data iku

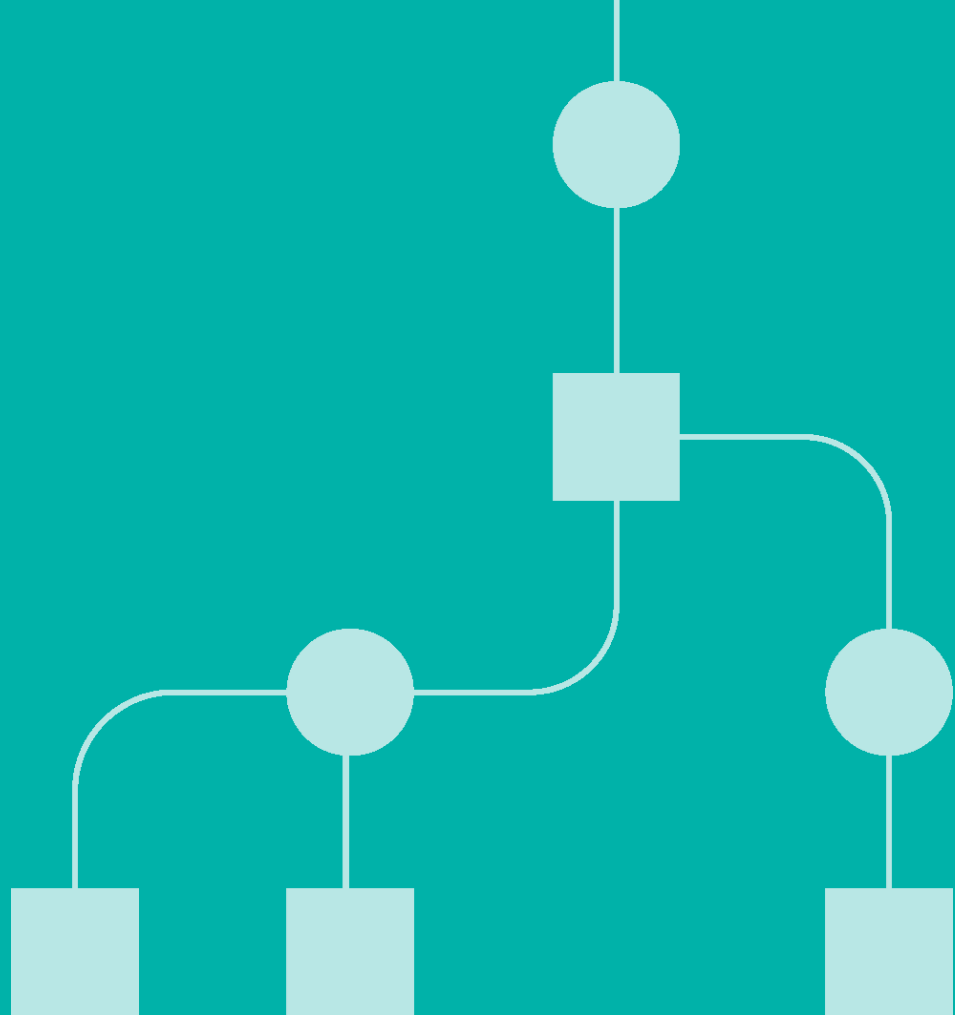# Executing a Cost-Effective Data & AI Strategy in Bear Market

Agenda

How Do Cost Problems Manifest In Data & AI and What Makes Them Worse?

What Can Organizations Do To Manage Those Costs?

Customer Success Story

How do cost problems manifest in data & AI? What makes them worse?

POV

You want to see ROI on AI initiatives — who doesn't? After all, the potential is huge.

" **ROI on leveraging AI techniques ranges from about 20% to more than 800%.**
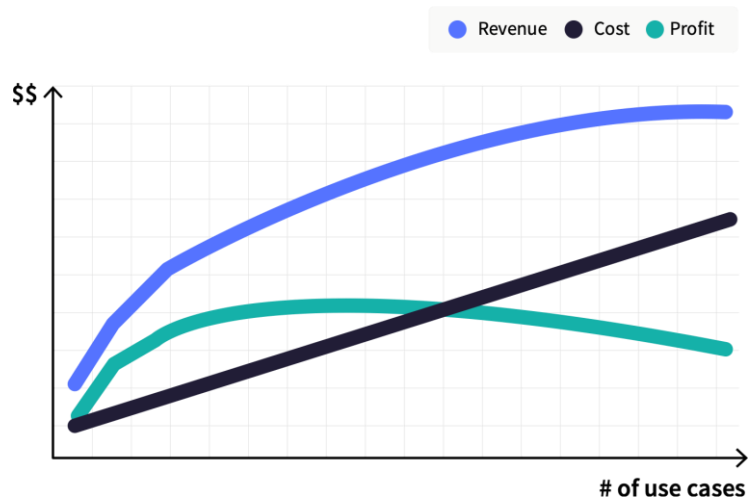
FACT

Maximizing ROI requires wide deployment across the enterprise.

" **Scale, dimension, and reach across the enterprise are the real returns on investment in AI.**

The Problem?

Legend: ● Revenue ● Cost ● Profit

X-axis: # of use cases
Y-axis: $$

- Your first use cases often have obvious, easy-to-capture value. Moving onward, use cases often require new techniques and skills and have less marginal value.

- Executing on increasingly sophisticated production use cases translates to a direct increase in maintenance costs.

- Even with maintenance handled, each AI project will need to evolve to meet new competitive pressures as costs increase and revenue slows.

The key to driving massive ROI from AI after some of the initial high-value use cases, then, is largely about deploying it massively while controlling costs. But how?

What can organizations do to manage those costs?

NEW PROJECTS

OLD PROJECT

Reusable Code ■ New Code
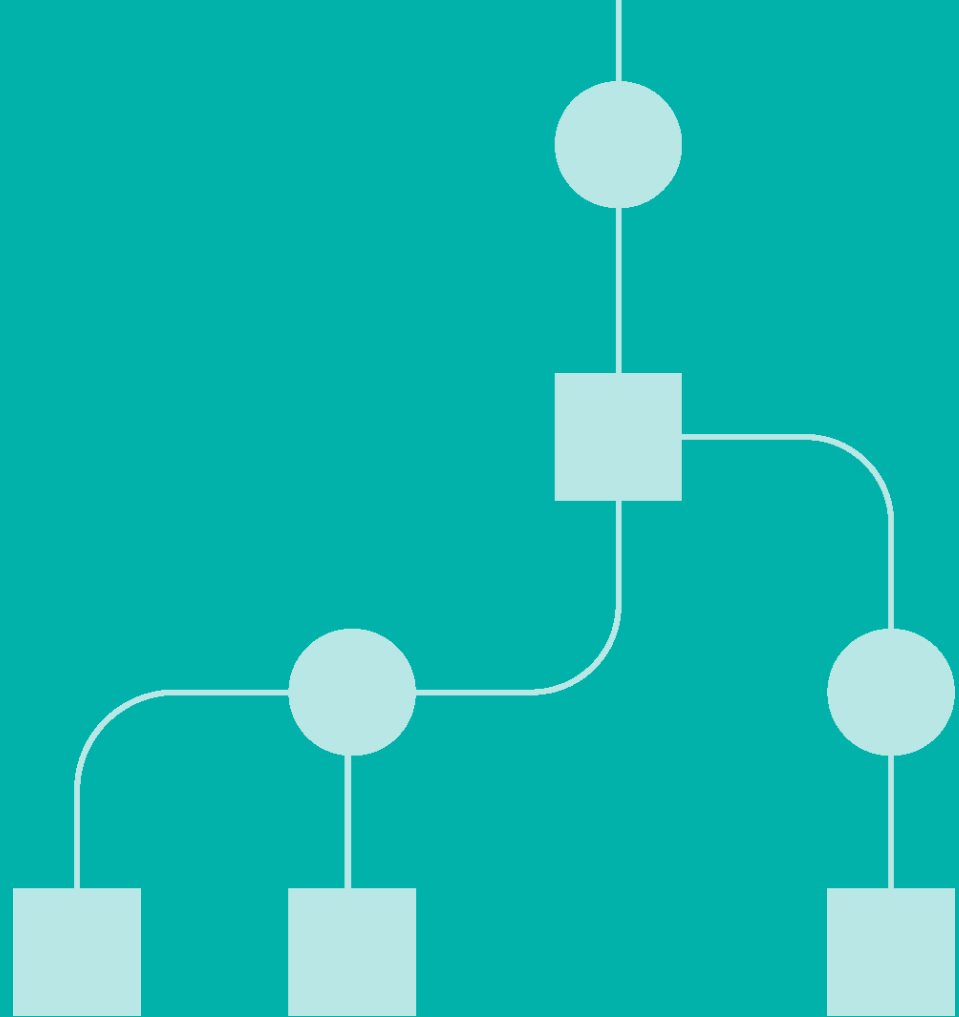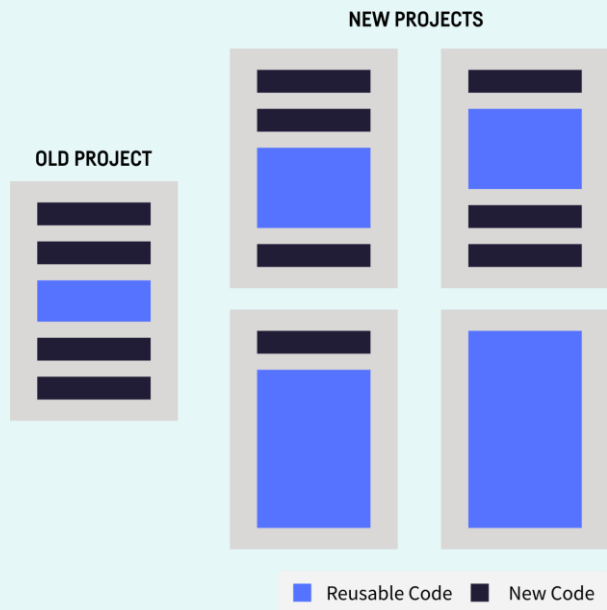
1. REUSE AND RECYCLE AI PROJECT COMPONENTS

- Avoid rework.
- Don't start from scratch every time.
- Find smarter, more efficient ways to ensure people across the organization aren't wasting time finding data or cleaning data that has already been prepared by someone else.

2. FACILITATE MORE USE CASES FOR THE PRICE OF ONE

- Increase the number of use cases being addressed across the organization.

- Empower everyone to leverage the work done on existing AI projects within new ones, potentially uncovering untapped, valuable use cases.
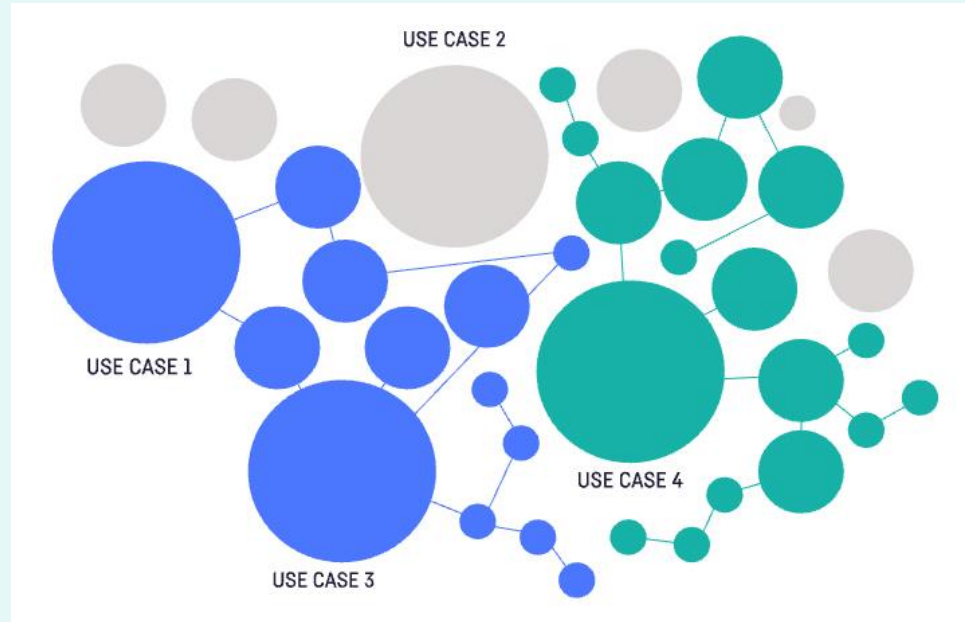
Sharing the cost incurred from an initial AI project results in many use cases for the price of one.
However, being able to leverage one project to spur another requires:

Radical transparency:

If neither customer services and marketing department knows that AI projects the other is working on, much less can access and leverage those components?

The right tools:

Tools like Dataiku makes data and AI accessible to anyone across the organization.

The surfacing of these hidden use cases often comes from the work of analysts or business users. It is one of the keys to data democratization and eventually to Everyday AI, where it's not just data scientists that are bringing value from data, but the business itself.

3. INTRODUCE EFFICIENCY ACROSS THE AI LIFECYCLE

Ideate & Explore

Experiment

Operationalize & Deploy
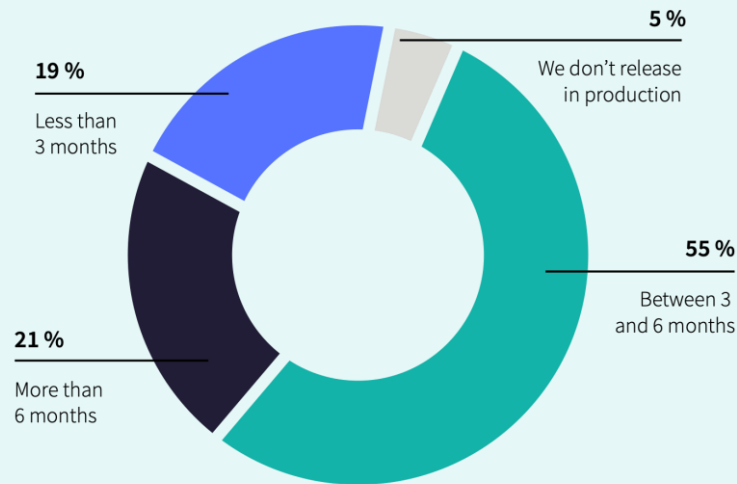
Manage, Learn & Scale
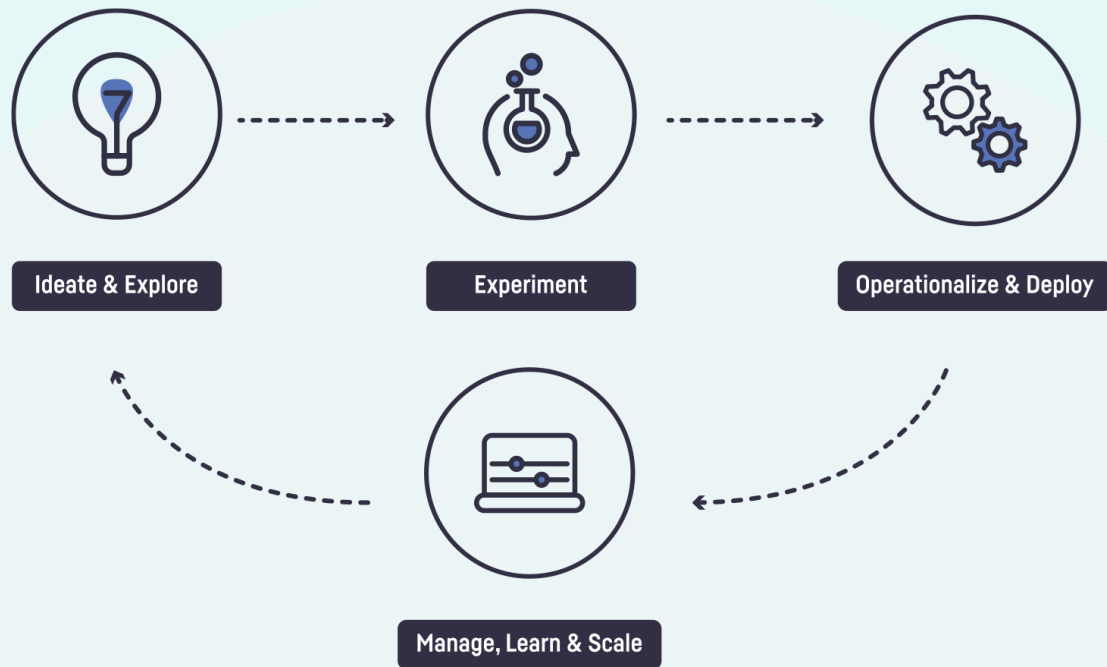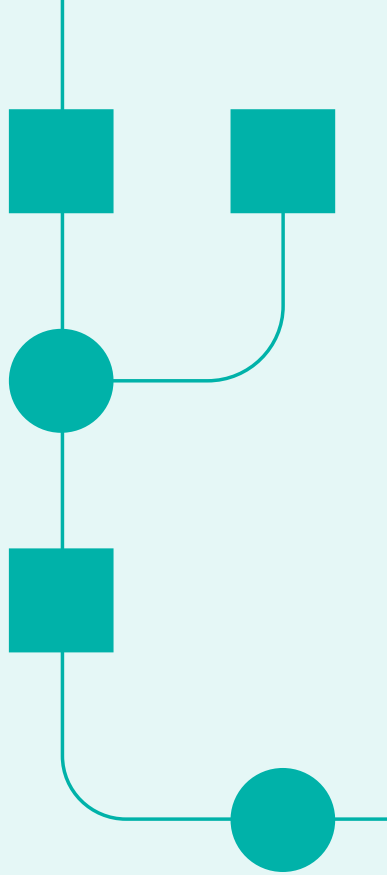
Operationalization, or Pushing to Production

Packaging, release, and operationalization of data, analytics, and AI projects is complex, and without any way to do consistently, it can be extremely time consuming.

This a massive cost not only in person hours, but also in lost revenue for the amount of time the machine learning model is not in production and able to benefit the business. Multiply this not by one model but by hundreds, and the cost is debilitating.

How long does it take to release a first model in production?

5 % — We don't release in production

19 % — Less than 3 months

55 % — Between 3 and 6 months

21 % — More than 6 months

Source: From a Dataiku survey of more than 200 IT professionals
https://pages.dataiku.com/trends-in-enterprise-data-architecture-model-deplyment

Model Maintenance (MLOps)

- Once put into production, challenge is around regularly monitoring and refreshing model to ensure it continues to perform as data changes
- Continual AI project cannot be ignored. In good case, model become less effective but in bad case, can be harmful & costly to the business.
- MLOps emerged as a way of controlling the cost of maintenance - shifting from manual work to a systemized, centralized task.

Changes in Underlying Architecture

- Architecture also needs to change as well as models. And switching architectures can be very costly
- Although cloud is gaining popularity, most companies will take hybrid approach thus Dataiku like abstract layer which sits on top of the architecture providing users with consistent experience no matter where the data is important is important
- Having modern approach to architecture helps to scale up and down of resources that is critical to reducing overall costs associated with AI
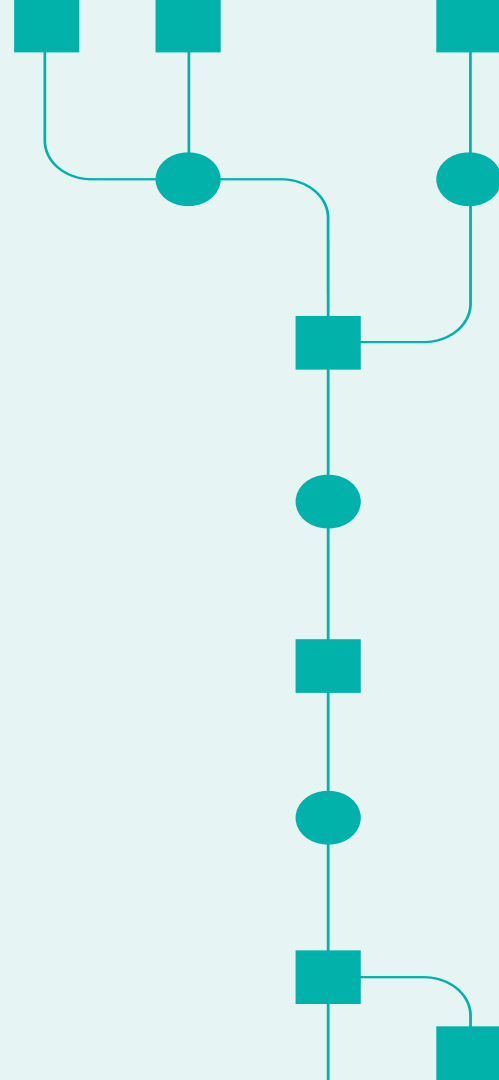
Controlling Costs is Just the Tip of the Iceberg

How can organization do it? - By investing in the right technology that:

1 **Anyone at the organization can easily access information**

2 **Data experts can create and share assets**

3 **Anyone at the organization can take, reuse, and adapt AI project work**

4 **Leaders at the organization can ensure the quality of AI projects**

Cost control requires removing friction - with that, you will be on your way to scale AI

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Customer Story
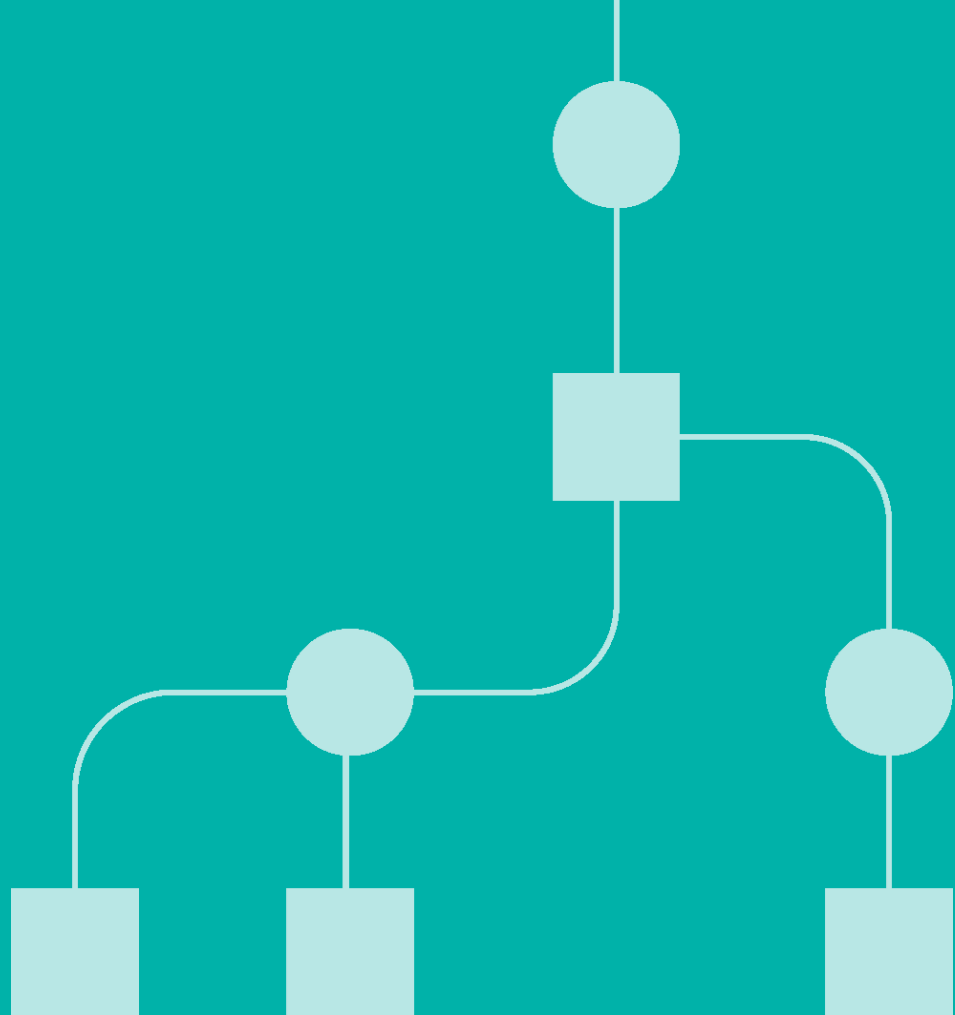
Malakoff Humanis

Improving Customer Relations with Power of NLP

Challenges

To keep up with customer demands and providing quality customer service, they collaborated with Dataiku on 2 NLP projects.

Use Case 1

NLP for Classifying Customer Claims

Helps to understand the topic of online claims through NLP classification algorithms and automatically dispatch the claim to the appropriate customer service team.

Use Case 2

Speech Analytics and Sentiment Analysis for Improve Telephone Customer Service

To analyze the content of customer calls (themes and tones) in order to identify area for improvement of telephone assistance.

Topic classification: What are the calls about?

The goal is to find out why there is a surplus of calls on certain topics, in order to have more precise staffing forecasts.

Sentiment analysis: What is the level of satisfaction of calls?

The objective is to build a model that allows to have new information on the global tone of the calls and to know on which topics and problems customers tend to be most dissatisfied in order to react promptly. Furthermore, this would allow to assess the levels of customer satisfaction across different teams, and compare the effectiveness of internal versus outsourced customer support teams.

SCOPE OF THE PROJECT MADE USING DATAIKU DSS
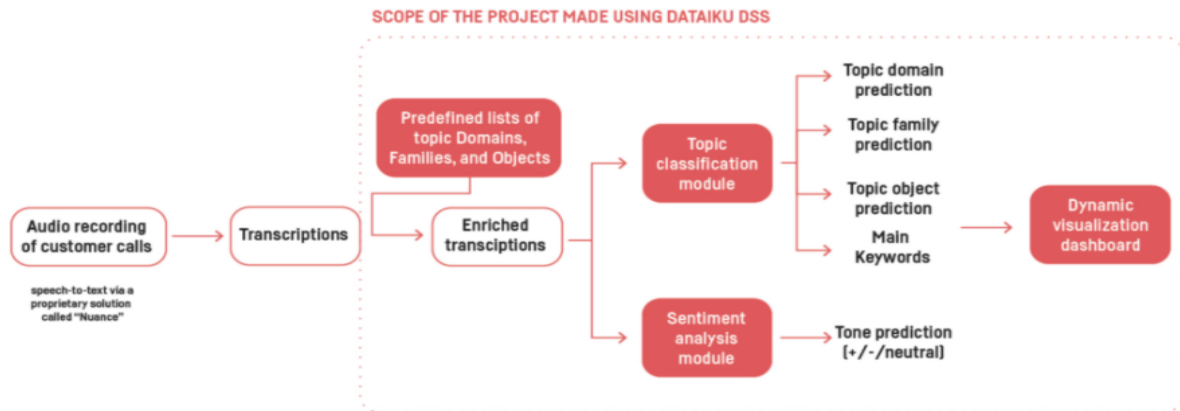
Result 1

Create a **processing chain** which takes transcriptions of telephone calls as input and analyses and **classifies the tone** as well as the **topic of conversations**.

Result 2

The information obtained allows to **analyze and monitor** the overall **content and sentiment of calls**, and **classify** them accurately into the main call categories.

Result 3

Identify and operationalize a new advanced NLP use case in a secure and scalable way that empowers users to be **autonomous**, **continue monitoring** the **models in production**, and potentially **reuse** it for other text classification problems. The Dataiku approach **facilitated knowledge transfer** and allowed for a **smooth project handover** between Dataiku and Malakoff Humanis.

Result 4

Helped to **go beyond a "algorithmic" approach** and focus the project efforts not only on the technical aspects, but also the **concrete business objectives**, by actively **collaborating with the business** side and providing them with actionable insights in the form of a dynamic dashboard. Dataiku's collaboration features were considered a major advantage and were appreciated both by executives and users.

Drive 423% ROI With Dataiku

Forrester: The Total Economic Impact™ Of Dataiku reveals that organizations save 75% of data scientists' time and reduce 90% of manual, repeated reporting tasks with the platform.

"By having these reusable data pipelines and data products, [we have] streamlined our operational side of development. We're talking about savings in the range of $4 million plus."

-Team Lead, Analytics Innovation | Pharmaceutical Company

READ THE FORRESTER STUDY

Thank You!