

A New Perspective for Emerging Risk Management: Maturity Level

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Agenda

1. Definition of Emerging Risks	3
2. Maturity Model	6
3. Cyber Risk, an example	13

1. Definition of Emerging Risks

What are Emerging Risks

What do you think of when talking about emerging risks?

Historical data



Tomorrow's exposure



Definition of Emerging Risk

We are adopting the definition provided by Swiss Re's SONAR report

Swiss Re definition of Emerging Risks

Emerging Risks are **new or changing risks** which are **difficult to quantify** and may have a **major impact** on society and the re/insurance industry but whose potential impact is **not yet sufficiently taken into account**.

Types of Emerging Risk:

- New risks/novel risks (e.g. blockchain technology)
- Latent risks (e.g. nanotechnology)
- Risks whose framework conditions change (e.g. regulatory, litigation)



Definition of Emerging Risk

Other definitions

Lloyds: An issue that is perceived to be potentially significant but which may not be fully understood or allowed for in insurance terms and conditions, pricing, reserving or capital setting.

- **PWC:** Those large scale events or circumstances beyond one's direct capacity to control, that impact in ways difficult to imagine today.

- **S&P:** Risks that do not currently exist.

Why Emerging Risks Are Important?

What we are talking about when we talk about emerging risks

Foresight is key to prepare for future challenges



- Emerging economic, technological, socio-political and environmental risks modify the risks we face
- The earlier the industry starts adapting to them, the better prepared it will be for future exposures and future opportunities
- There is no silver bullet that will work in all cases, but sharing knowledge is a good first step to prepare for what might lie ahead

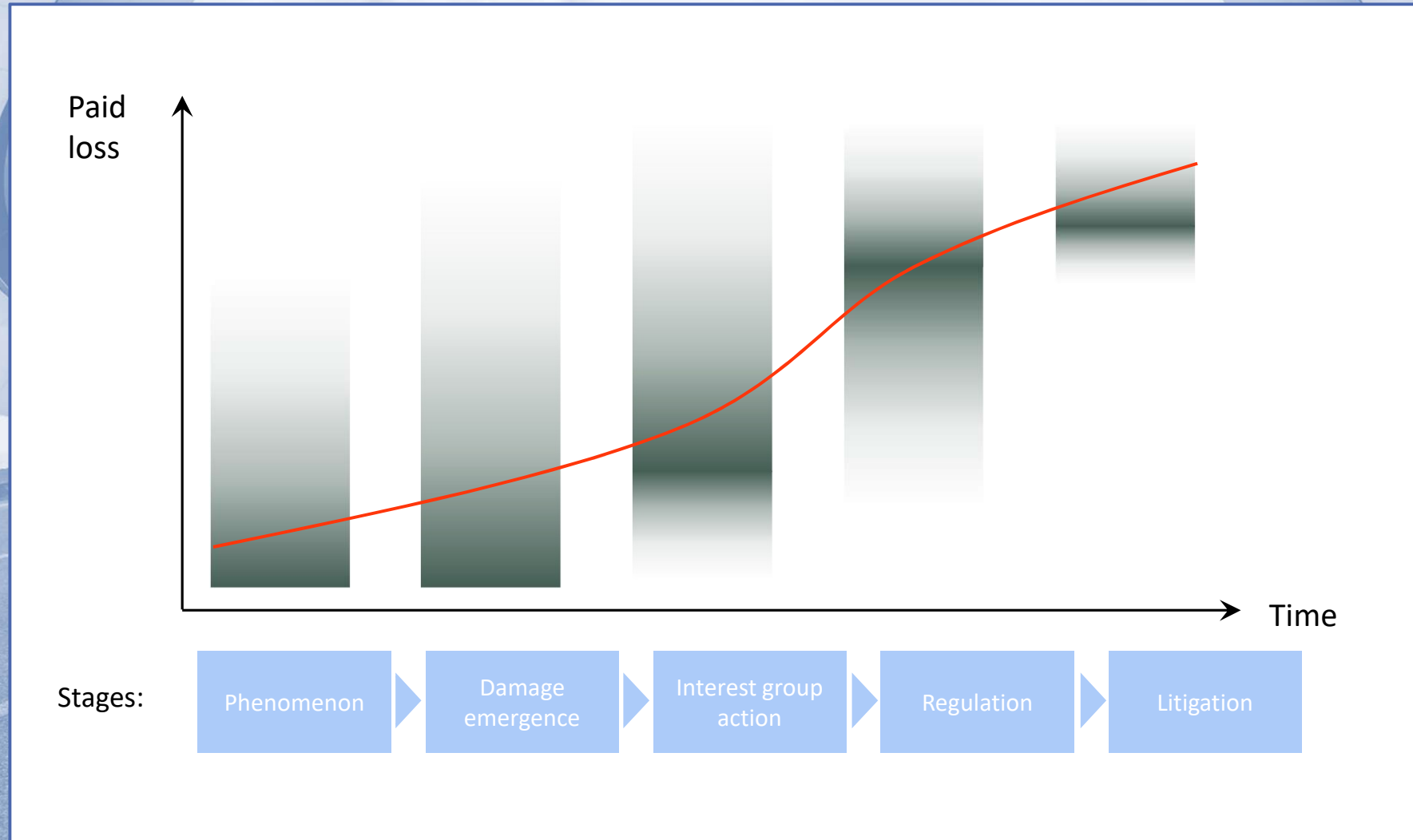
At Swiss Re, Group Risk Management identify, assess and report emerging risks together with our partners in order to:



- Increase risk awareness
- Protect the balance sheet, and
- Seize opportunities and enable risk taking

New Risks Emerge in Stages

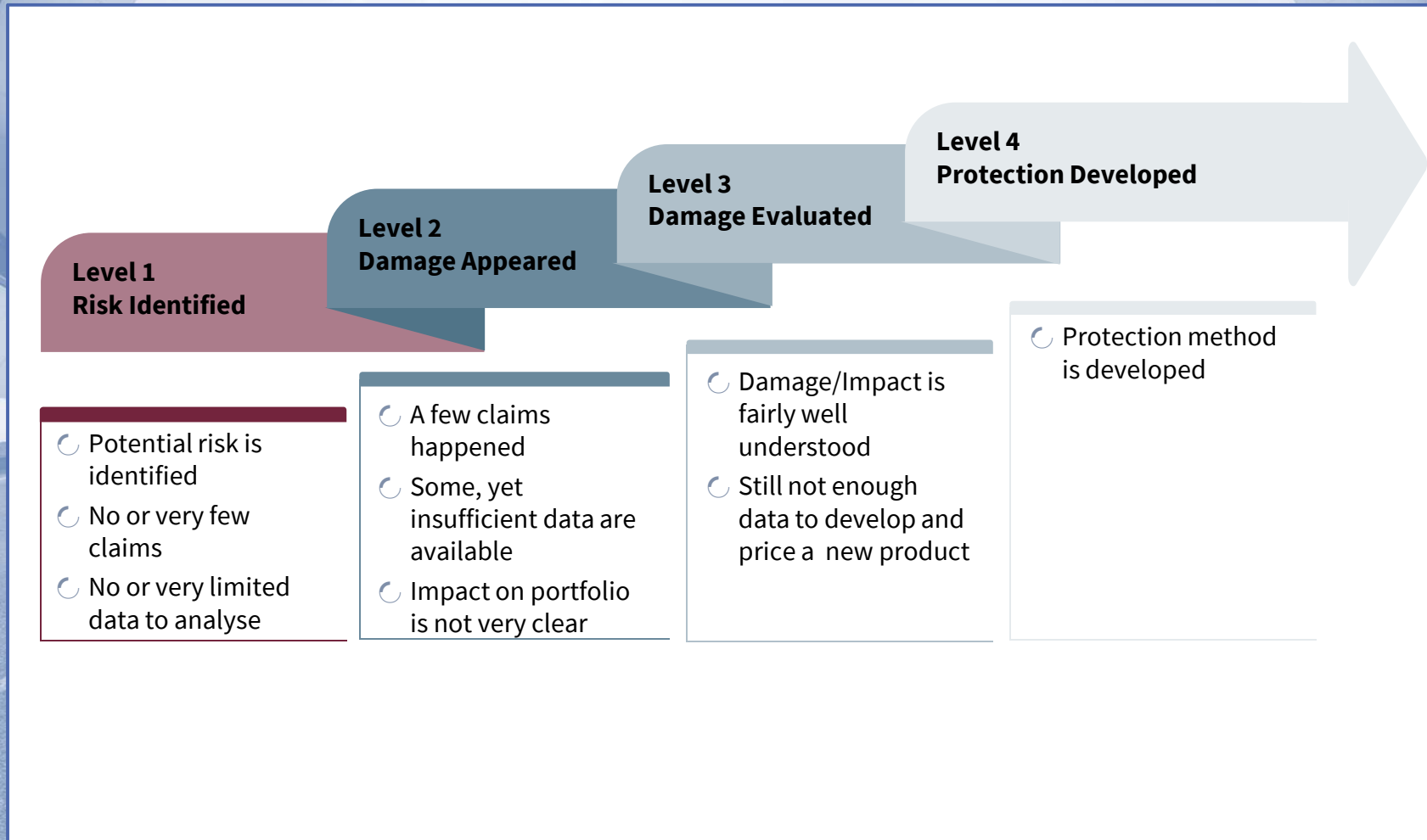
Different stages can be observed as risks mature (casualty risks-type example)



2. Maturity Model

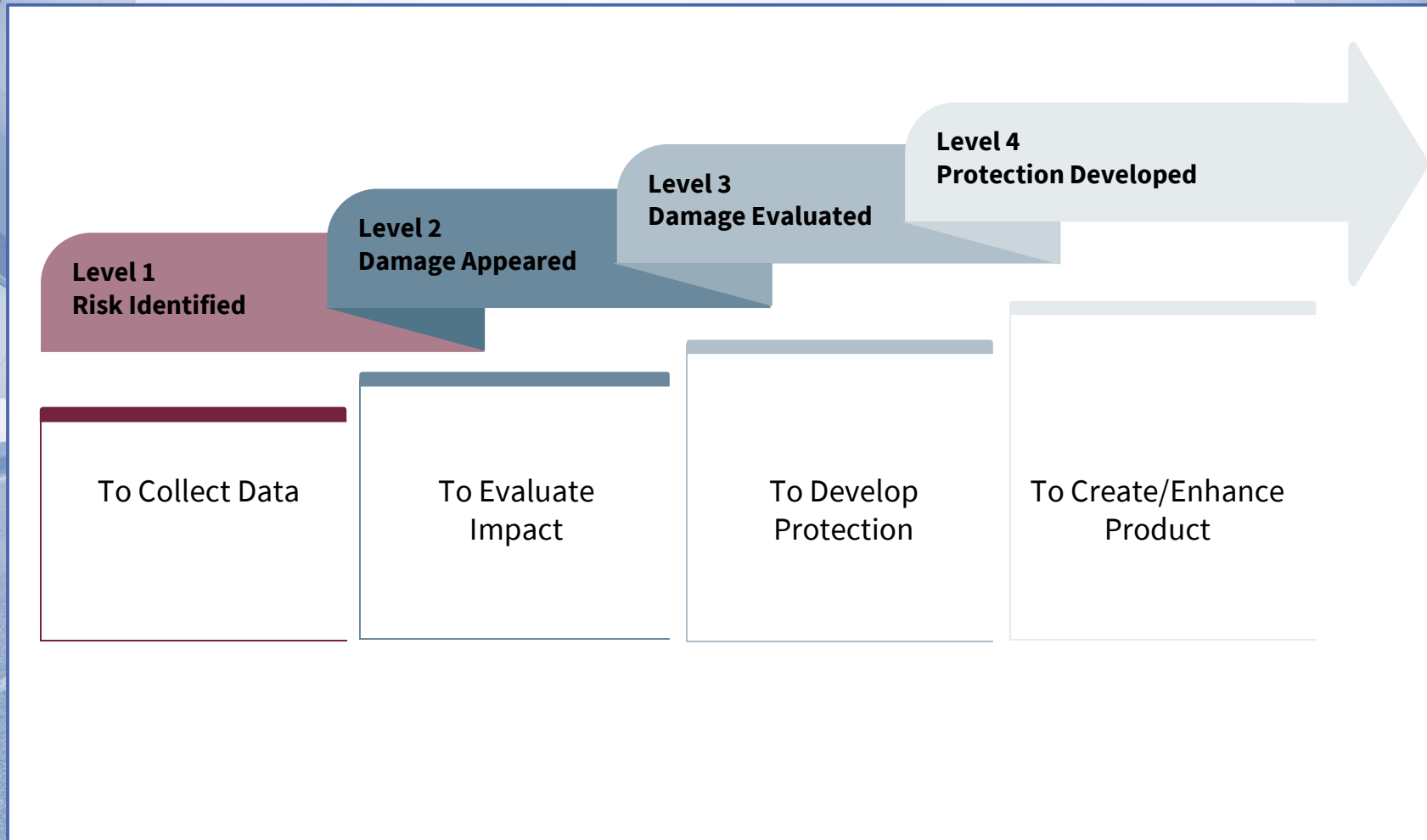
Phenomenon: Maturity Level of Emerging Risks

A new perspective to look at Emerging Risks



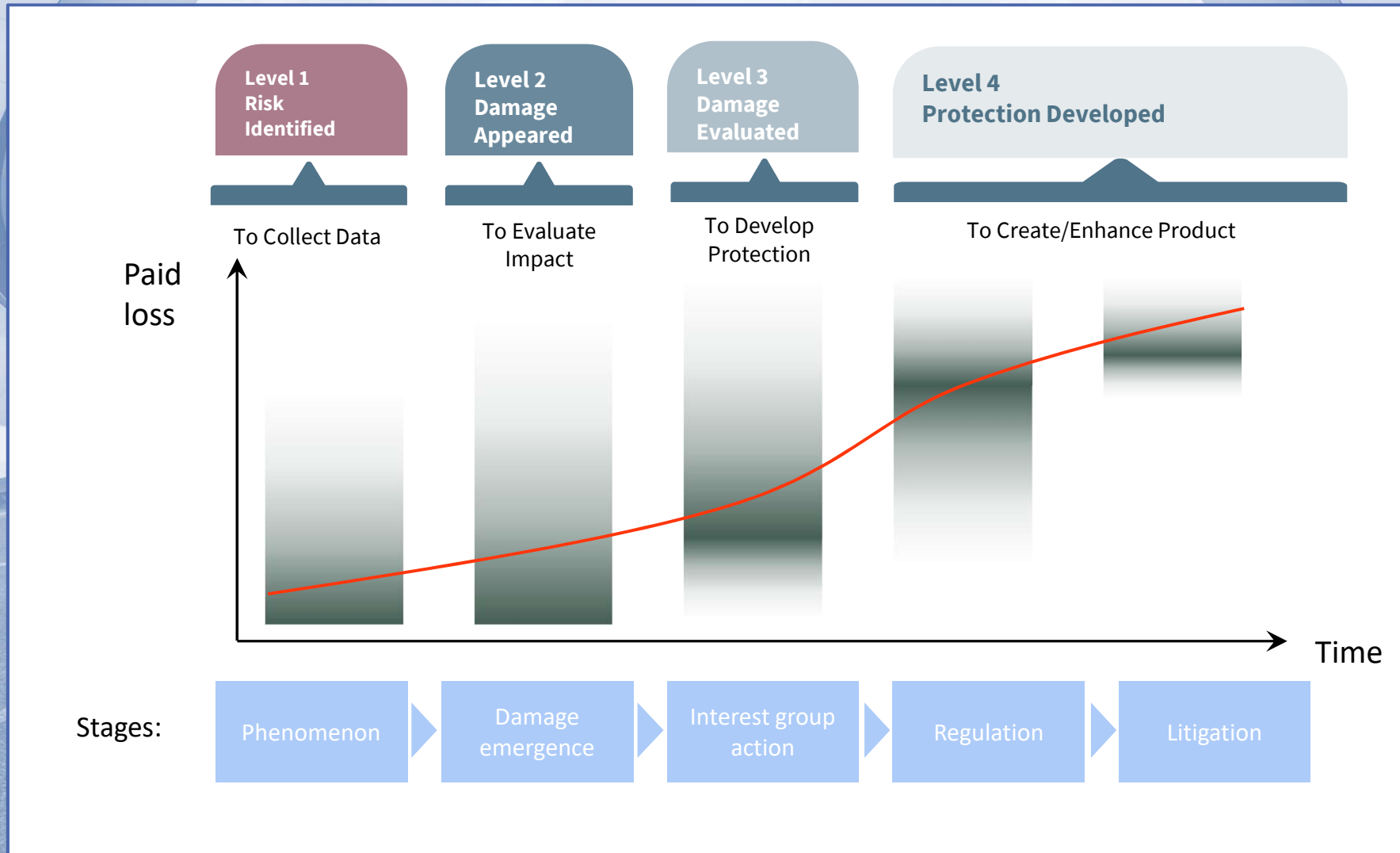
Solution: Maturity Level of Emerging Risks

A new perspective to look at Emerging Risks



Stages of Emerging Risks and Maturity Model

How Maturity Model is mapped to stages of emerging risks



3. Cyber Risk as an example

Cyber Risk as An Example

What we know about the risk today

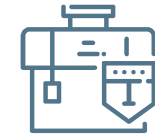


Trend

- Cyber risks are evolving rapidly
- Extent of associated possible losses is also broadening
- Cyber protection topic is rising up the corporate agenda

Challenge

- Risk landscape continues to rapidly morph
- Complex to understand and calibrate
- Limited data to extrapolate information about future losses



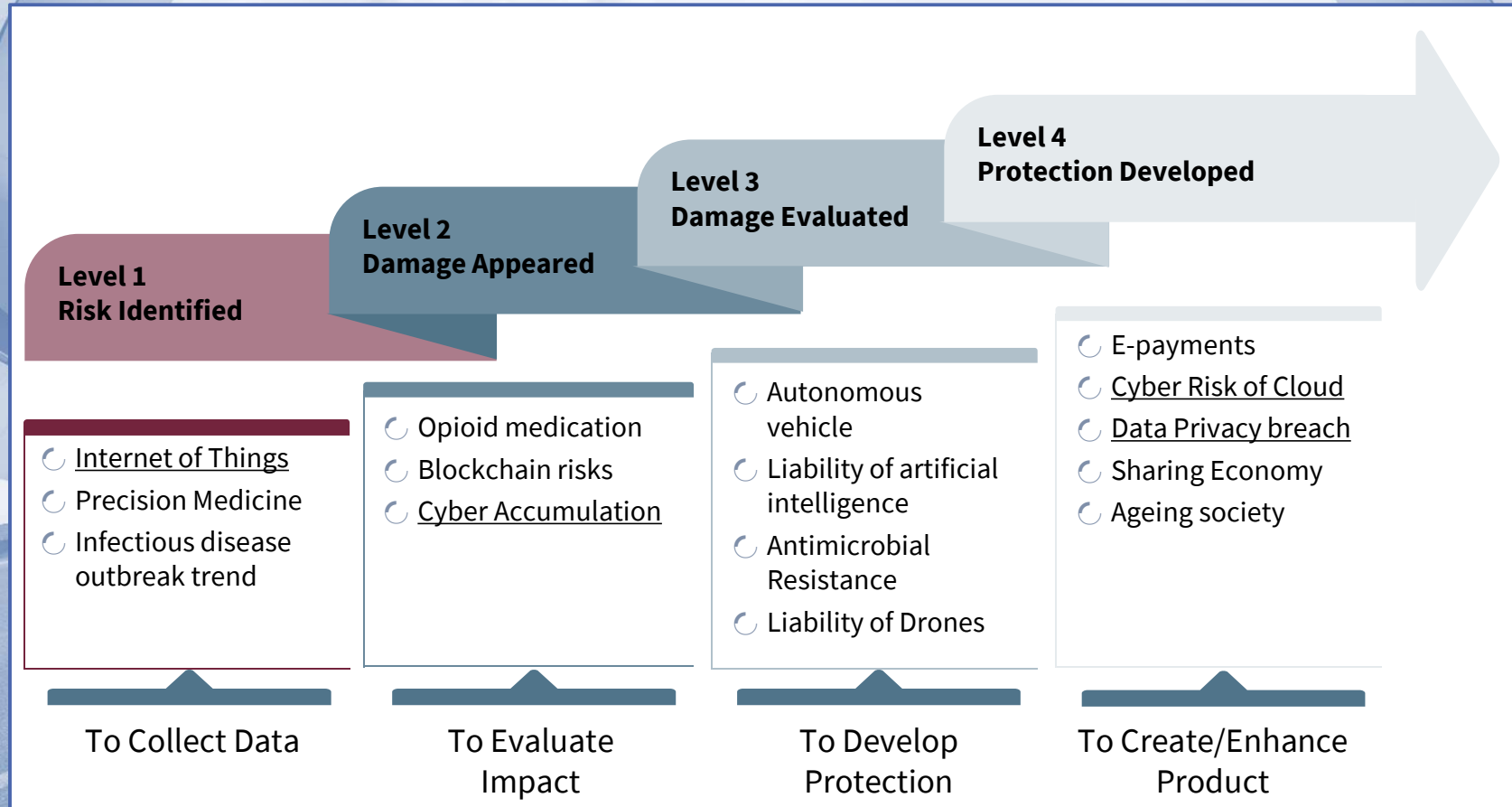
Our Understanding



For Swiss Re, cyber risk is still very much an emerging risk despite the fact that the dedicated cyber insurance market is developing rapidly, with an increasing number of insurers looking to write more business in this specialty line.

Maturity Level of Cyber Risks as an example

For the most part, Cyber related risks have evolved from Level 1 to Level 3&4



Definition of cyber risk is much broader nowadays so it is possible for subcategories (such as IoT) under cyber risk to have maturity level that deviates from Level 3&4.

Synpulse's maturity model is a conceptual framework that can be employed to consider and evaluate emerging risks. However, the characteristics of it may apply only to a small number of emerging risks. This is not reflective of Swiss Re's approach to identify, assess and evaluate emerging risks.

Closing Thoughts on Industry Impact of Cyber Risk

To increase resilience of society towards cyber, a united front is required.

1

The Insured

To increase cyber resilience, the insured need to share all data that helps assess their specific risk.

2

(Re)-Insurers

To provide not only capital and adequate risk transfer products, but also services that help insureds prevent and/or manage cyber-attacks.

5

Government

To raise general awareness, set the right legal framework to establish protocols for capturing and disseminating risk relevant data.
Government back-stop financing may ultimately become necessary for accumulating cyber scenarios that are too great to be absorbed by the private re-/insurance market, and/or events with a terrorism- and war-like character.

3

Professional associations

Professional associations (or government) shall set-up risk-adequate and principle-based minimal IT security and protection standards and define who and how to enforce them.

4

International Organizations and Public Partners

Swiss Re is working with international organizations and public partners to develop a workable data sharing concept.



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