Microsoft

techedge

Microsoft Azure Marketplace

Azure - Forecasting

2-Weeks proof of concept

2021

Context

WHAT IS IT?

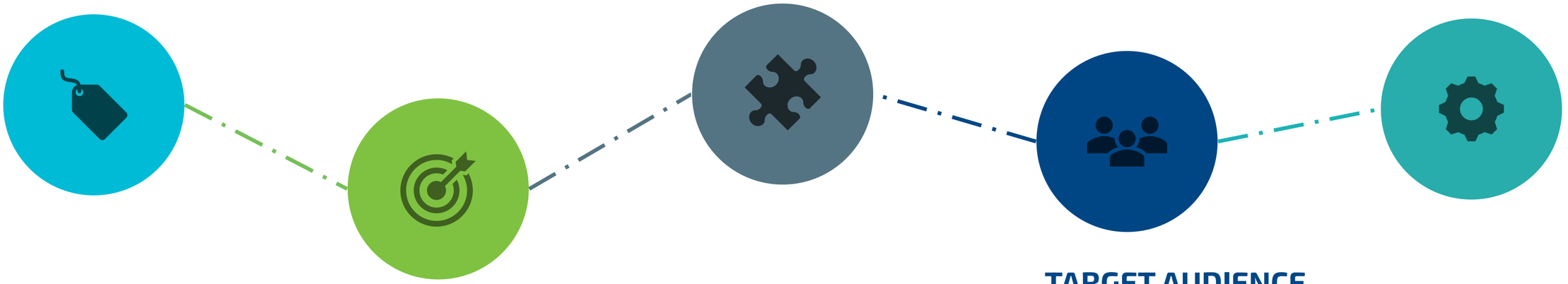
2-Weeks Proof of Concept about **Forecasting** models based on Azure solutions. A worldwide experience available both in italian or english languages.

BUSINESS AREA

Automotive
Distribution
Financial Services
Manufacturing
Media & Communications
Retail + Consumer Goods

GOLD SKILLS

Data analytics
Data science
Machine Learning
Data platform



GOALS

Highlight Azure analytical potentialities and how they fit in your organization. Provide data forecasting insights and showcase how they can be extended with a structured approach.

TARGET AUDIENCE

ICT departments
Data scientists
Business analysts

POC Description

“Improve your forecasting capabilities through AI applications”

Obtain reliable business previsions (financial, demand, supply chain, quality, and other forecasting scenarios)

2-weeks Forecasting POC

Techedge will carefully evaluate your needs, to design an appropriate solution by melting advanced analytical methodologies with the Azure ecosystem as ML Studio and Notebook.

At the end of this journey, Techedge will support you to plan the actions in order to make the POC part of your analytics portfolio extending it to more complex analysis and use cases.

Complete data science environment, from data ingestion to the final insights given by the information distilled by the models' elaborations.

Azure ML platform

Powerful combination of enterprise data warehousing and big data analytics features able to remove the existing barriers between operational data, data warehouse and analytics to evolve towards a concept of unlimited analytics.

Critical data analysis from different perspectives and wide investigation of the fundamental relationships between the several observables

Multi-disciplinary team

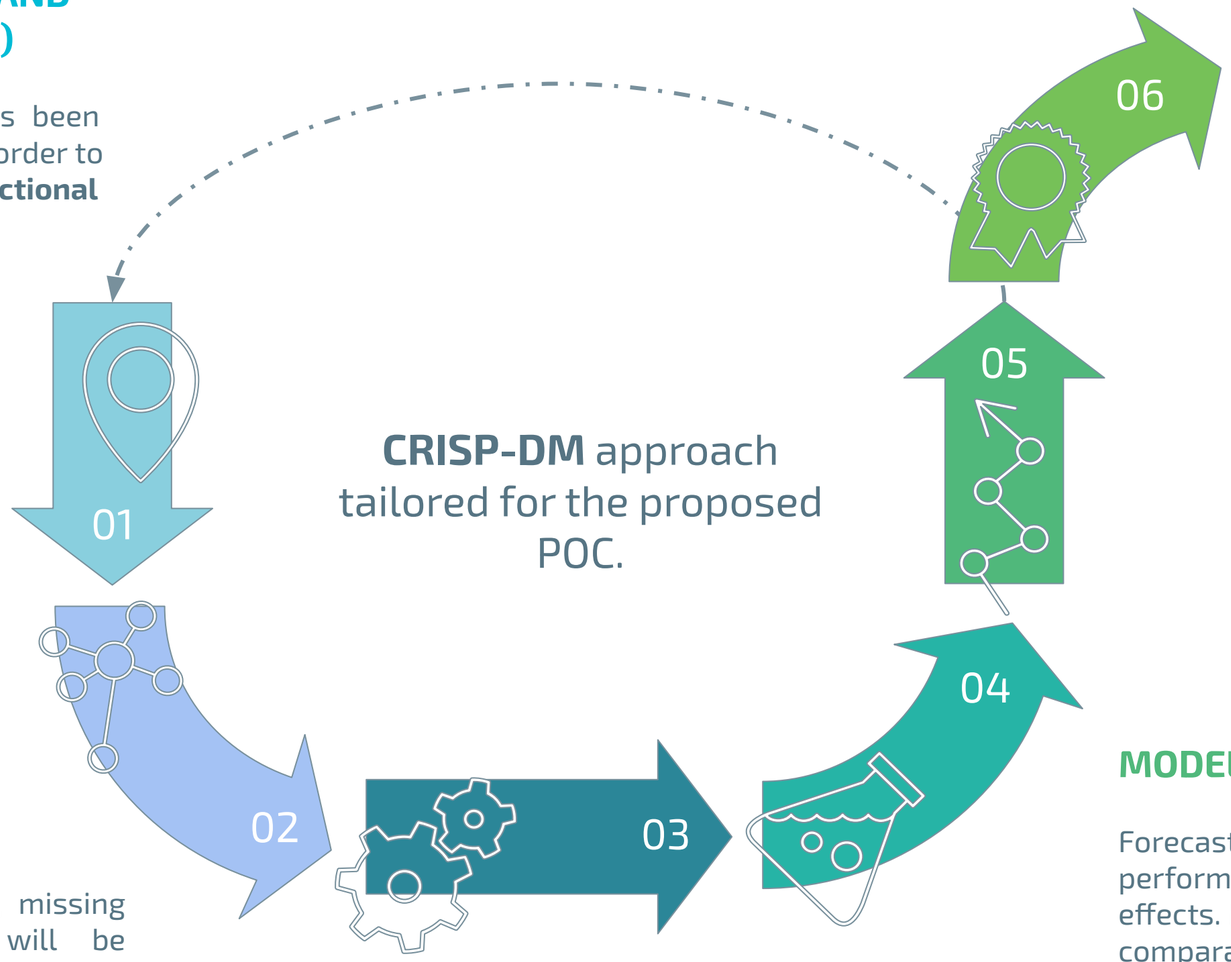
Techedge advanced analytical team is coming from different academic backgrounds and careers (e.g. mathematicians, physicists, statisticians and economists). Different mathematical tools will be appropriately adapted to the specific case.

The analytical flexibility of our team makes it possible to contextualize the elaboration complexity without compromising model explainability, allowing to extract the information hidden in the data and understand the answers given by the model.

Approach

BUSINESS UNDERSTANDING AND DATA FIRST CONTACT (1-2)

Self-consistent **dataset selection** has been selected and high-level exploration in order to clarify the **processes** and data **functional meaning** (business users required).



CRISP-DM approach tailored for the proposed POC.

DATA VISUALIZATION (6)

AML **notebook** design to summarize the data insights.

MODELING AND EVALUATION (4-5)

Forecasting models elaboration. **Training** will be performed to neutralize overfitting or underfitting effects. Models will be **tested** on a new dataset. A comparative analysis will be performed among the considered models.

DATA PREPARATION (3)

Identify and correct anomalies, missing values and outliers. Data will be **investigated** to discover most significant features and patterns on which the forecasting model will be constructed.

Outcomes and deliverables

OUTCOMES

- Contextual **understanding** of the selected Azure analytical tools for the specific use case
- Discover how ML and AI could be **exploited** to **improve** the considered process or phenomena
- Model explanation and **meaningful** information extraction from the data

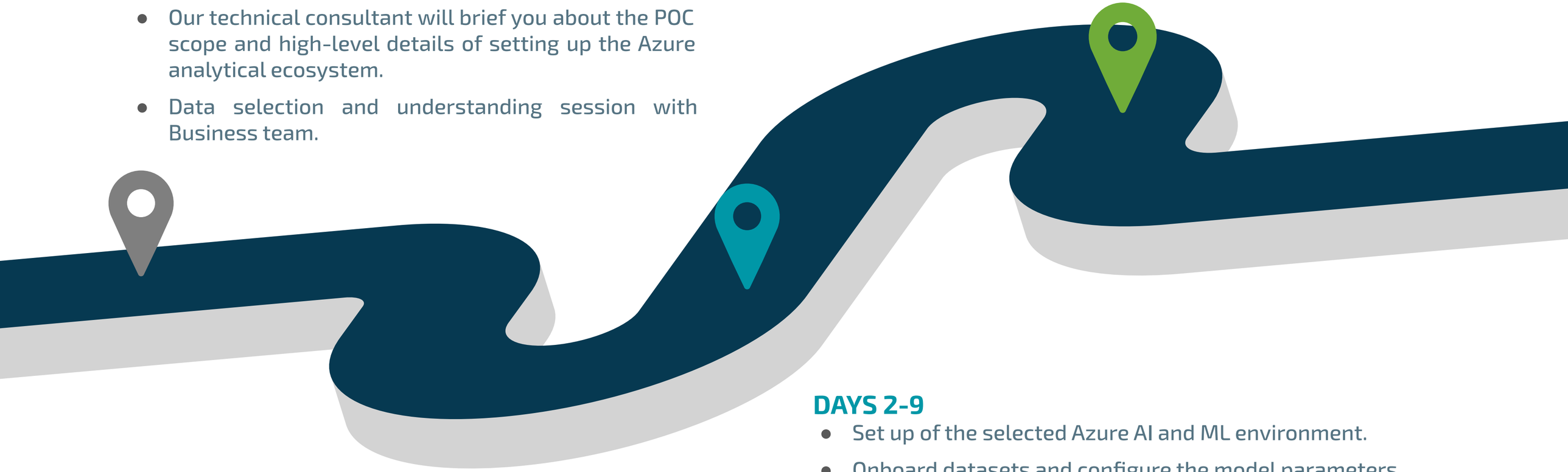
DELIVERABLES

- **Setup** of Azure analytical solutions
- Azure Machine Learning and AI capabilities overview
- Data **model** build and training
- AML **notebook** on exploratory data analysis and forecasting model results
- Presentation about how to **extend** the POC to other businesses scenarios

Planning

DAY 1

- Our technical consultant will brief you about the POC scope and high-level details of setting up the Azure analytical ecosystem.
- Data selection and understanding session with Business team.



DAYS 2-9

- Set up of the selected Azure AI and ML environment.
- Onboard datasets and configure the model parameters.
- Test and train the forecasting models and run predictions.
- Analytical notebook highlighting the most important features.

DAY 10

- Roadmap based on the data and insights generated by the pilot.

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