Dear Mask working group,

We agree wholeheartedly with the aims of the working group and the recommendations that you have made.

For Point 3 in your recommendations: According to FIE rules the two ends of the straps of the fastening system have to be firmly affixed to the two sides.

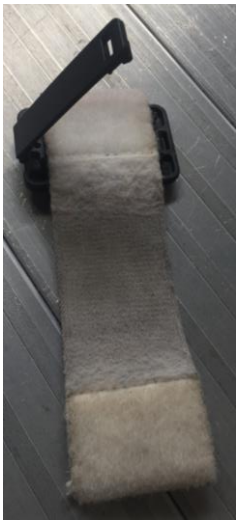
we wanted to create a test to check the security of the Velcro. Attached is the data sheet of the device we have made to allow us to check the force required to make an elastic strap fail. Here are some sample videos showing the tester in use:

https://youtu.be/C_oicMBHA7I

We now can test; existing mask, mask that are new, mask that are old and different security designs. The results for some masks are shown in this table below:

Type of mask	Force require
USED Non LP mask that had fallen off fencers head	9Kg
LP Single velcro	16Kg
LP Double lock Velcro new design	24Kg
LP Elastic through metal loop	20Kg

We have also looked at the possibility of having a plastic clip that could be attached to old mask that would make them safe and save fencer buying a new mask in 2018. Here we are using a standard clip for car seatbelts. We could manufacture a better purpose built clip but this proves the theory.



On the right is a image mask that fell off at the British Youth Championships. Video of the incident can be seen here: https://youtu.be/ReFJAZYPZFk
We have this mask in our possession. The mask was 3 years old and the Velcro was worn. This mask had a pull fail result of 9kg.

By attaching plastic clips to the Velcro sides of the mask the pull strength needed to make the mask elastic fail was 20kg.

If this mask had clips it would not have fallen from the fencers head.

The clips would cost less than 10Euro per pair. This kind of solution might be worth investigating if the FIE think it is of interest.

For reference below are some designs of mask that LP are testing with fencers.

		
Metal clips at side of mask	Plastic clips at side of mask	Multiple elastics, Velcro and straps

We will send more details of these trial mask separately.

Kind Regards,

Ben Paul