GUIDELINE FOR THINGWORX ANALYTICS

ptc

EVALUATING MODEL PERFORMANCE

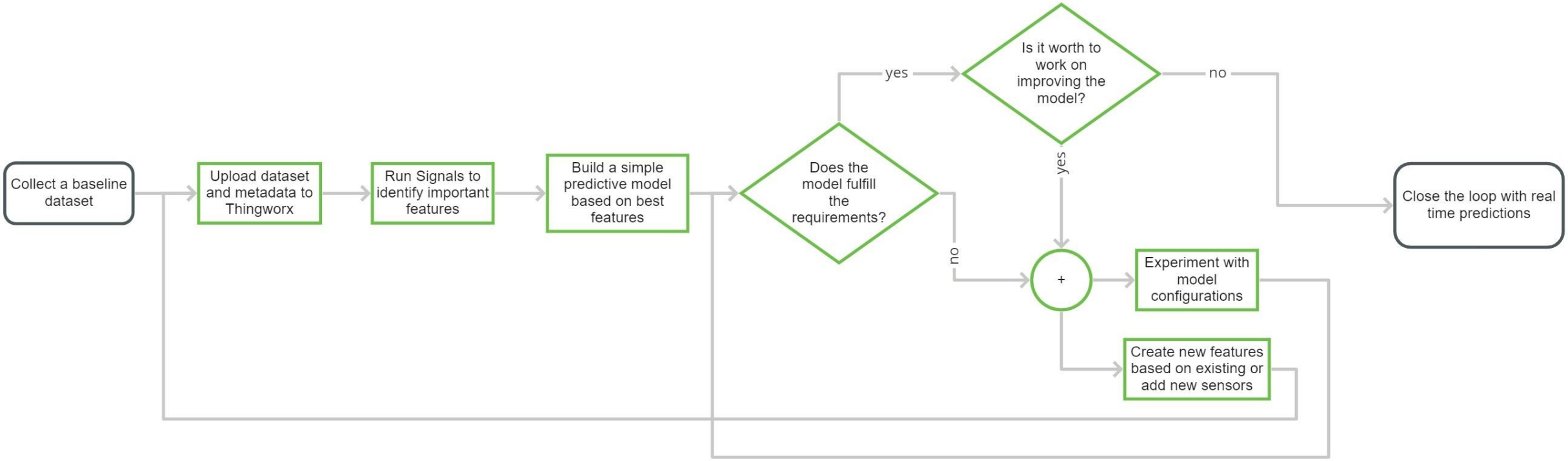
1.

- How much money can be saved if a failure can be predicted?
- How much money can a false prediction cost?
- Will the savings outweigh the cost of development (return on investment)?

2.

- Technical performance indicators to compare results within scope

DEVELOPMENT WORKFLOW



DATASET

- Which data can be collected?
  - Available sensor data
  - Additional sensors needed?
- How fast can data be collected?
  - Time series analytics need fixed timing intervals -> request all sensor values together periodically
- Create metadata
  - Thingworx Analytics needs to know the data types
- The more features are used, the larger the dataset must be
  - The model performs better if the entire spectrum of data variation is contained in the dataset

TIME SERIES MODEL

- Lookback size
  - How many time intervals in the past do you want to include for a prediction?
  - Is old data still relevant?
  - Select suitable timing in between data intervals
  - Can data be grouped or preprocessed?
  - Every live prediction needs as much samples as defined in the lookback size
- Lookahead size
  - How many time intervals in the future do you want to predict?
  - Higher number -> lower percentage of correct prediction
- Goal history
  - Does it make sense to include the goal history?
  - Can be used to simulate a sensor based of other features