Cyber by Sighbear

With the CiBears talking about Cyber Risk

V1.1 (Copyleft)

Any comments / suggestion / abuse tweet @SighBearUK

The purpose of this slide deck and why we did it?

- We (Sighbear and the CiBears) want to help people get into Cyber.
- We also want to to do some myth busting around cyber and especially challenge the snake oil sellers and security charlatans

How to use the slide deck?

- You can just go through the slides and then look at the speak notes as you go through it again.
- Do each slide and speaker notes in the first pass and then just the slides
- Or in whatever why you like ;-))

What is Cyber?

- “There are no common definitions for Cyber terms - they are understood to mean different things by different nations/organisations, despite prevalence in mainstream media and in national and international organisational statements.” - NATO Cooperative Cyber Defence Centre of Excellence. https://ccdcoe.org/cyber-definitions.html
- Given this ambiguity which option will you pick for Cyber
  - From the Ancient Greek verb “to steer, to guide, to control”
  - Relating to or characteristic of the culture of computers, information technology
  - Connotes a relationship with information technology.
  - Anything relating to, or involving, computers or computer networks (such as Internet)

What is Risk?

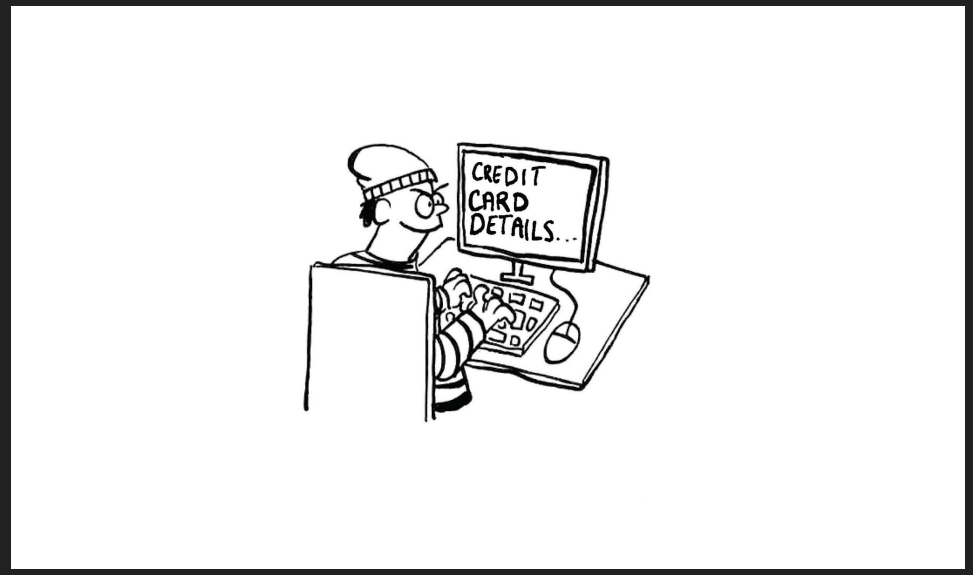
- A situation involving exposure to danger. (Noun)
- Expose (someone or something valued) to danger, harm, or loss. (Verb)

What is Cyber risk

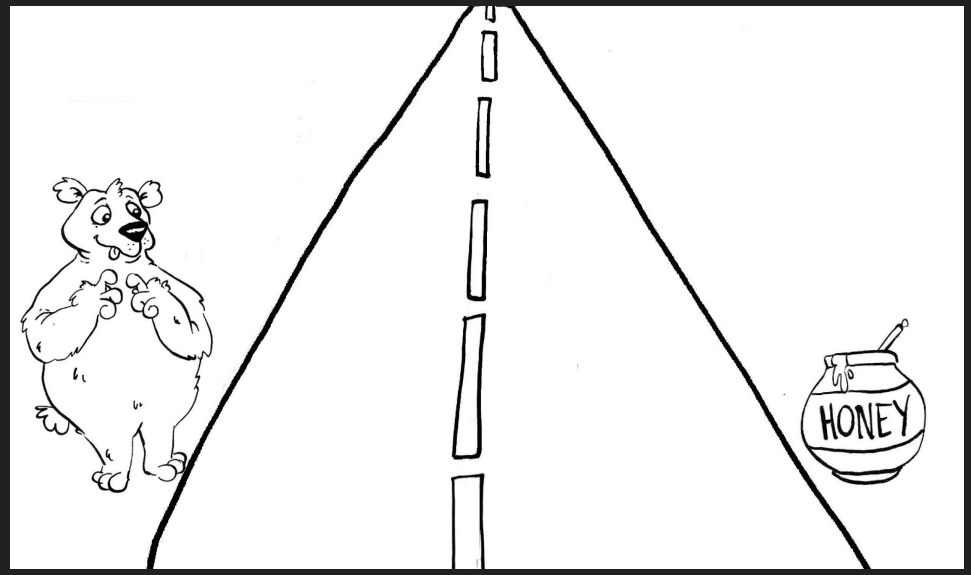
- '**Cyber risk**' means any **risk** of financial loss, disruption or damage to the reputation of an organisation from some sort of failure of its **information technology systems**.
- There is a Cyber Risk that if you put information (i.e. credit card details) on the Internet it could be compromised

Risk scenarios

Cyber world
An online retail business does not want its customers credit card details stolen



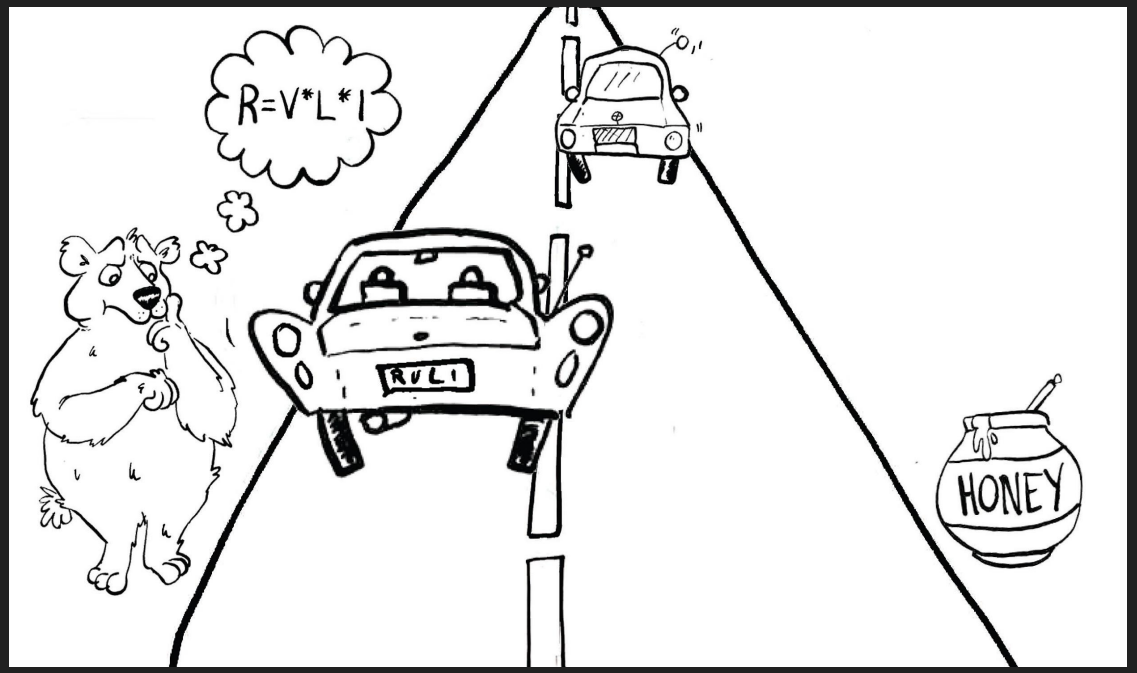
CiBear world
The bear wants some honey for its cubs



HOW DO WE UNDERSTAND RISK?

- As a simple equation like
  R = V * L * I

- As words
  “There is a risk that …… a vulnerability is likely to be exploited leading to an impact of …….”



Risk Assessment

- The a simple risk assessment using the equation
  - R = V * L * I
  - (R)isk equals (I)mpact multipled by (V)ulnerability multipled by (L)ikelihood

- Be aware there are various risk assessment methodologies, covering qualitative, quantitative, component based, system based

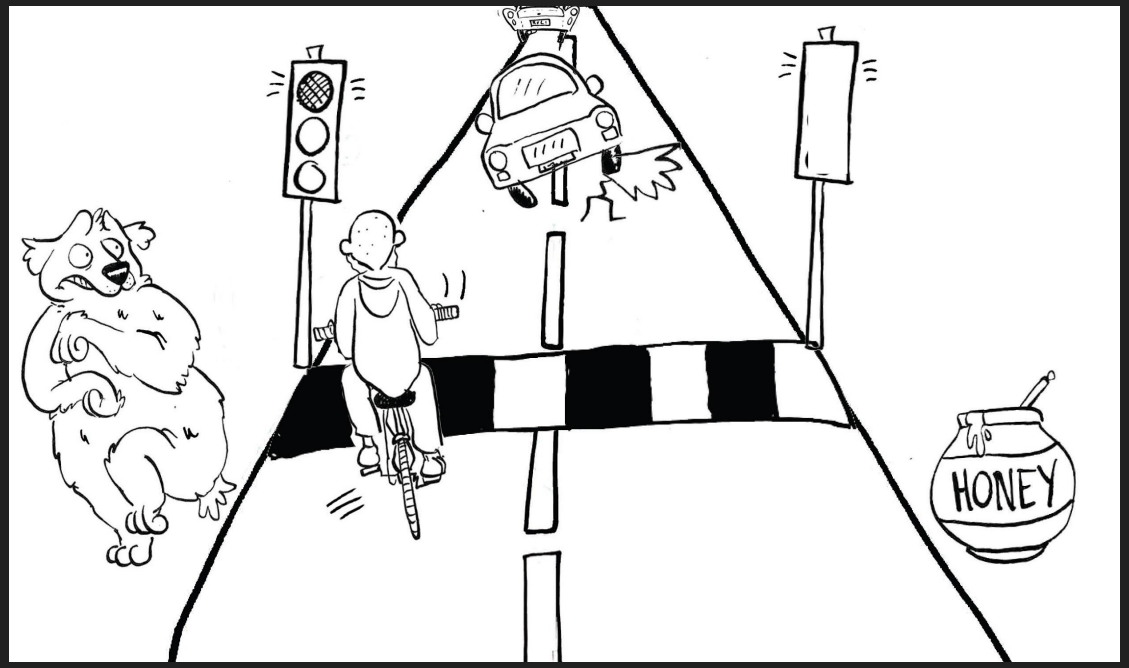
- The Sighbear’s choice at the time of putting this slide deck together are attack trees.

Assets, Value, & (I)mpact

- An Asset – something with value to someone / business
- Value – the worth of an asset, could be money or reputation
- Impact – what is the effect if the asset is compromised
  - Confidentiality (disclosed)
  - Integrity (unauthorized change)
  - Availability {made unavailable} (denial of service)
- *Note – Impacts rarely change 'the impact is the impact' if you have £10 stolen you have it stolen even if it is in a bank in a safe with armed guards or just in your wallet you have still lost the £10*
- CiBear world - The asset is the bear and the value is its life and the impact is the bear can no longer provide food for it's cubs.

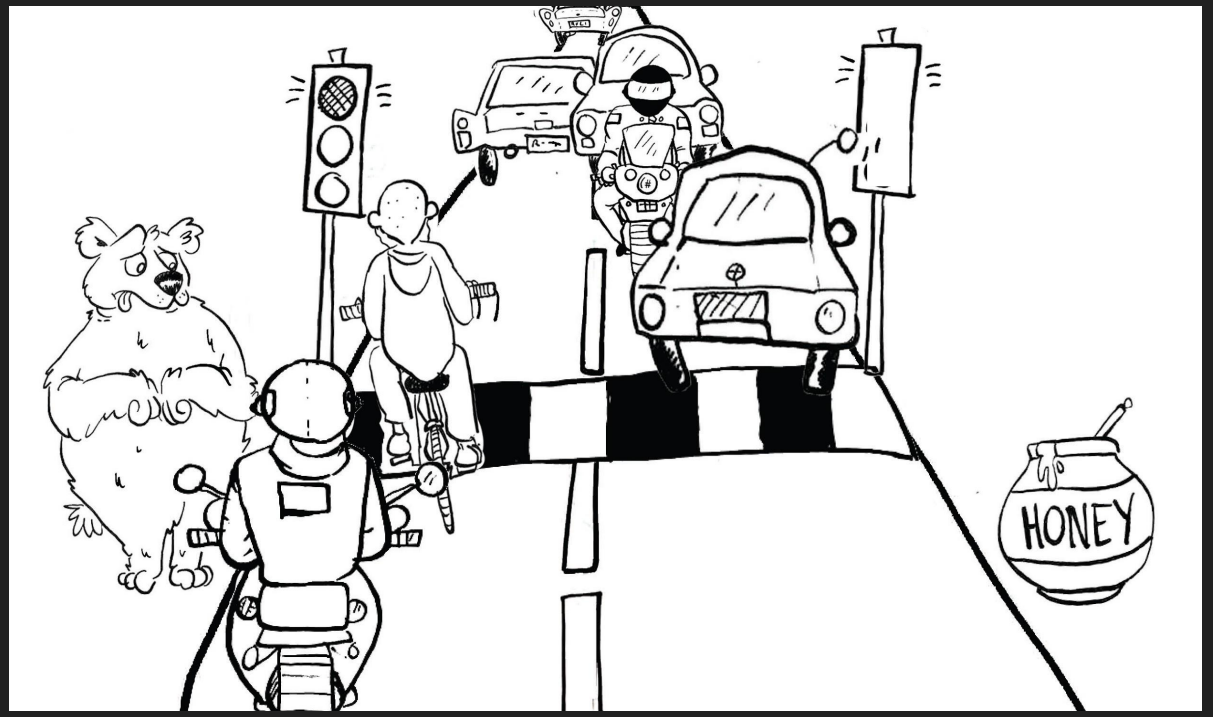
Vulnerabilities

- Definition
  - The quality or state of being exposed to the possibility of being attacked or harmed.
- Definition (Cyber)
  - "**a** term that refers to a flaw in a system that can leave it open to **attack**. A **vulnerability** may also refer to any type of weakness in a **computer** system itself, in a set of procedures, or in anything that leaves **information security** exposed"



Likelihood

- Definition:
  - the chance that something will happen:
- Cyber example
  - the likelihood of a hacker attacking your system rather than someone else's



So what do we do with risks?

- We manage them in one of the following ways
  - **Avoid** – Change plans to avoid the risk;
  - **Control -** Change the risk result through reducing vulnerabilities or impact or likelihood or a combination of those;
  - **Accept** – Assume the chance of the the risk being realised is lower than the any of the other risk management options;
  - **Transfer -** to a third party

The CiBear analogy - pulling it all together

So there is a risk that the bear cubs will starve if the CiBear crosses the busy road and gets hit by a fast car because he has soft fur and skin.

- Avoid - Don’t attempt to get the honey from the pot
- Control - Use the pelican crossing
- Accept - Cross the road and hope a car does not hit him
- Transfer - send the chicken cross the road to get the honey pot