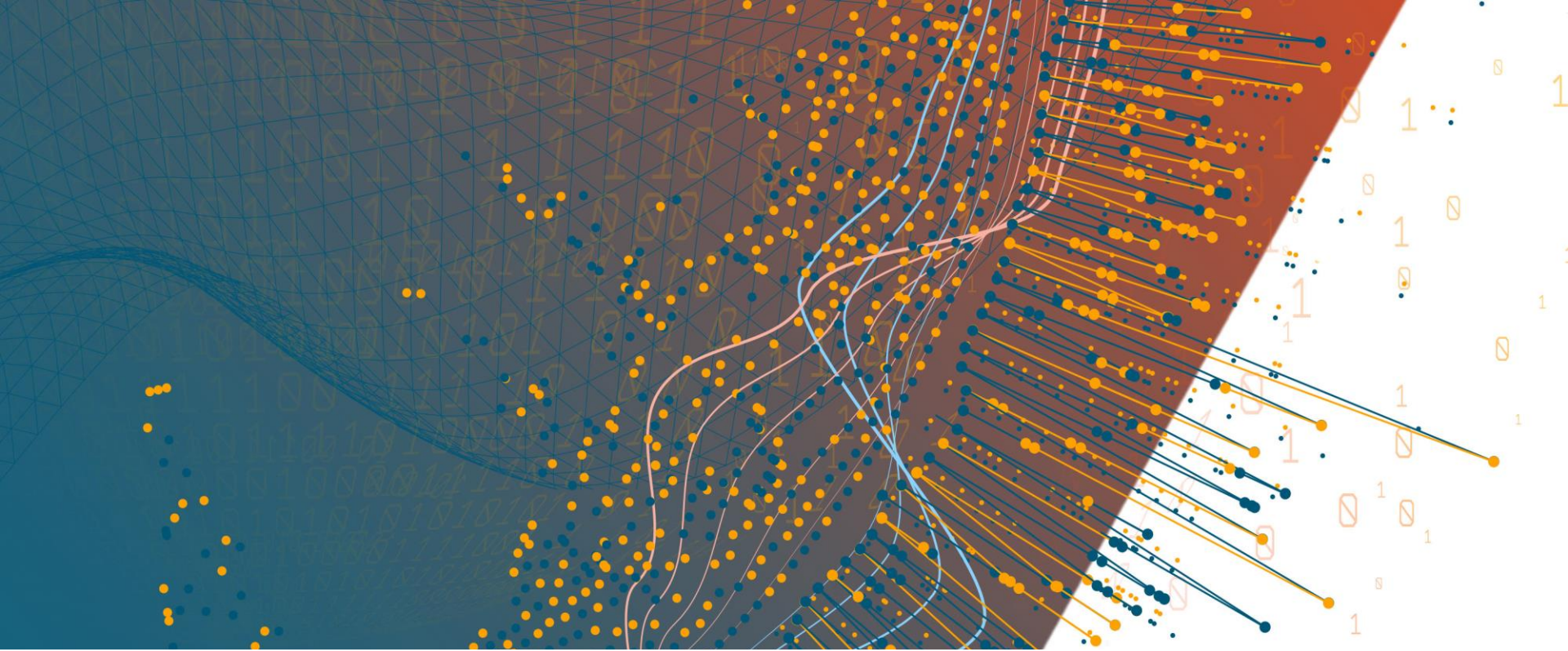


ALTAIR | RAMDO SOLUTIONS

RAMDO TOP USE CASES

Altair Partner Alliance

Safety Restrain Design Accounting for Human Variability

Challenge

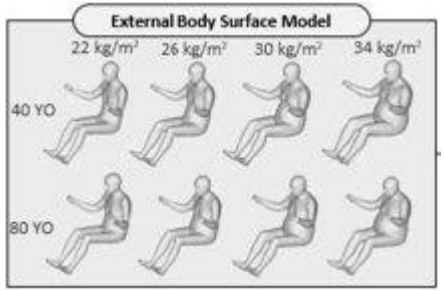
- Predict which human populations segments are more susceptible to injury risks in car crashes by considering the variability in age, stature, BMI, and gender.
- Current seat belt systems are designed for the midsize male.

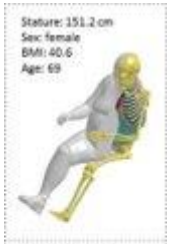
Solution

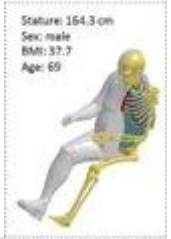
- Shows the designer which population is most at risk and thus can create adaptive designs to target specific population segments.

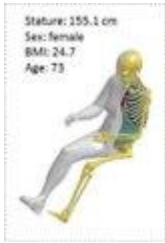
Result

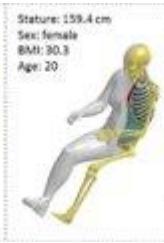
- Reduces injury risk entire population.

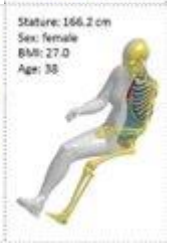


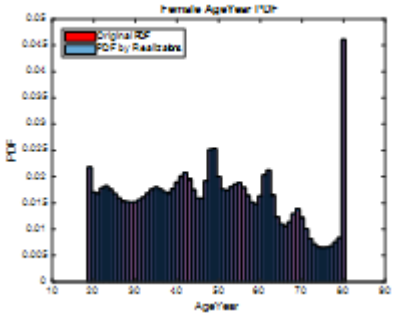












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Speed Maps for Mobility

Challenge

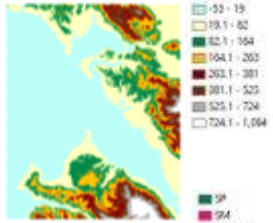
- By taking into account the variability of soil conditions, elevation, and slope, you can predict the probability of attaining given speeds through various routes.
- Current speed maps didn't take into account the variability of the soil conditions, elevation, or slopes.

Solution

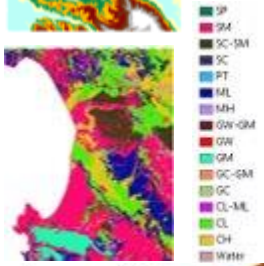
- Able to provide a series of probabilistic maps that predicted the most favorable routes.

Result

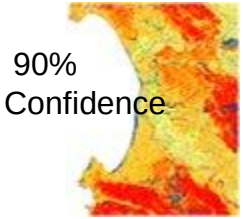
- Improved chances of desired speed and mission success of chosen route.

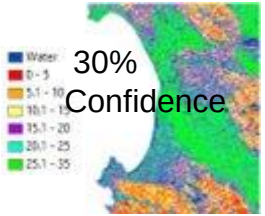


Elevation



Soil Type





Speed Maps

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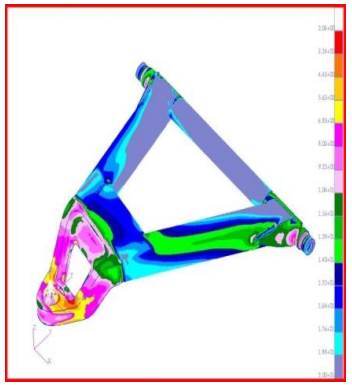
Suspension Linkage Mechanical Design



Challenge

- Accounting for the material property and manufacturing variability in the design optimization of a steel suspension linkage.
- Premature suspension component failures.

Solution

- Account for the variability in the material properties and manufacturing process and further optimized the design to increase the durability and reliability.

Result

- Improved reliability of vehicle thus increased the safety of the soldiers and contributed to high rate of mission success.

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