Bow-Tie Risk assessment

CCPS Bow-Tie for Covid-19

Presented by; Yousef Shafiei

Email; u3fshafie@gmail.com

Iran, South Pars Gas Field Development

April, 2020

Introduction;

- All activities of an organization involve **risks** that should be **managed**.
- The risk management process aids decision making by taking account of uncertainty and the possibility of future events or circumstances (intended or unintended) and their effects on agreed objectives.

u3fshafie@gmail.com Instagram;hse_system
hseclub.blog.ir 09161402218

Introduction;

Risk assessment is that **part of risk management**

which provides a structured process

Risk management includes the application of logical and systematic methods for;

- communicating and consulting
- establishing the context
- monitoring and reviewing risks;
- reporting and recording the results appropriately

u3fshafie@gmail.com Instagram;hse_system
hseclub.blog.ir 09161402218

Introduction;

- ***Risk assessment attempts to answer the following fundamental questions:***
- what can happen and why (by risk identification)?
- what are the consequences?
- what is the probability of their future occurrence?
- are there any factors that mitigate the consequence of the risk or that reduce the probability of the risk?
- Is the level of risk tolerable or acceptable and does it require further treatment?

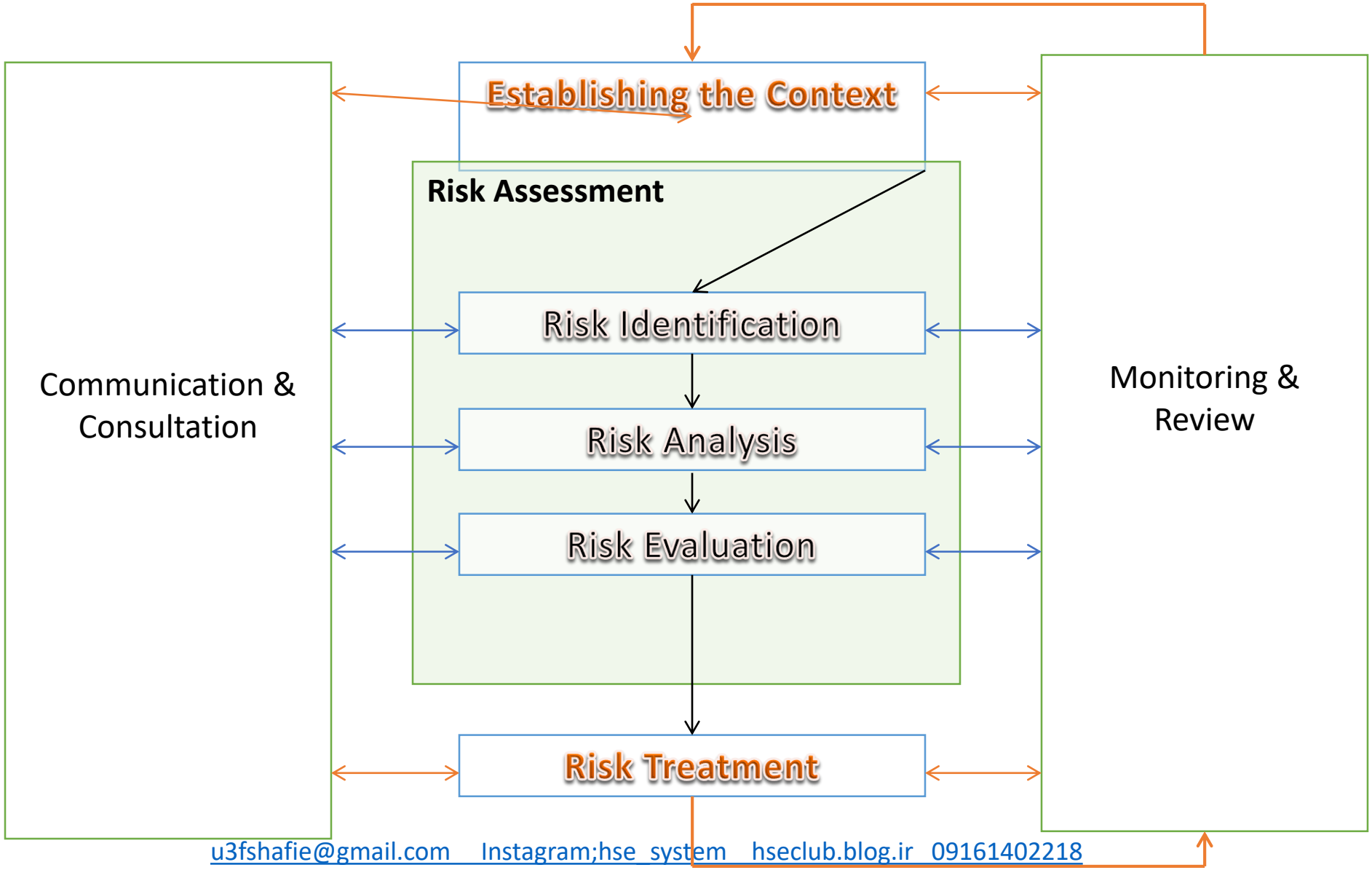
Introduction;

- ***These Items should be clear about;***

- The context and objectives of the organization,
- The extent and type of risks that are tolerable, and how unacceptable risks are to be treated,
- How risk assessment integrates into organizational processes,
- methods and ***techniques*** to be used for risk assessment,
- Accountability, responsibility and authority
- Resources available to carry out risk assessment,
- Reported and reviewed process.

u3fshafie@gmail.com Instagram;hse_system
hseclub.blog.ir 09161402218

Risk Assessment Process;



u3fshafie@gmail.com Instagram;hse_system hseclub.blog.ir 09161402218

Bow- tie for Covid-19

Bow Tie for Covid-19 (as per CCPS/EI guidance)

Authors: Mark Manton (ABS Group), Martin Johnson (BP), Mark Scanlon (Energy Institute), Rob Miles (Hu-tech) and Charles Cowley (CCPS)

Date: 31st March 2020

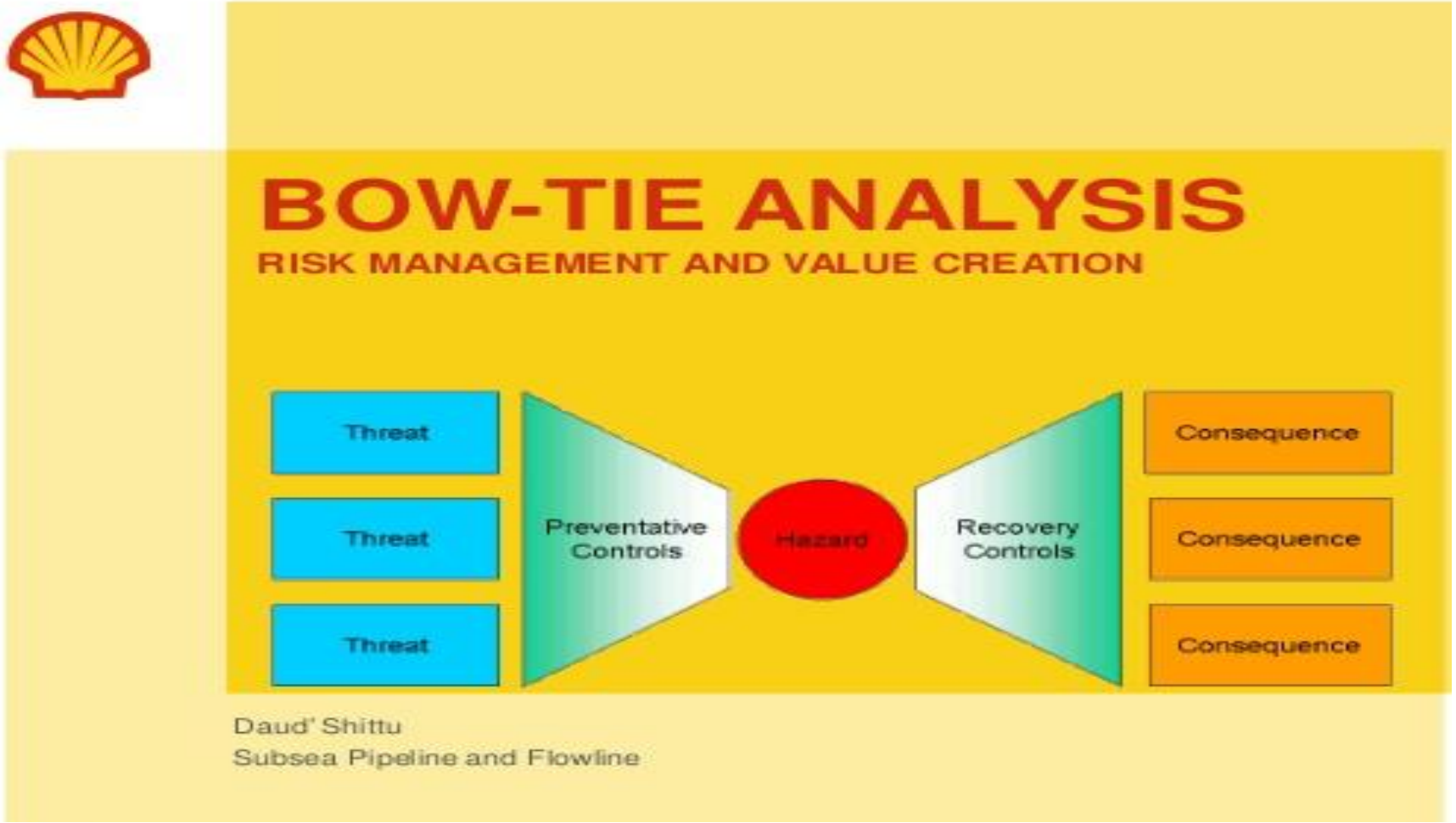
Covid-19 is sweeping the globe and there is a lot of guidance on what we should be doing, but this tends to be many words and it is not always obvious why specific guidance has been introduced and what it hopes to achieve. So we have produced a picture which hopefully explains **your** role in the whole pandemic, a visual aid in the shape of a bowtie:

> *The bow tie methodology illustrates how threats can act on hazards leading to a loss of control, which may result in catastrophic consequences. In the bow tie diagram, prevention barriers are located on the left side and mitigation barriers are located on the right side. A well-drawn bow tie clearly shows all barriers that can prevent the top event, the loss of control, from occurring or mitigate the consequences.*

We, members of the committee who worked on the recent book, "Bow Ties in Risk Management", published by the Energy Institute and the American Institute of Chemical Engineers' Center for Chemical Process Safety, developed this bowtie for Covid-19.

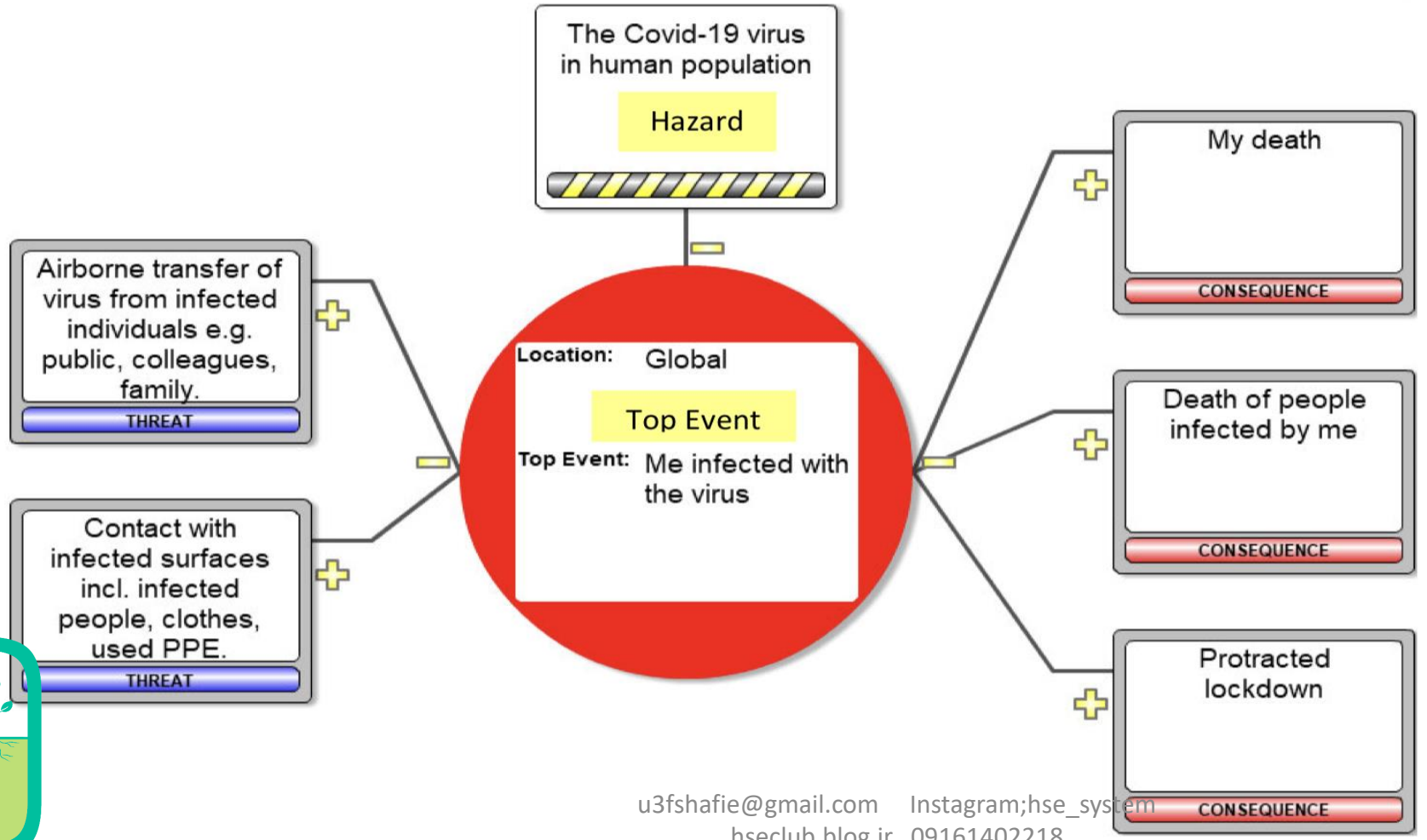
Bow- tie for Covid-19

1. Hazard?
2. Threat?
3. Top Event?
4. Consequences?
5. Preventive Barriers?
6. Mitigation Barriers?
7. Degradation Factors?
8. Controls?



u3fshafie@gmail.com Instagram;hse_system hseclub.blog.ir 09161402218

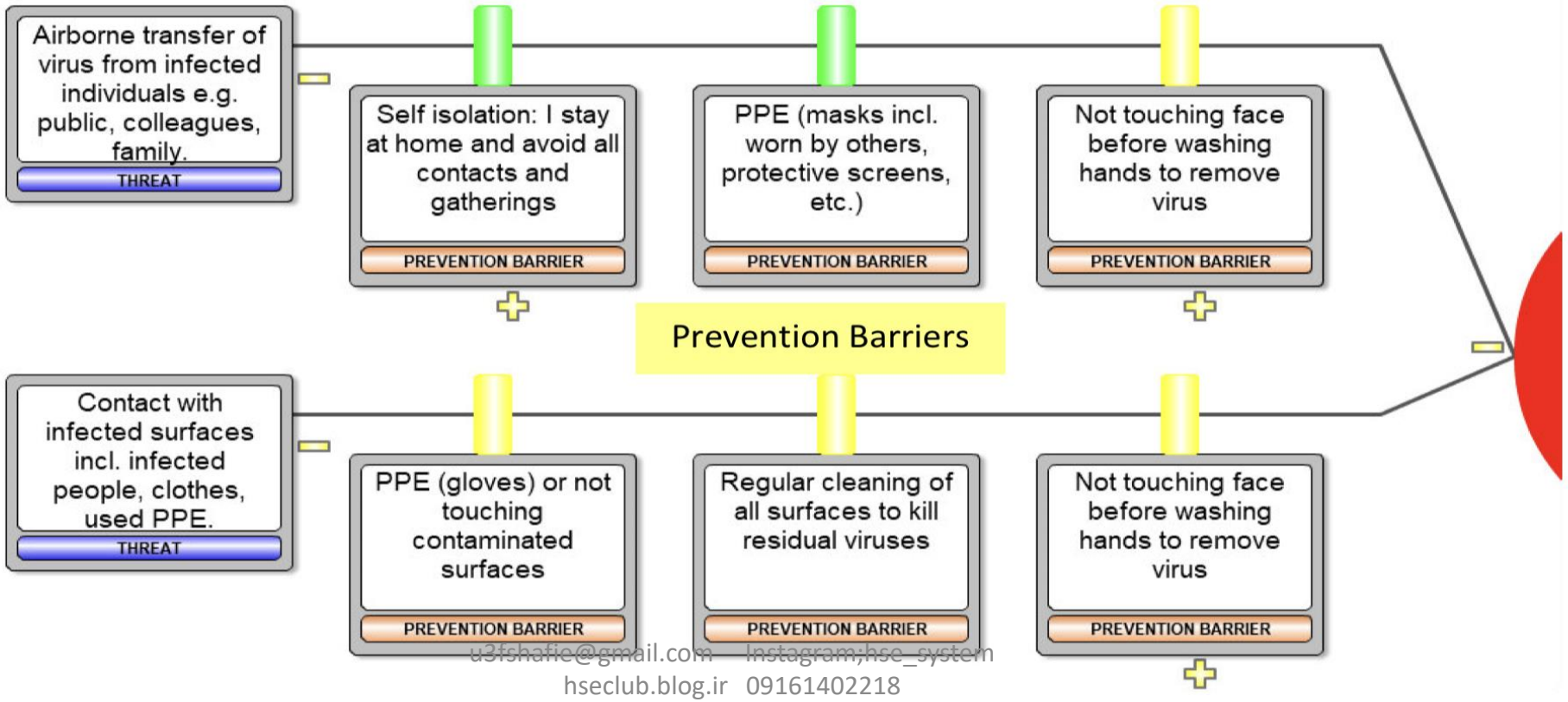
Bow- tie for Covid-19



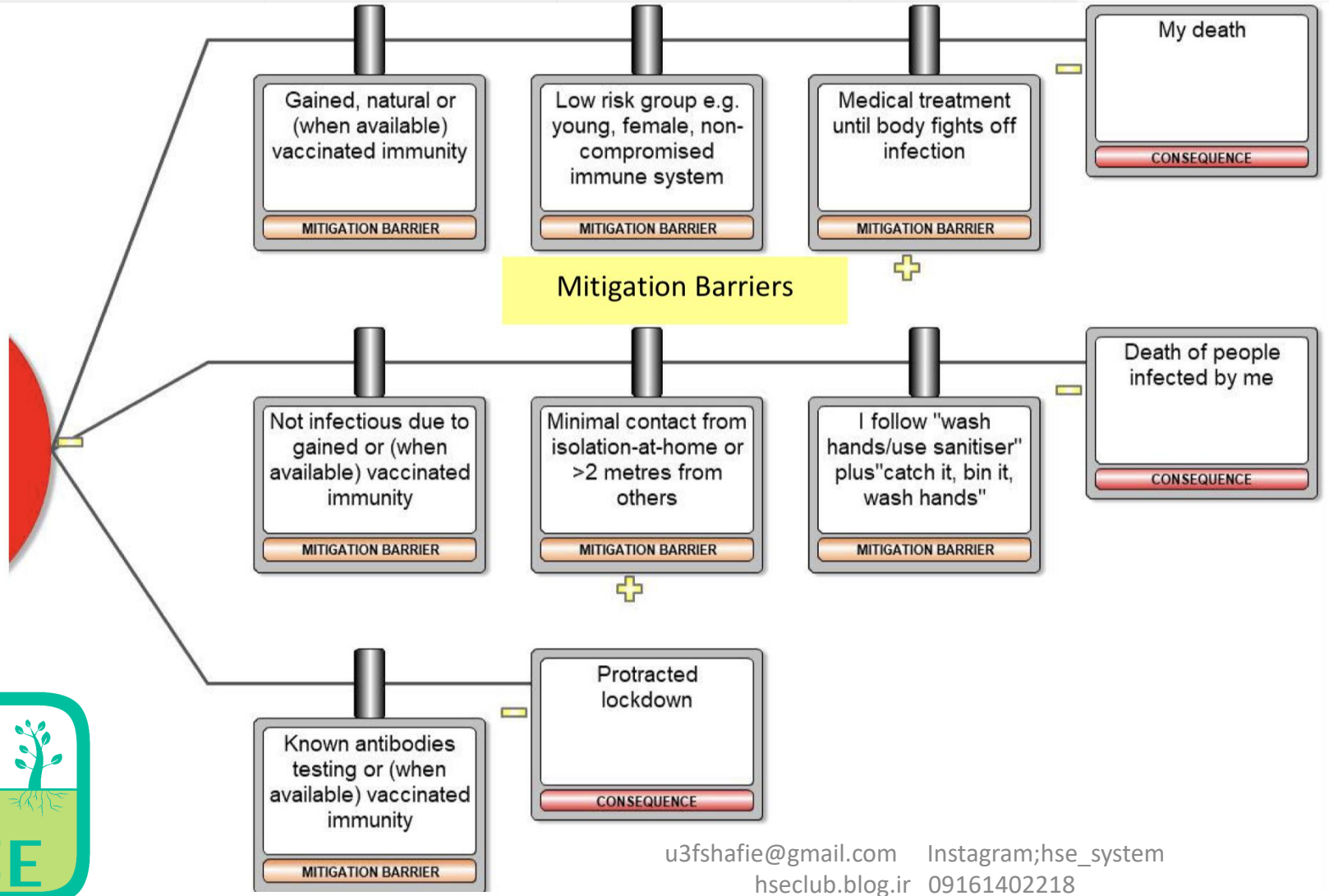
u3fshafie@gmail.com Instagram;hse_system
hseclub.blog.ir 09161402218

Bow- tie for Covid-19

To stop this happening we have **prevention barriers**:

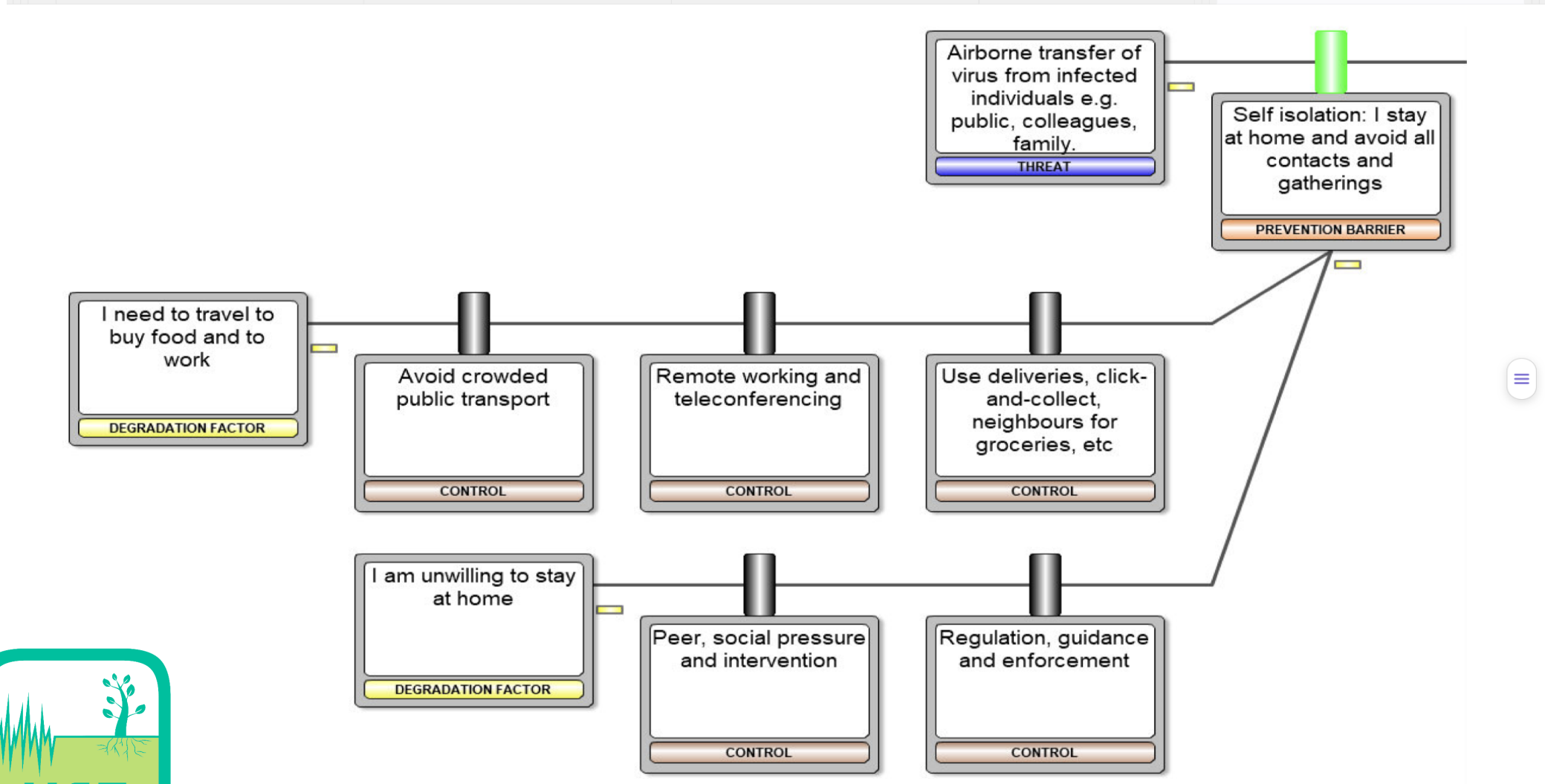


Bow- tie for Covid-19



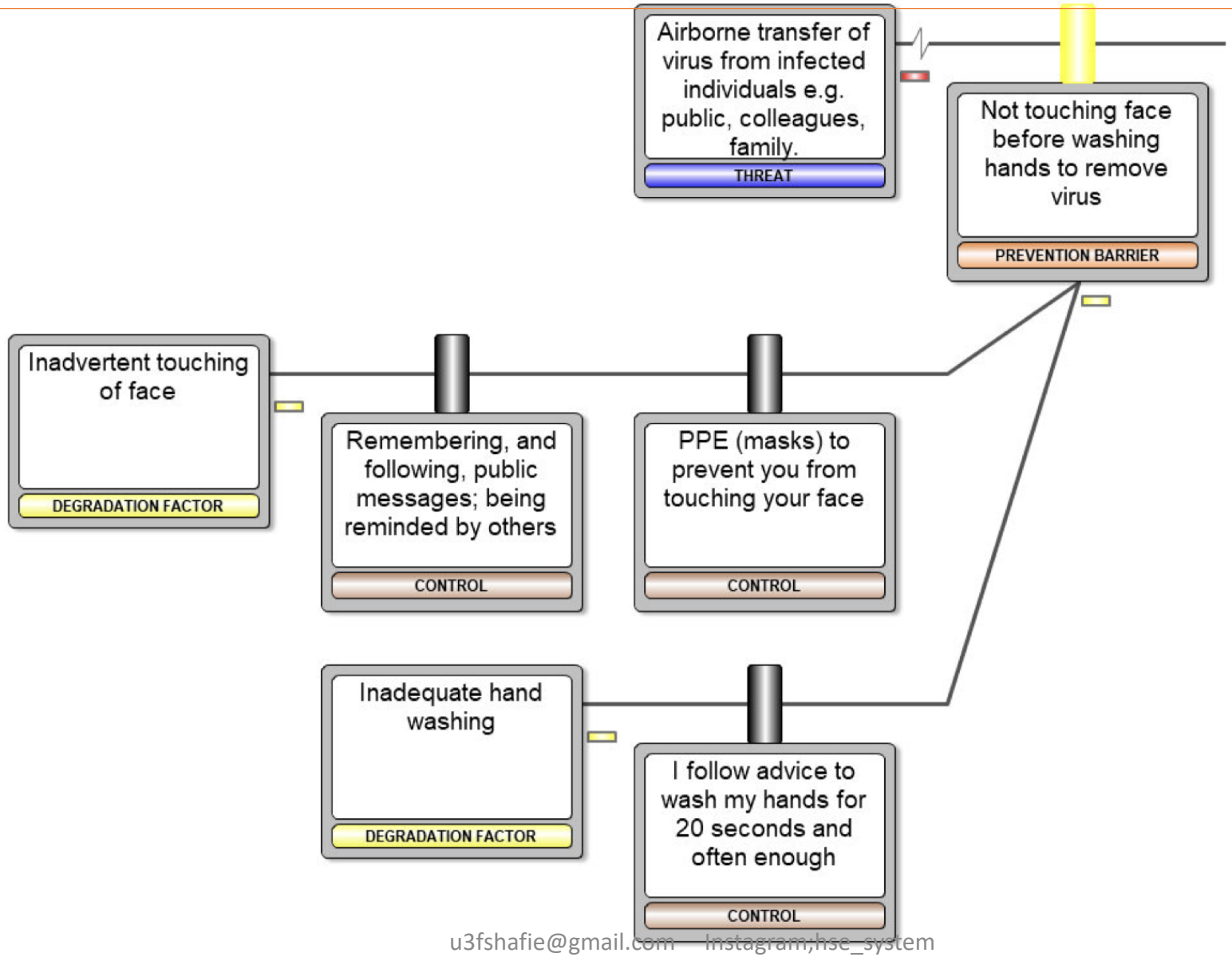
u3fshafie@gmail.com Instagram;hse_system
hseclub.blog.ir 09161402218

Bow- tie for Covid-19

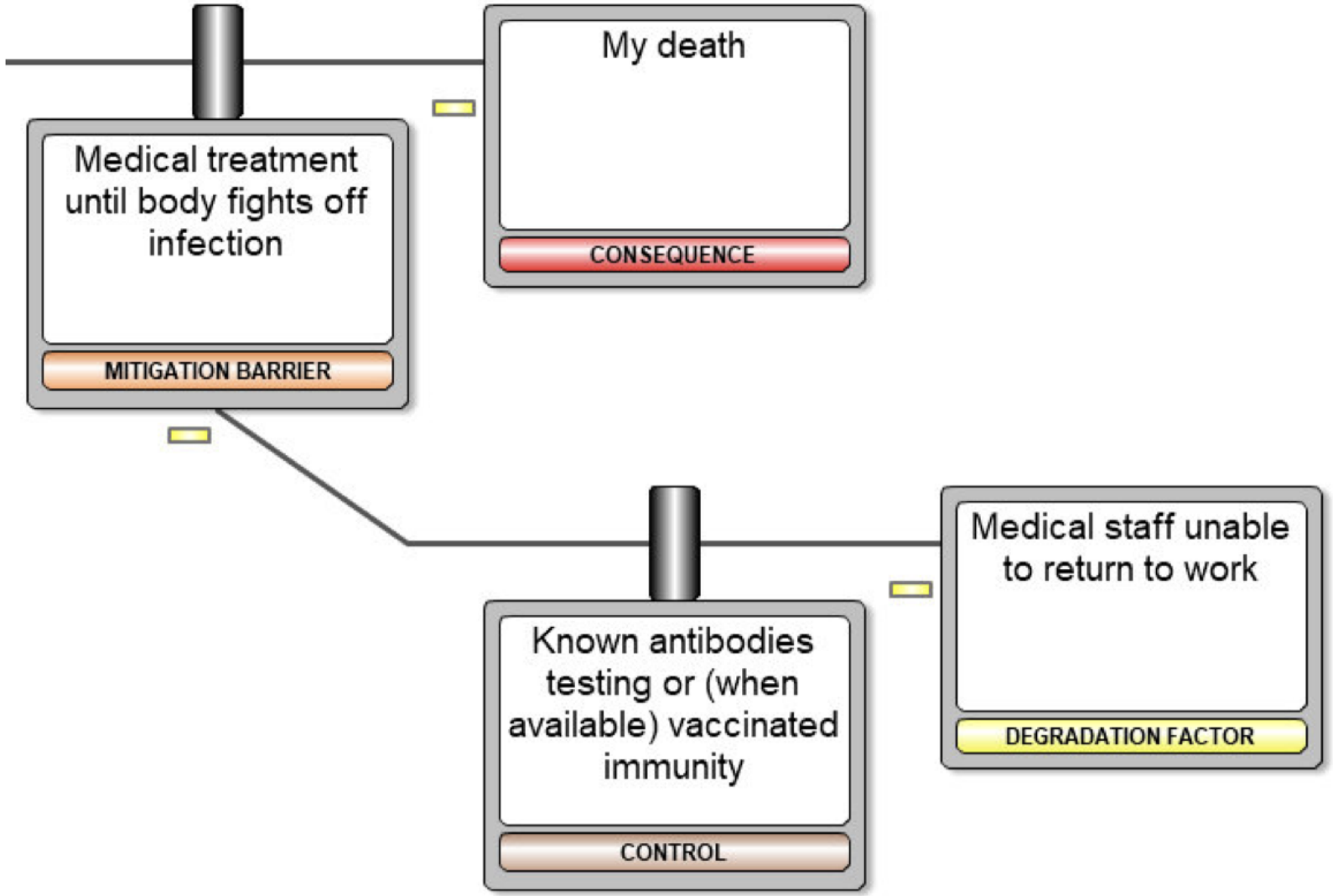


u3fshafie@gmail.com Instagram;hse_system
hseclub.blog.ir 09161402218

Bow- tie for Covid-19

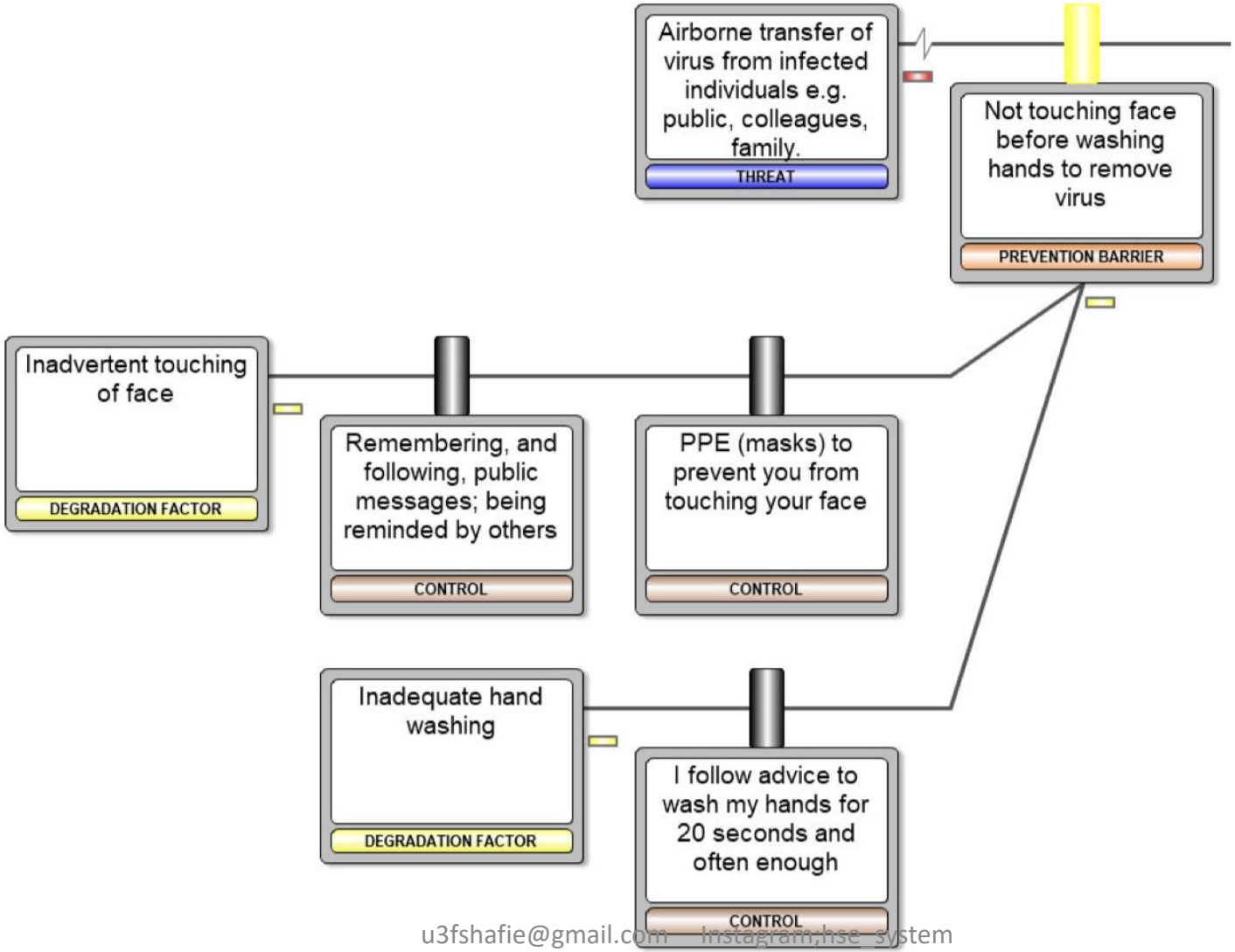


Bow- tie for Covid-19



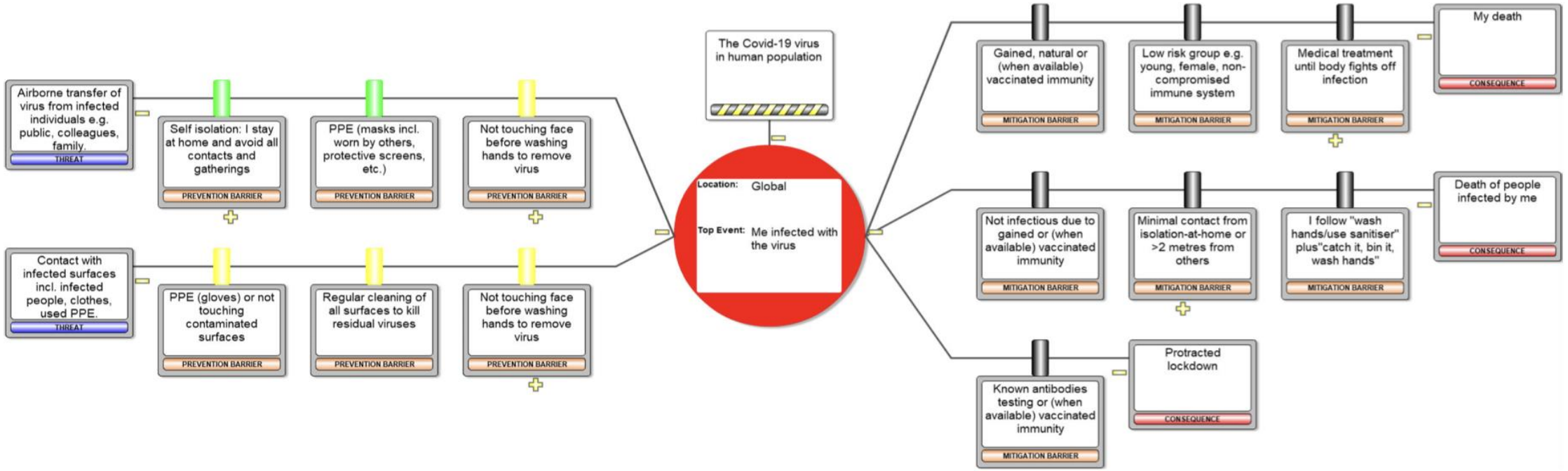
u3fshafie@gmail.com Instagram;hse_system
hseclub.blog.ir 09161402218

Bow- tie for Covid-19



Bow- tie for Covid-19

Finally here is the complete bowtie with all the barriers shown:

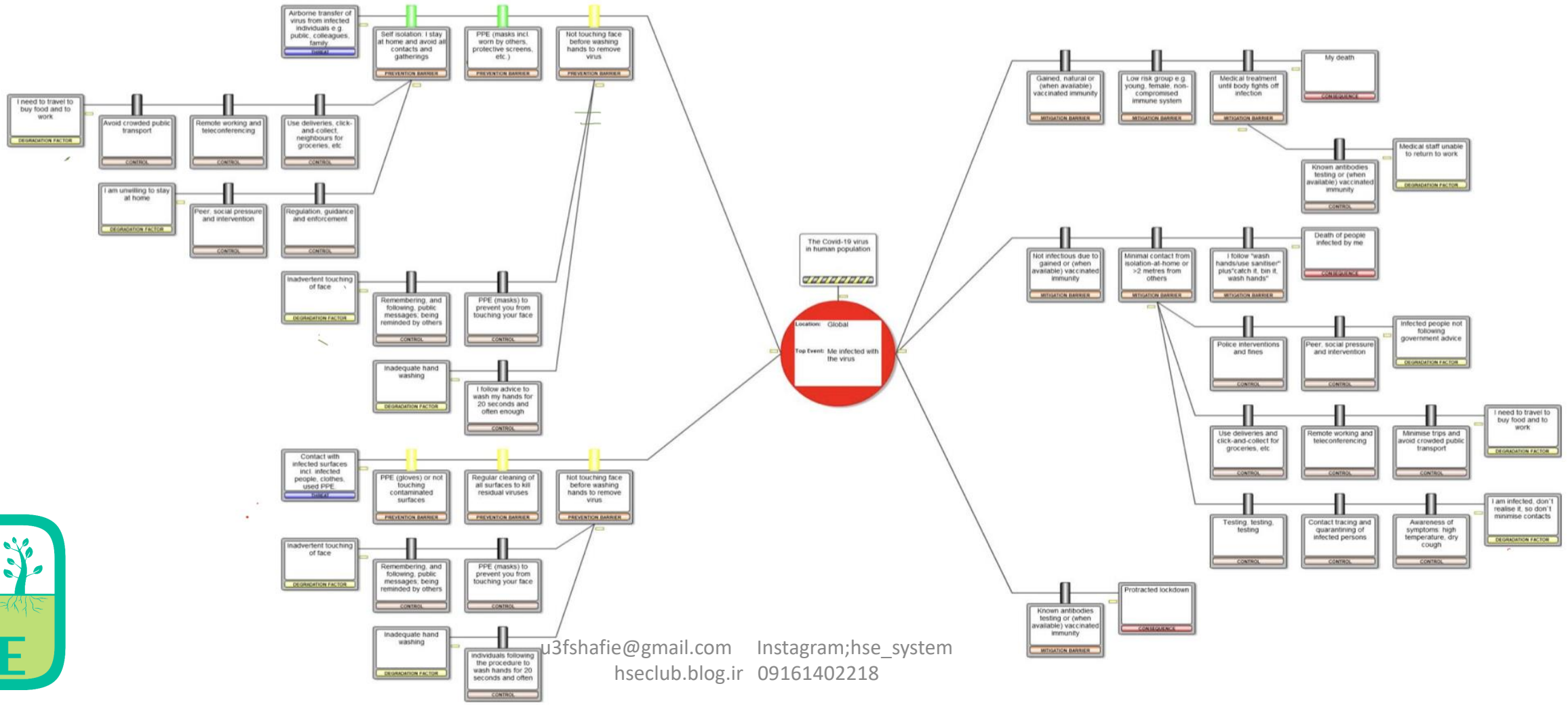


If you would like to observe the bowtie in more detail, then please contact Mark Manton (mmanton@ABS-Group.com) and he will happily send you a portable bowtie (to be read via a simple, free bowtie reader). Alternatively, if you have THESIS then we can provide the file. If you don't have THESIS file then please contact thesis@absconsulting.com for a trial version. Alternatively, the complete bowtie is shown on the next page, but this requires a lot of zoom in order to be able to read the texts (or printing on large format paper!)

1st March 2020

u3fshafie@gmail.com Instagram;hse_system
hseclub.blog.ir 09161402218

Bow- tie for Covid-19



u3fshafie@gmail.com Instagram;hse_system
hseclub.blog.ir 09161402218

Thanks for your Attention

Presented by; Yousef Shafiei
Email; u3fshafie@gmail.com
LinkedIn; Yousef Shafiei; HSE Auditor and Consultant
Weblog; hseclub.blog.ir
Mobile Phone; +989161402218