4 Evaluating a project

AI business impact

Return on investment (ROI)

- Compare tangible value and cost

- KPI examples
  - Revenue increase
  - Efficiency gains
  - Implementation costs
  - Risk (investment, acceptation, regulation, cyber, etc.)

Value on investment (VOI)

- Also consider intangible value

- KPI examples
  - Customer satisfaction
  - Employee motivation
  - Brand reputation
  - Intellectual property
  - Partnerships

How to measure success?

- Project fails if it doesn't meet predefined objectives
  - Define goals upfront at start
  - Well defined, quantifiable and measurable
  - Compare against status-quo benchmark

- Problem definition as a prediction task
  - NOT "stop customers from leaving"
  - BUT "predict which customers will churn and primary reasons of churn"
  - Makes it easier to find technical metrics

Technical vs business metrics

- Always align business objectives with technical metrics
  - Not doing so will yield disappointment

- Define quantifiable business value
  - Translate it into proper technical metrics

- Choose something meaningful to measure in business terms
  - Make their link to the outputs of the AI solution explicit

Case studies

- Fully automated image clean-up for a manufacturing company
  - Background removal
  - Time and resource consuming

Time to clean
an image **0.07s**

Cleaning pixel
accuracy **> 99%**

Man hours saved
per year **> 3500**

- Physical advertisement impact prediction
  - Assess the effectiveness of ads

3 billion data points
processed
in under **10 min**

prediction performance
f1 ~0.8

Algorithm used in
all reports