

# CHALLENGE

# CRASH SIMULATION

Start Hack  
2019

# CONTENT

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- Need
- Challenge
- Input
- Output
- Measurement Criteria
- Restrictions

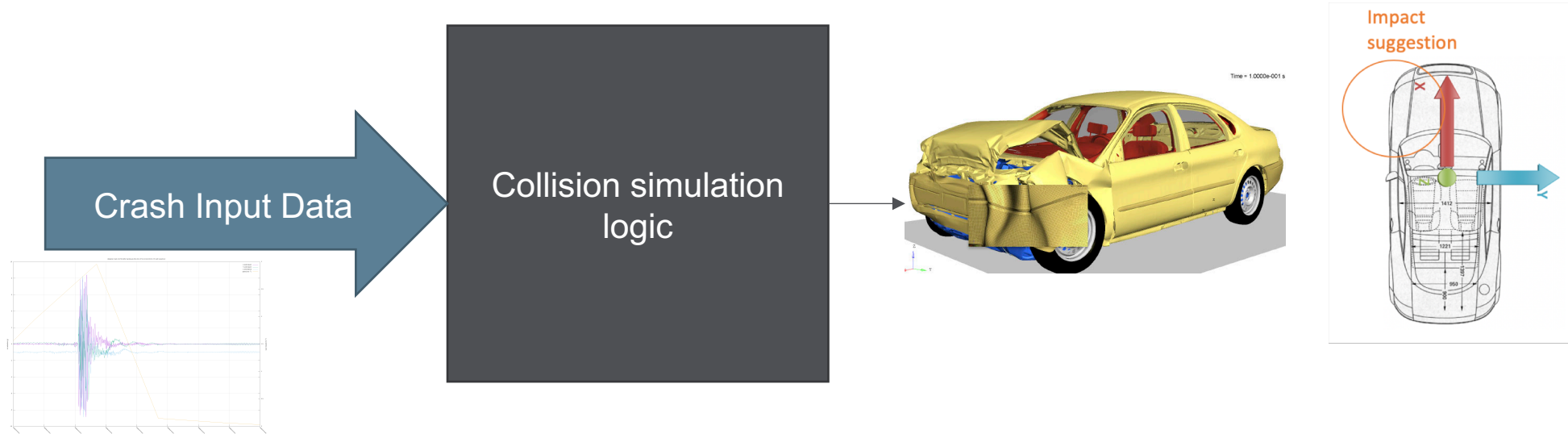
# NEED



- Visualization of crash data for:
  - Insurances
  - Fleet Management
  - Car history
  - Parents ;)

# CHALLENGE

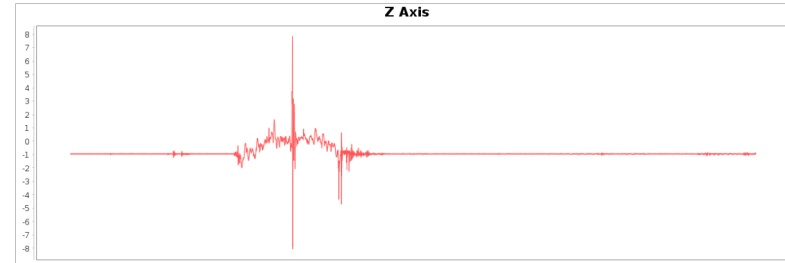
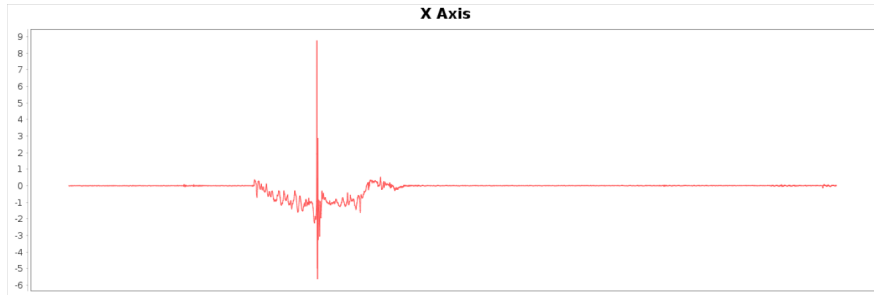
- Build Microservice(s) to generate Image with 3D object simulating forces impact for given time offset (from crash)
- Deploy Microservice(s) on Swisscom Application Cloud (cloud foundry)
- Provide API(s) for submitting Input data (stream) and getting the Result



# INPUT



- Available Data:
  - Accelerometer Data from crashed object (X, Y, Z axis in time)



- 10 Crash Datasets

# OUTPUT



- 
- For each submitted Crash Record AND time offset generate Image with:
    - Direction of the impact (Impact angle and energy)
    - Visualized damage
    - Time offset with the maximum force/damage on the object

# MEASUREMENT CRITERIA

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- Winner is the Team who:
  - Has identified the maximum number of crashes correctly providing:
    - Correct impact direction
    - Most accurate 3D simulation (compared to real crash picture)
- How will be measured
  - Crash Record is submitted to the service
  - The calculated impact direction will be compared with pictures from real crash
  - The simulated damage image will be compared with pictures from real crash

# RESTRICTIONS



- 
- Service must be deployable on cloud infrastructure (AWS/Cloud Foundry/Kubernetes/Docker)
  - Service should use as less as possible external APIs
  - Given Data Models and API POST Requests structure must be used



