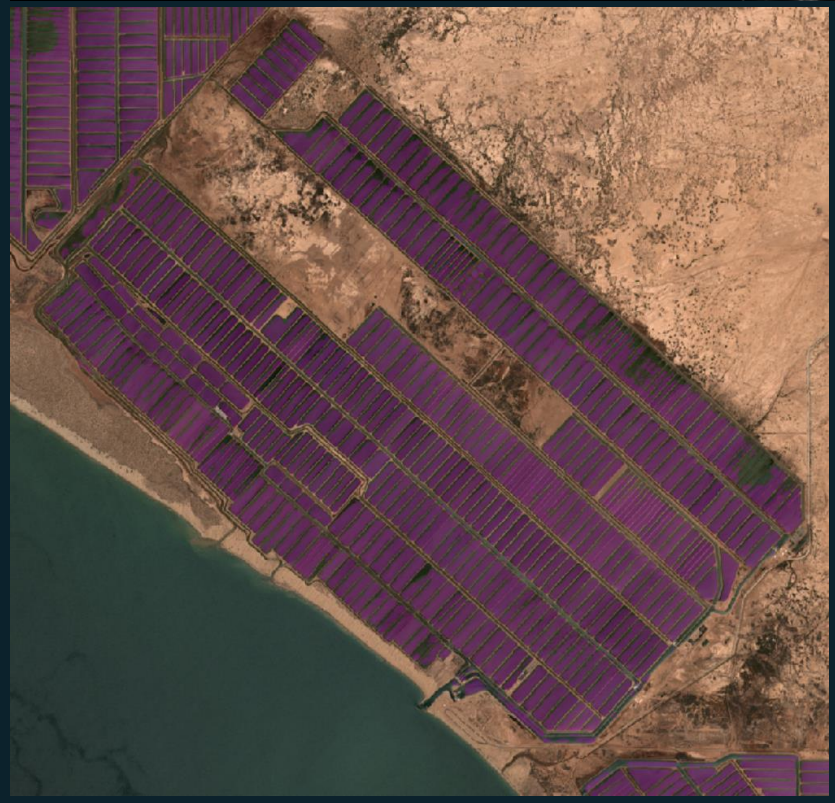
COMPUTER VISION EXAMPLES

Shrimp farm analysis using satellite data

An innovative startup in Singapore and Crayon joined forces to develop an AI solution for detecting shrimp aquaculture ponds.



Business Problem

- The client was looking to get an overview of the status and development of the shrimp aquaculture ponds in selected regions
- The identification and tagging of shrimp ponds was done manually which is expensive and time-consuming

Business Solution

- Used Computer Vision algorithms and Machine Learning to automatically identify shrimp pond areas and to distinguish them from shallow water and paddy fields
- Provided data collection, validation, training, and testing workflows
- Used open-license Sentinel satellite images which can be applied to very large areas cost-efficiently

Outcome

- Localized and visualized the shrimp pond area in regions of interest with an accuracy of 85% (*mIoU*) and an instance recall of 96%
- Saved time and money for the client
- Foundation for future investment and additional data insights
- Cloud-based solution which is easily scalable

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Data-driven Maintenance

Avoid unplanned downtime and inefficient operation of your assets with our customized AI solution

We provide you with a customized end-to-end data insights solution, from sensor connectivity, data integration and collection to machine learning model deployment and real-time insights.

The Offer Package

Business Value

- Cost savings due to automated process for timely and accurate detection of anomalies
- Better understanding of process data allows experts to optimize Standard Operating Procedures
- Continuous business value by sustained solution quality and relevance through monitoring and maintenance

Deliverables

- ✓ Configuration and implementation of scalable data extraction and processing pipelines
- ✓ Managed machine learning services
- ✓ Real-time insights dashboard
- ✓ Real-time notifications on anomalies
- ✓ Customizable maintenance event progress reports

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DATA INSIGHTS SOLUTION EXAMPLES

Metal Corrosion Prediction

A leading provider of oilfield diagnostics wants to monitor and predict corrosion rates in oil and gas wells.

Business Challenge

- Over time, oil wells undergo corrosion and metal loss due to external factors. This can eventually lead to leakage and unplanned downtime which is very costly.
- Current manual preventative maintenance strategies involve yearly or bi-yearly checks which do not prevent all unplanned downtime.

Business Solution

- Development of a machine learning model to prediction the rate of metal loss inside a well.
- Estimation of when wells will require maintenance actions (based on the metal loss at any given time)

Expected Outcome

- Reduction of leakage events and unplanned downtime
- Foundation for data-driven planning of maintenance actions

TGT and Crayon partner to transform the industry through predictive diagnostics (Link)

DATA INSIGHTS SOLUTION EXAMPLES

AI to enable usage-based pricing model

A leading manufacturer and operator of cranes wants to monitor and predict complex movements.

Business Challenge

- Product management needs to understand usage of products in the field
- Large amounts of data collected from several sensors on the machine sensors need to be analyzed by experts
- Sub-optimal use of cranes leads to fast wear & tear

Business Solution

- Clear digital definition of how a lift is represented in the data
- Implementation of unsupervised AI model to identify single states and movements of the crane
- Validate solution by selecting suitable labeling tool for experts
- Continuously create automated usage reports

Outcome

- Reduction of expert effort for analysis and reporting
- New capability to detect mishandling and excessive usage
- Set foundation for usage-based pricing model and autonomous crane operation

DATA INSIGHTS SOLUTION EXAMPLES

Survey Planning and Duration Prediction

The world's largest classification society wanted to reduce costs on survey planning.

Business Problem

- Surveys are business critical for vessel owners as vessels are not allowed to operate without the right classifications.
- Process is carried out locally through e-mail and phone interaction with client and limited systems support.
- Manual scheduling of physical inspections globally is a very complex process and results in 4.3 job splits.

Business Solution

- Implemented customer portal for survey booking and planning.
- Precise estimation of survey duration is key to ensure customer satisfaction and reduce survey costs.
- ML model for estimating the duration of a survey was trained using 55.000 past surveys and over 300 features.

Outcome

- Estimated annual savings of 10M USD
- Reduction in avg. job split from 4.3 to 1.9
- Reduction in administrative work related to manual scheduling
- Improved ability to optimize location and resource capacity

DATA INSIGHTS SOLUTION EXAMPLES

Piece Classification

Steel producer and trader wants to optimize its multiple warehouses in several countries.

Business Problem

- The stocks are filled with potentially resalable rest pieces.
- Each piece needs to be assessed manually whether it is worth keeping on stock or should be melted.
- An individual piece might only be sellable in other areas than where it is stocked.

Business Solution

- Analyse 2 years of sales and stock data with 69k pieces.
- Predict time on stock for each piece according to its individual specification.
- Recommend individual pieces to potential customers.

Outcome

- SAP-based UI is in development.
- Compression of stocks by 35%
- The application lays the foundation for inventory- and demand-based multi-warehouse optimization.

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COMPUTER VISION EXAMPLES

Data extraction from technical drawings

The customer wanted to enhance discoverability of technical drawings.

Business Problem

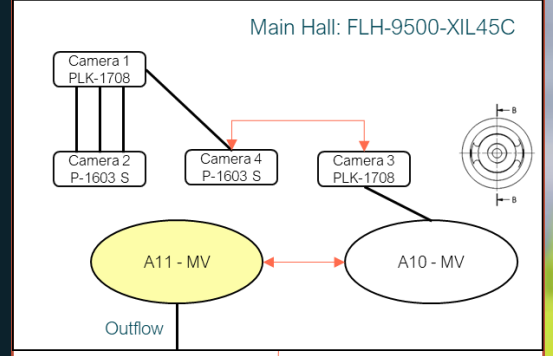
- Customer is manually searching necessary data within tens of thousands of technical drawing PDF files including text.
- Human visual inspection in multiple large PDF file is very time consuming and requires zooming to different areas, and adapting to different font, color, orientation, and size.

Business Solution

- A cloud-based solution using Computer Vision (CV) combined with Artificial Intelligence to extract a target tags/codes from PDF documents.
- Extracted content is indexed and made available in a search tool.

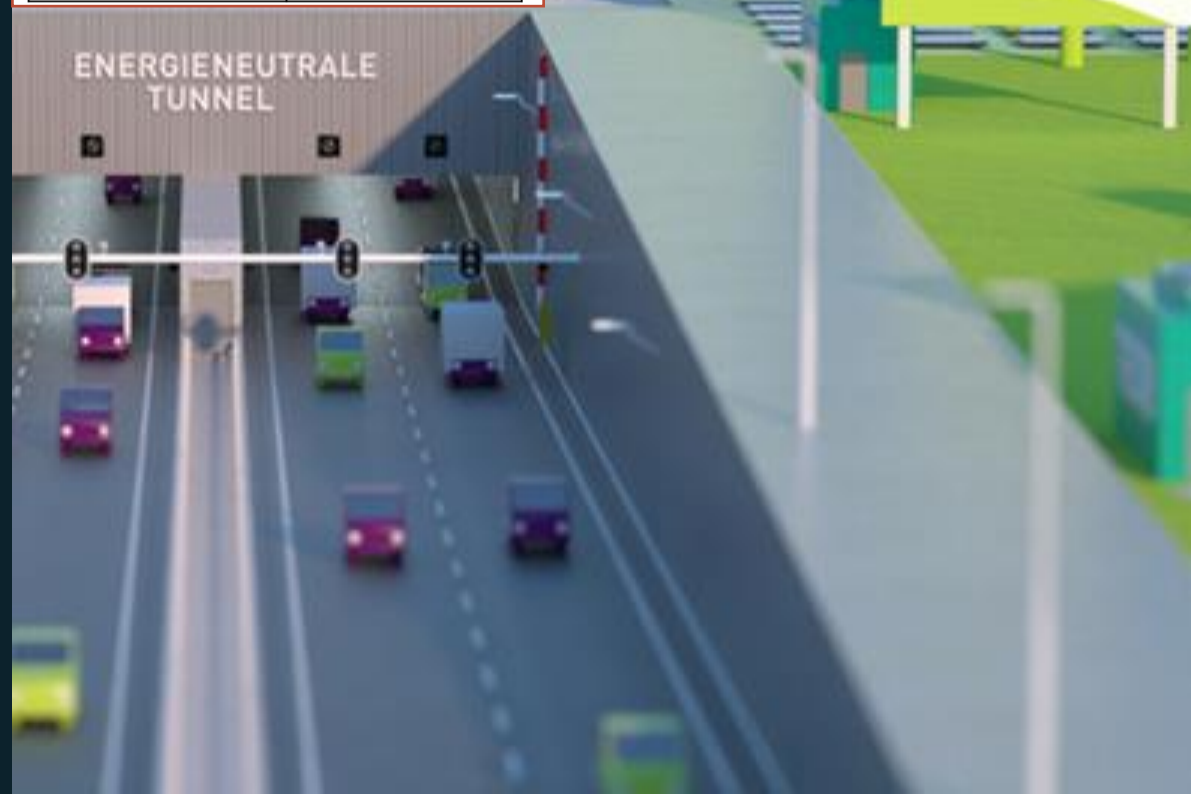
Outcome

- Reduce a manual lookup of the information by 90%.
- A scalable solution that can be used for indexing additional types of technical documents.



Output / Indices

Value	Position
A10 - MV	(68, 45)
A11 - MV	(31, 45)
Camera 1 PLK-1708	(18, 17)
…	…



NATURAL LANGUAGE PROCESSING EXAMPLES

Next-generation Health & Safety Engine

A leading integrated services business wants to use AI to monitor and predict safety risks in their operating environment.

Business Challenge

- Understanding and managing risks and responding to and learning from incidents plays a fundamental role in Downer's Zero Harm goal.
- This program generated an in-depth analysis of 320 material risks for which 16,000 controls (things you do to manage risk) were documented
- The sheer volume of control information and management system documentation make this mission extremely challenging

Business Solution

- Using NLP to tag Downer Group's safety reports and documents with the safety controls
- Automatically associating safety incidents identifying risks and controls
- We enabled Downer to significantly improve their ability to organize unstructured content purely based on "semantic similarity."

Outcome

- A model that produced up to 80% accuracy when identifying controls in management system documentation–achieved in only five weeks
- The solution is enabling a range of tools being developed in-house by Downer that will begin to transform the way health, safety, and environment are managed across the Group. In the future

DATA PLATFORM AND ENGINEERING EXAMPLES

Production MLOps Platform

A global leader in refractory products requires a production machine learning platform.

Business Problem

- Existing models to optimize the maintenance of vessel lining by predicting the durability of the material over time.
- The models are running on a local machine and are not scalable to other customers.

Business Solution

- Deliver a scalable production ML platform for the deployment and management of multiple models for various customers.
- Up-skill the team to maintain and further develop the platform.

Outcome

- Establish a production ML platform for model deployment and management.
- Reduce costs for customers by optimizing timing of lining repairs.
- Scaled solution to 50+ customers.

DATA PLATFORM SOLUTION EXAMPLE

Data & MLOps Platform for Biotech Industry

Agritech's data-driven future: enabling ML-powered gene editing with a modern Data and MLOps Platform

Business Challenge

- Limited governance over machine learning experiments and data assets
- Diverse tooling hinders maintainability of the platform and incurs cost
- Existing setup had limited scalability potential

Business Solution

- Building scalable and unified Data Platform for efficient data governance
- Building MLOps Platform to optimize costs, performance and maintainability
- Moving several gene-editing projects into production on the new architecture

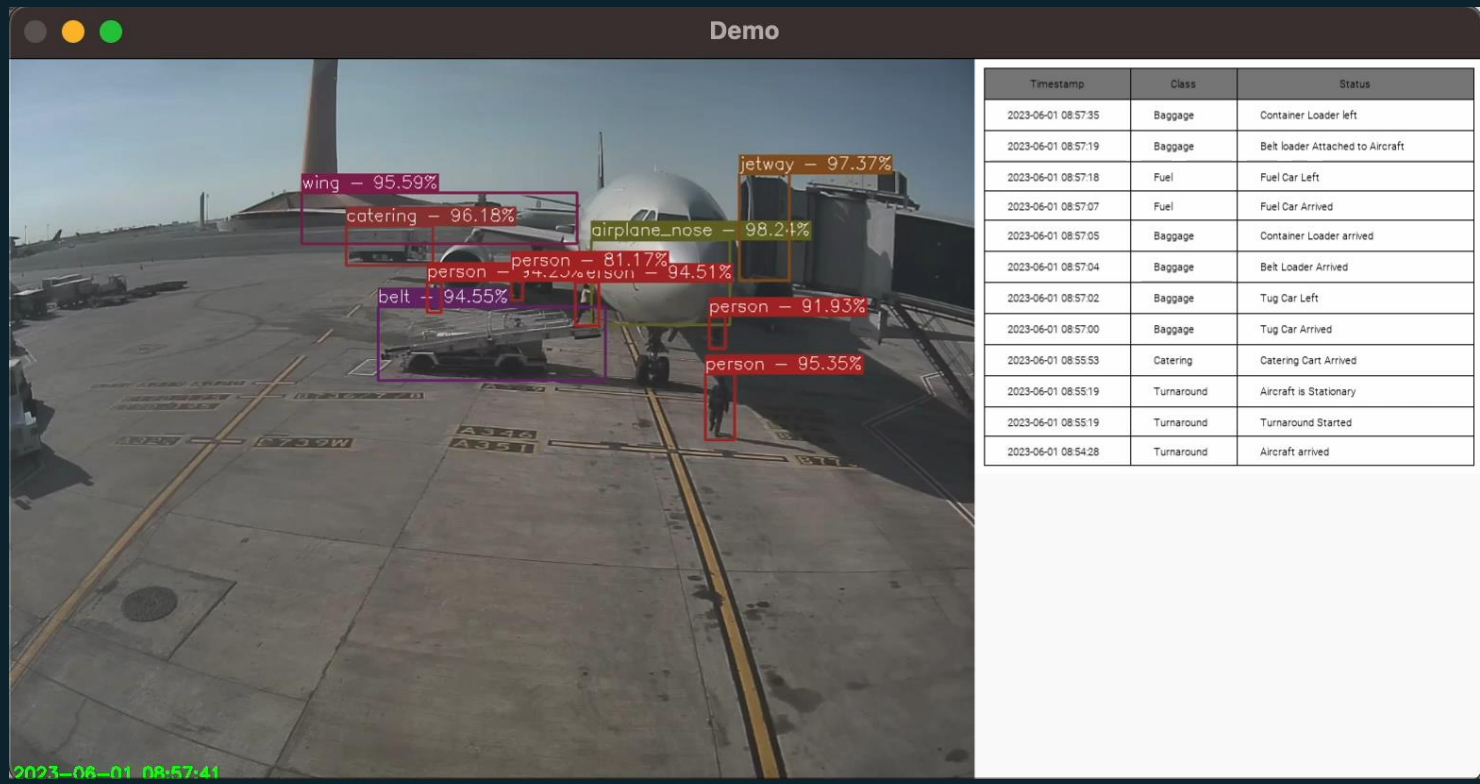
Outcome

- Better performance: running the experiments up to 10 times faster
- Cost optimization due to unified tool stack
- Scalability and operationalization of research for production: more resilient solution for scaling into production with high operational visibility
- Time saving with easier maintainability of the solution

COMPUTER VISION EXAMPLES

Airport Monitoring and Security

A leading airline company wanted to automate the security and turnaround management of the airport.



Timestamp	Class	Status
2023-06-01 08:57:35	Baggage	Container Loader left
2023-06-01 08:57:19	Baggage	Belt loader Attached to Aircraft
2023-06-01 08:57:18	Fuel	Fuel Car Left
2023-06-01 08:57:07	Fuel	Fuel Car Arrived
2023-06-01 08:57:05	Baggage	Container Loader arrived
2023-06-01 08:57:04	Baggage	Belt Loader Arrived
2023-06-01 08:57:02	Baggage	Tug Car Left
2023-06-01 08:57:00	Baggage	Tug Car Arrived
2023-06-01 08:55:53	Catering	Catering Cart Arrived
2023-06-01 08:55:19	Turnaround	Aircraft is Stationary
2023-06-01 08:55:19	Turnaround	Turnaround Started
2023-06-01 08:54:28	Turnaround	Aircraft arrived

Business Problem

- Manual surveillance of hundreds of video feeds is a challenging task, and human errors may lead to catastrophic outcomes in some scenarios.
- Automating this process is a difficult task due to the complexity of the problem.

Business Solution

- Developed an AI solution using video feeds from security cameras and Computer Vision and ML to automatically monitor the following:
  - catering supplies or specific objects that belong to the aircraft
  - unauthorized access or suspicious behaviour
  - cabin crew status and location
  - aircraft door status / aircraft is unattended
  - distinguish different operational staff and keep a register of all the entries/exits
- The solution should support security team and onsite experts in the decision-making process.

Expected Outcome

- Reduced time and number of staff for surveillance, while increasing performance.
- Increased accuracy and objectivity due to AI solution.

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DATA PLATFORM AND ENGINEERING EXAMPLES

Modern Data Platform on Azure

A large energy company required a cloud native solution to modernize their legacy stack.

Business Challenge

- Existing legacy solution for collecting operational data for wind and solar energy facilities needs to be replaced.
- The new platform should be usable by domain experts and easy to extend with additional KPI calculations.
- Existing data sources as well as legacy data needs to be connected.

Business Solution

- A modern, multi-mode data processing platform on Azure.
- Built on top of Azure Event Hubs, ADLS, Databricks, and Managed SQL.
- A purpose-built UI and set of APIs abstract the complexities of the underlying systems.

Outcome

- Crucial reports on operational data can now be managed via an intuitive user interface.
- Significant improvements in the quality of the data, turnaround times as well as extensibility of the system.
- Fully integrated into the existing monitoring and lifecycle management systems.

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Thank you