

The Role of Innovation

Claes Tingvall

ÅF, Chalmers University of Technology and Monash University Accident Research Centre



Great Challenges....

To safely send a man to the moon To replace fossil fuel with renewable energy To eradicate road deaths and serious injury



...that all depend on innovation

What made them different from conventional decisions, were that the solutions and costs were not known before the decisions were taken.



If the current methods does not lead to eradication, full compliance and zero-defects, we need new methods







If the current methods to eradicate produce side effects or does not lead to overall sustainability (Sum Zero), we need new methods





Bildkälla: Post Card Urbanism/KTH



If the current methods to eradicate are too costly, takes to much time or are not accepted by the public, **we need new methods**







If you cannot express the need for innovation in an innovative way, you need to **go home and rethink**



Rule 4 example

A bicyclist shall remain without **serious/fatal injury when falling to** the **ground**











Develop criteria, test methods, critical limits and test demos early to drive innovation











Read your Haddon

(it is always about control of energy!)





Never give up, sometimes it can take

50 years to be understood!



