## Lesson 18 – Activity Sheet

## Getting Started

* You and your team have been asked by ArmCars to design, develop and test a self-driving car
* The car should be able to drive autonomously around the racetrack developed earlier
* It should be able to stop at traffic signals and avoid collisions with pedestrians, road furniture and other vehicles
* The primary goal is to get around the track safely without causing any damage to The Egg Family
* The secondary goal is to do this in a reasonable time, but your family doesn’t choose their car on performance alone – style, safety and comfort all play a part

## Success Criteria

* To apply the skills and knowledge developed during the course to complete a team project
* To perform a stakeholder analysis.
* To complete a project SWOT analysis

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| **Stakeholder** | **Impact/Stake** |
| Customers | If vehicle doesn’t meet their needs they won’t buy it. |
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| **Strengths**  *Eg Do not need to know how to drive* | **Weaknesses**  *Eg Electric vehicles take time to charge* |
| **Opportunities**  *Eg Will reduce traffic jams* | **Threats**  *Eg People scared of “robot cars”* |

## Pro-tip

## Consider all the impacts the car will have – Commercial, Environmental, Accessibility

* For every pro, try to think of a competing con

## Test Time

Think Pair Share your ideas

For the SWOT Analysis table think about the following:

* How can you counteract ‘fear’?
* How will the car reduce pollution?
* In case of accidents, who will be to blame?

## Stretch Tasks

* How will you get the early adopters on board quickly?
* How can you encourage the early majority:
  + Advertising?
  + Branding?
  + Fashion trends?
* Would giving away models to trend setters, influencers and celebrities help encourage sales?

## Final Thoughts

* Today we have introduced our independent project. We have discussed the goals we are trying to achieve and looked at how we can prepare to meet these by identifying the key stakeholders and performing a SWOT analysis
* We have considered the factors that inform design decisions and looked at the technology life cycle from the perspective of both the consumer and manufacturer