

RTC 2017

THRIVING IN TESTING

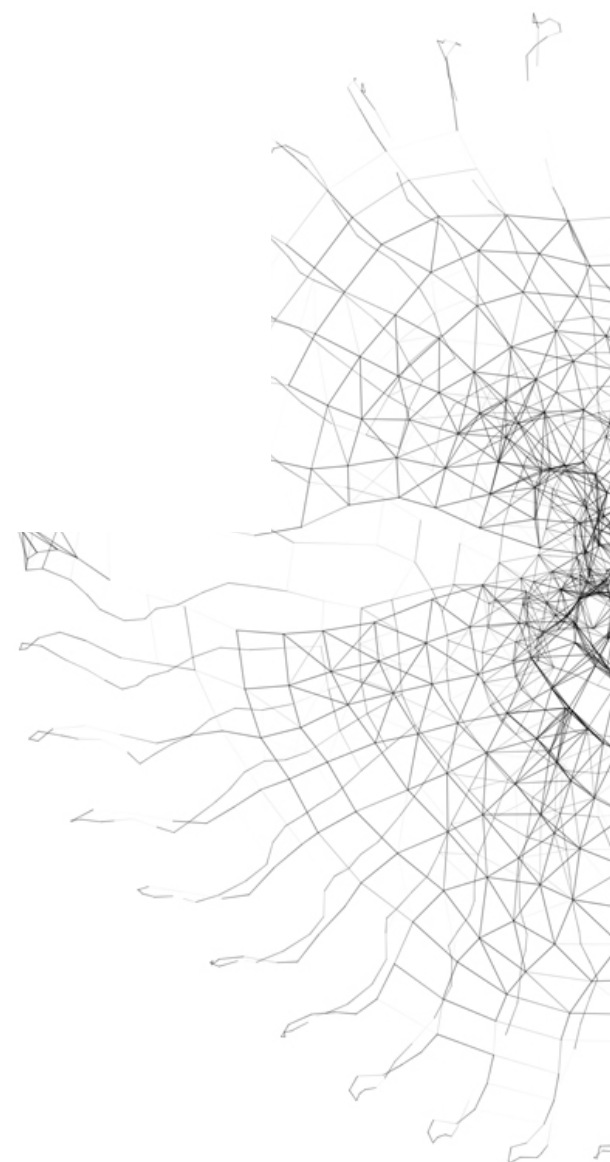
“The Risk Questionnaire”

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Why Am I Here?

First Event

Watched a UK TV
documentary on
Risk

This led me to
read “Risk – The
Science and
Politics of Fear” by
Dan Gardner



Second Event

Got made
redundant

Led me to contact
an Independent
Financial Adviser

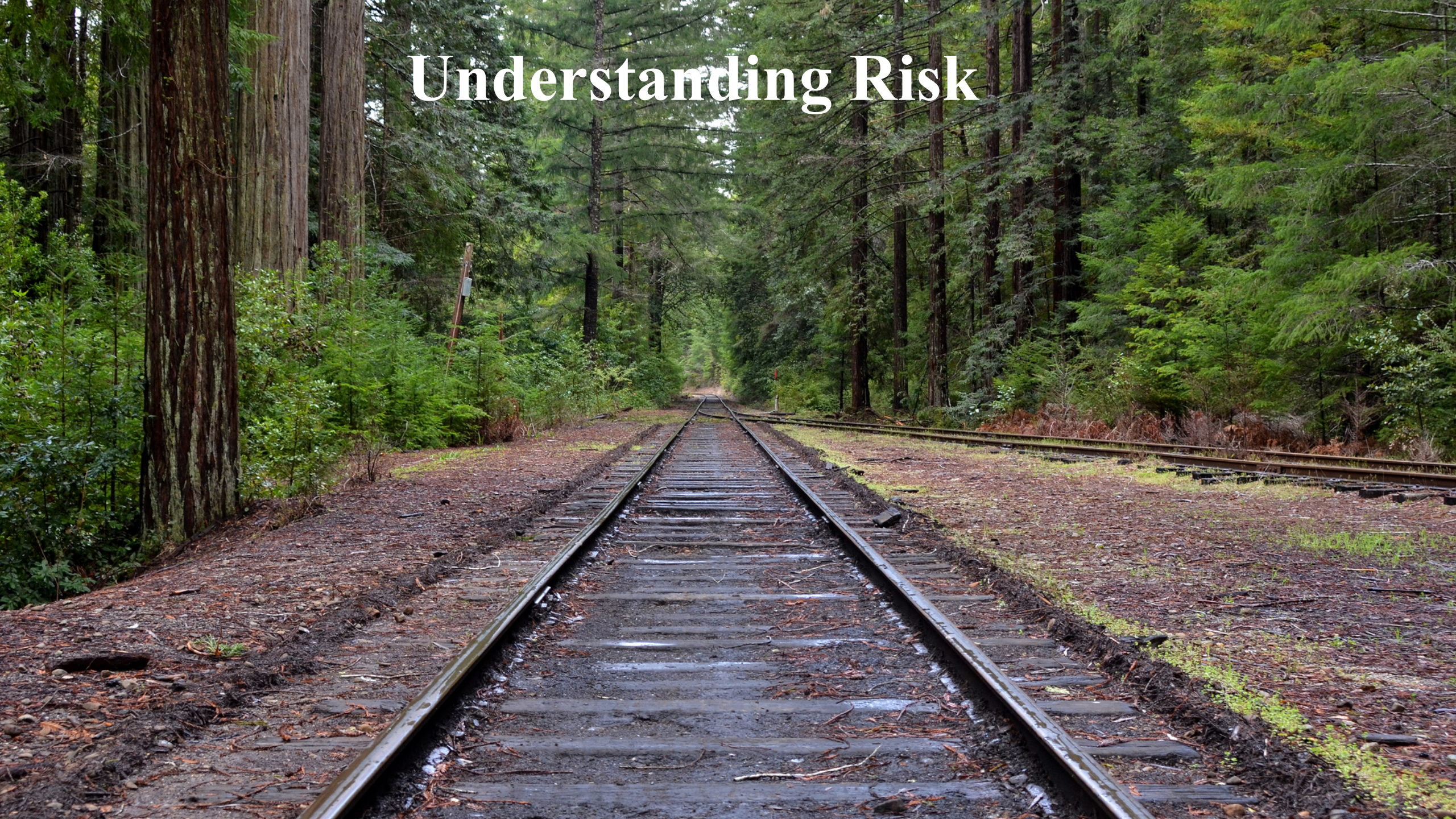
Also led me to
joining a new
company

Understanding Risk

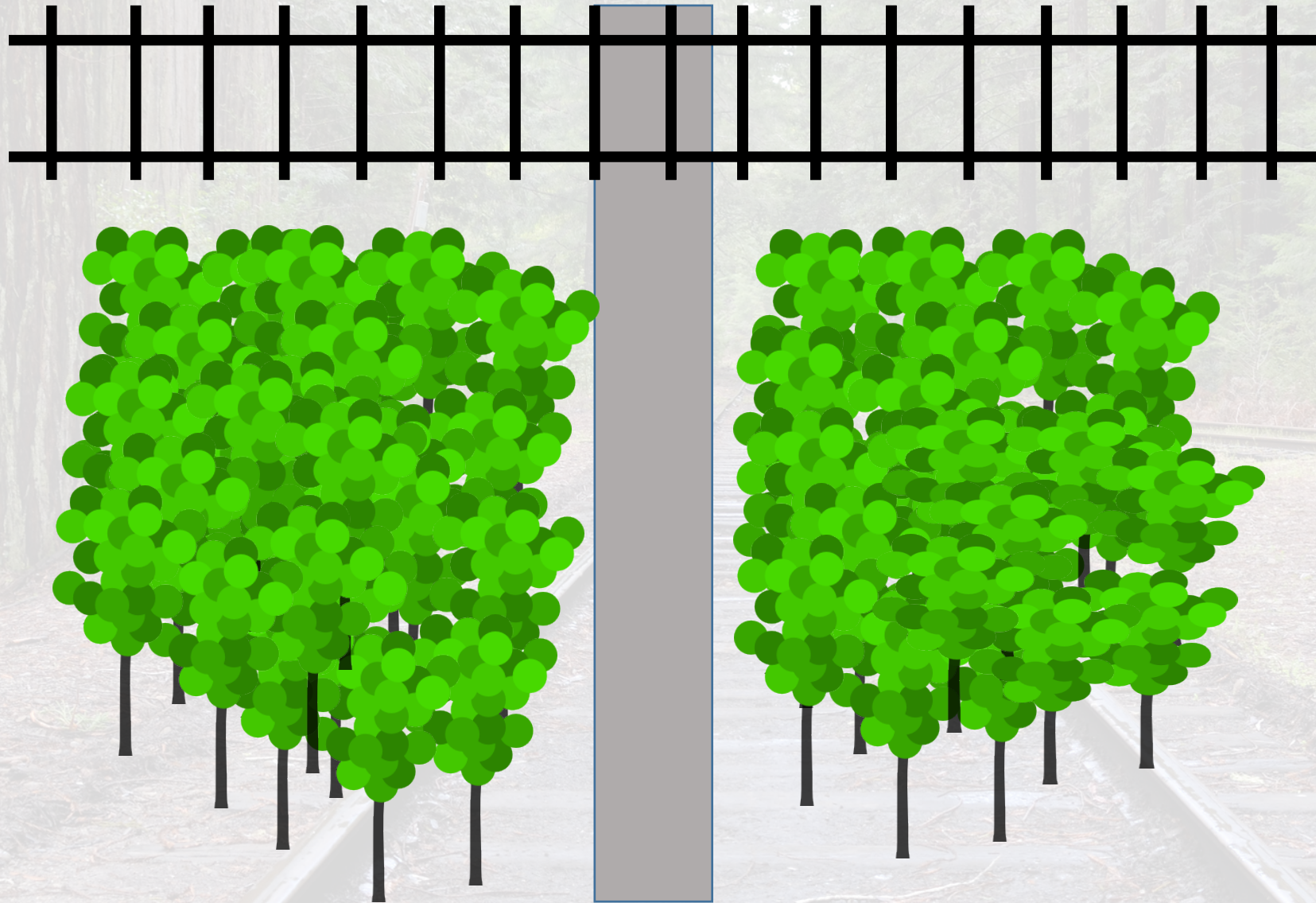
A man with glasses and a lab coat is holding a large beaker filled with a bright green liquid. The scene is dimly lit, with the primary light source being the glow from the liquid itself. In the background, there are some blurred red and blue lights, possibly from laboratory equipment.

A dark art?

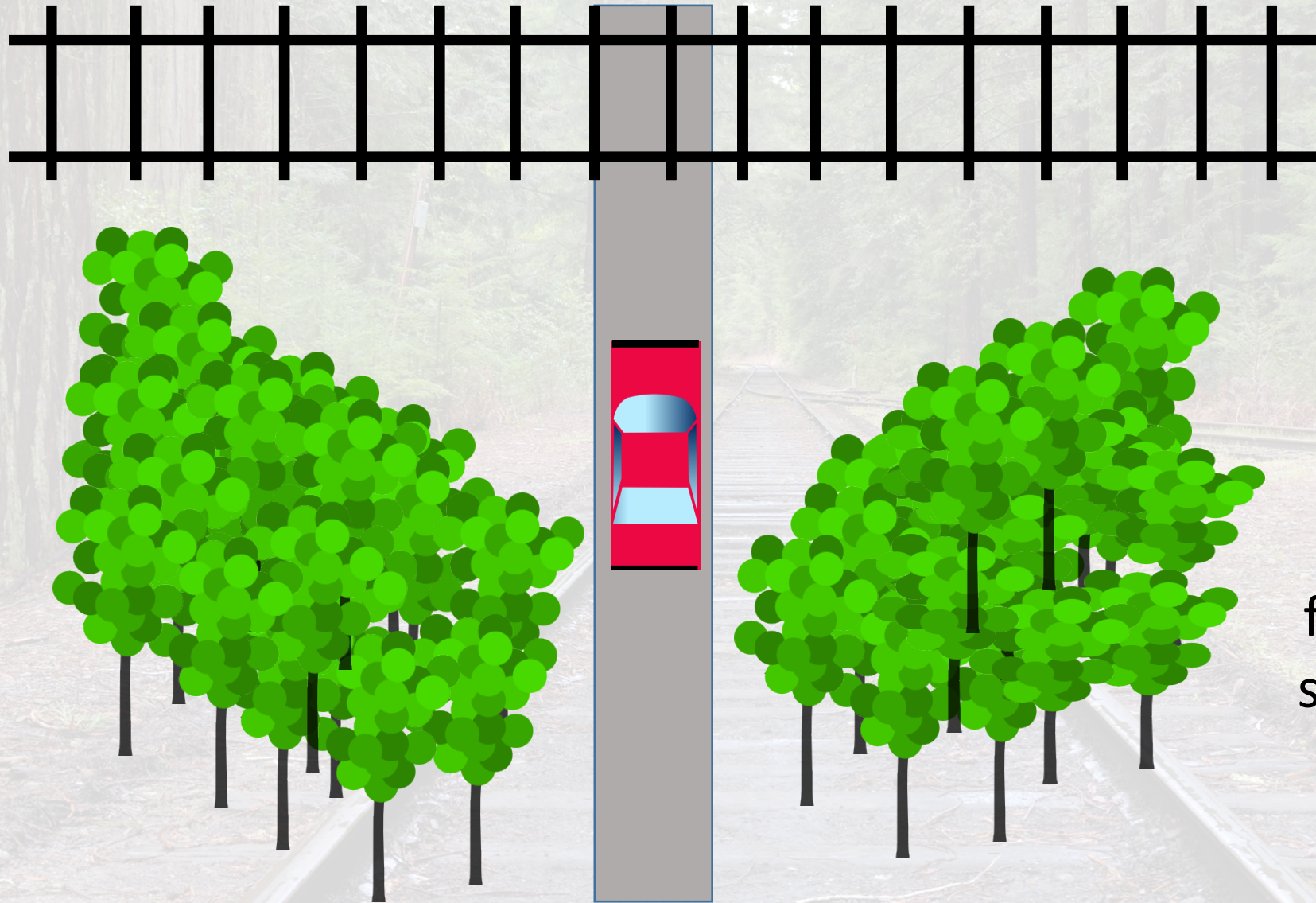
Understanding Risk



Understanding Risk



Understanding Risk



People
increased
speed to
compensate
for perceived
safety benefit

Risk Compensation

Maintaining equilibrium in perceived risk



Risk Compensation

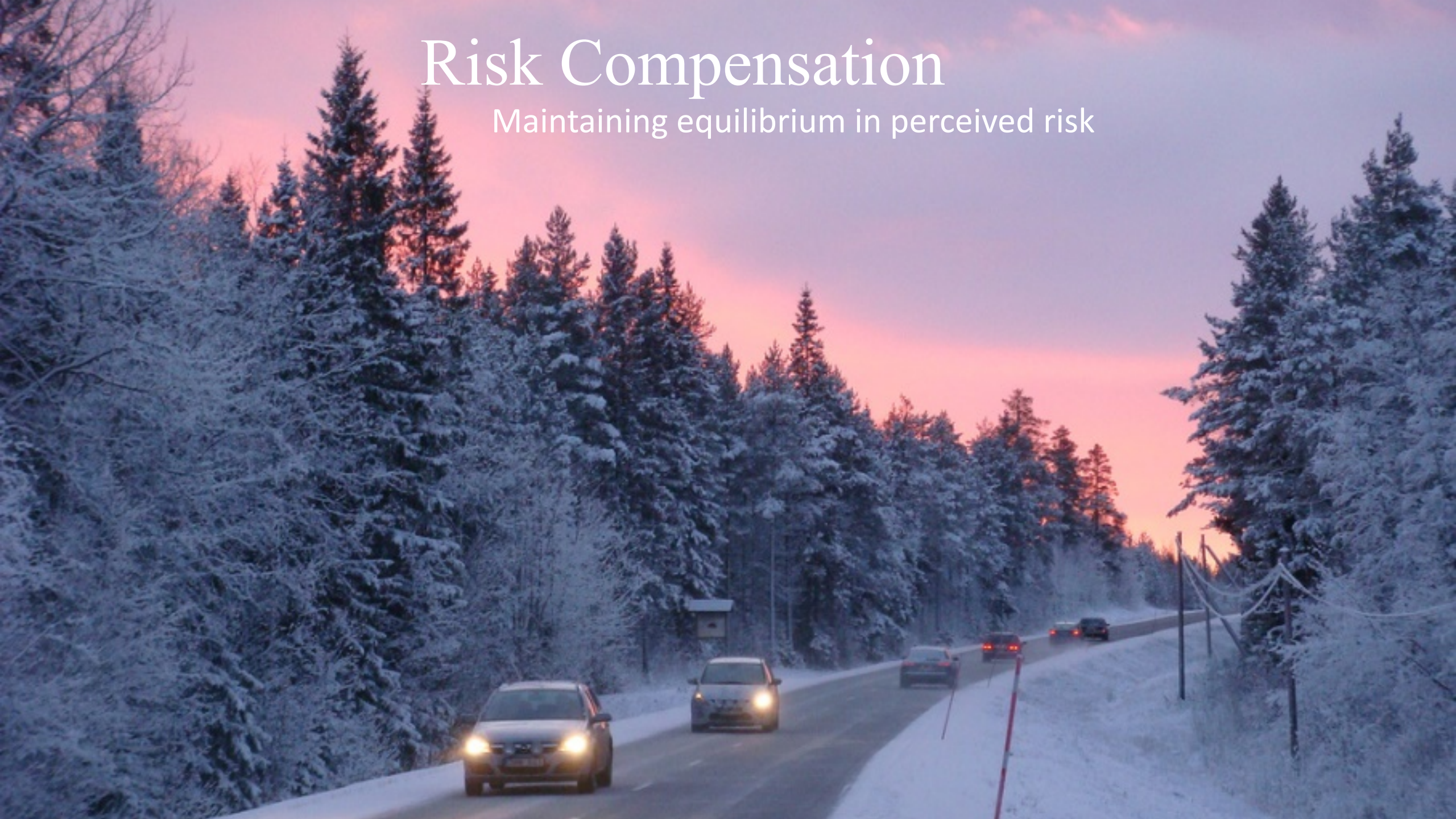
Maintaining equilibrium in perceived risk

- 11 September 2001 twin towers
- Level of road fatalities increased
- After 1 year returned to 'normal'



Risk Compensation

Maintaining equilibrium in perceived risk




Risk Compensation

Maintaining equilibrium in perceived risk

- 3 September 1967 Sweden switched to right hand driving
- Level of road fatalities dropped
- After 2 years returned to 'normal'



A close-up, low-angle shot of a black seatbelt buckle and strap. The buckle is metallic and has a small rectangular hole at the bottom. The strap is black and has a textured surface. The background is blurred, showing warm, golden light and dark, indistinct shapes, suggesting an interior space with soft lighting.

Individuals compensate for
changes in variables ...

... to maintain a constant
perceived level of risk



Risk Perception

What influences our perception of risk?

Human Brain evolved in Stone
Age



Risk
assessment is
'System One'
thinking

Driven by
Availability
Heuristic

Business Leaders and Risk Perception

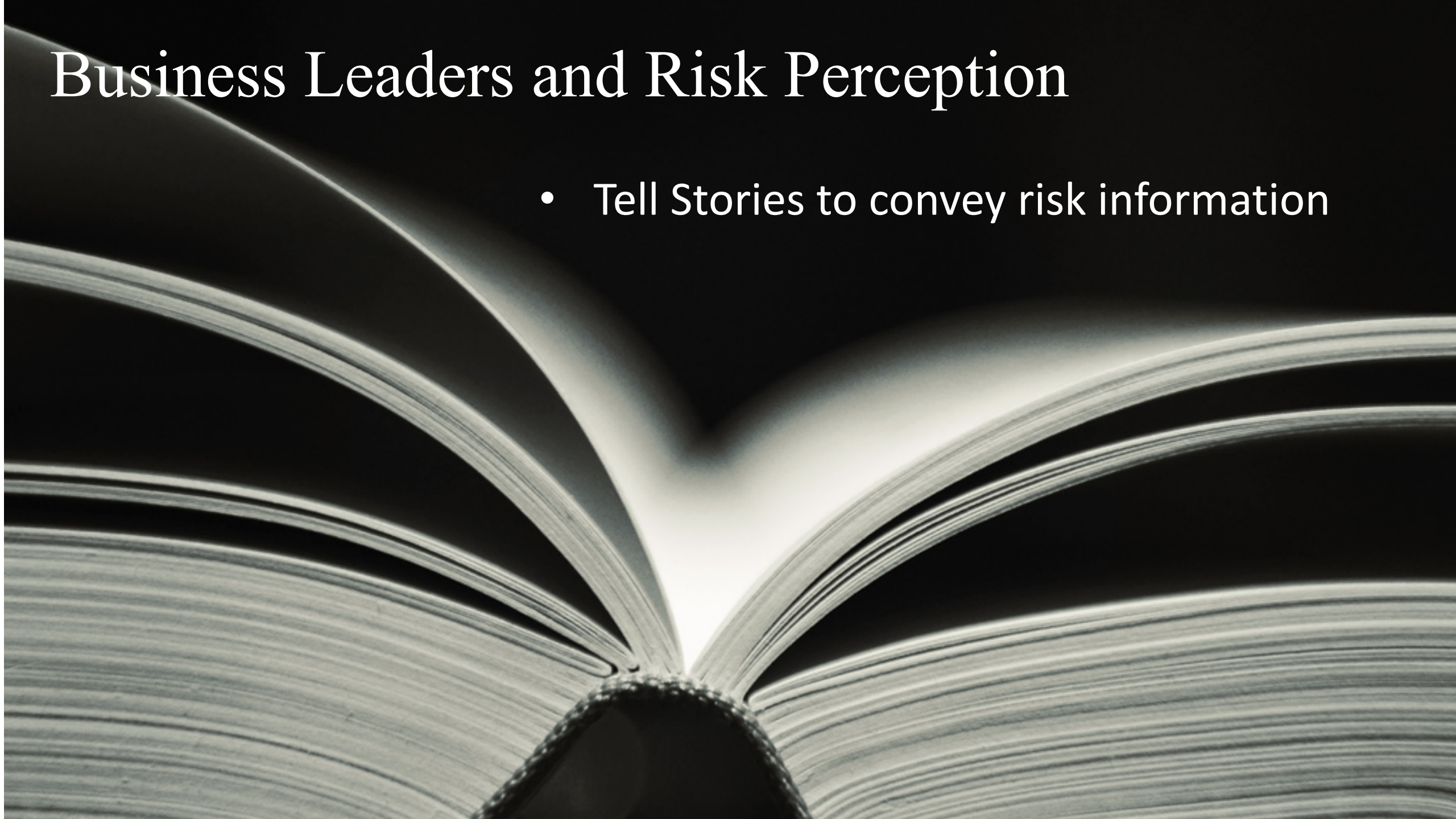


Business Leaders and Risk Perception

- Manager perception drives risk decisions
- Lack of 'Availability' leads to Underestimation Bias
- Multiple negative outcomes considered as one risk

Business Leaders and Risk Perception

- Tell Stories to convey risk information



Testers and Risk Perception

What influences a tester's perception of risk?

Personal Experience = Bugs
Shared Stories = Bugs
Availability Bias = Bugs

The background of the slide is a photograph of two glasses of beer on a wooden table. The glass on the left is partially filled and has the words "THE AMBER NECTAR" embossed on it. The glass on the right is more full. Both glasses are covered in condensation droplets. The warm lighting creates long, soft shadows across the wood grain of the table.

Testers and Risk Perception

What influences a tester's perception of risk?

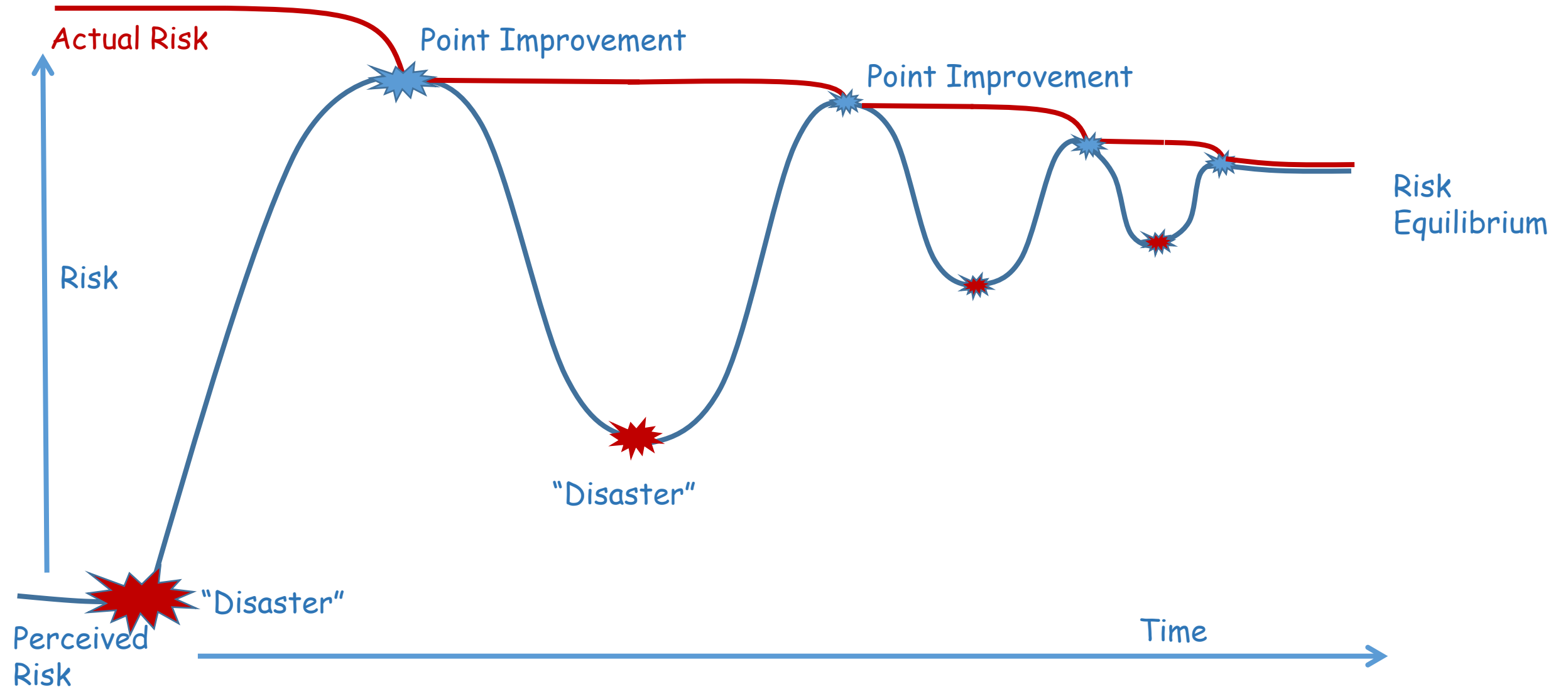
Testers and managers will perceive risk differently based on availability

Testers and Risk Homeostasis

When Can Testers' Risk Reducing Initiatives Backfire?

- Tester Introduces Risk Reducing Initiative
- Decision maker increases velocity to deliver faster with same perceived risk
- Risk can go up

The Wave of Acceptable Risk



The Challenge

Reaching Equilibrium



The Challenge

Reaching Equilibrium

- Developer testing
- No clear understanding of testing responsibilities
- Lack of clarity on the business expectation in testing
- There was no consensus over what constituted acceptable risk



Learning from Finance



Learning from Finance

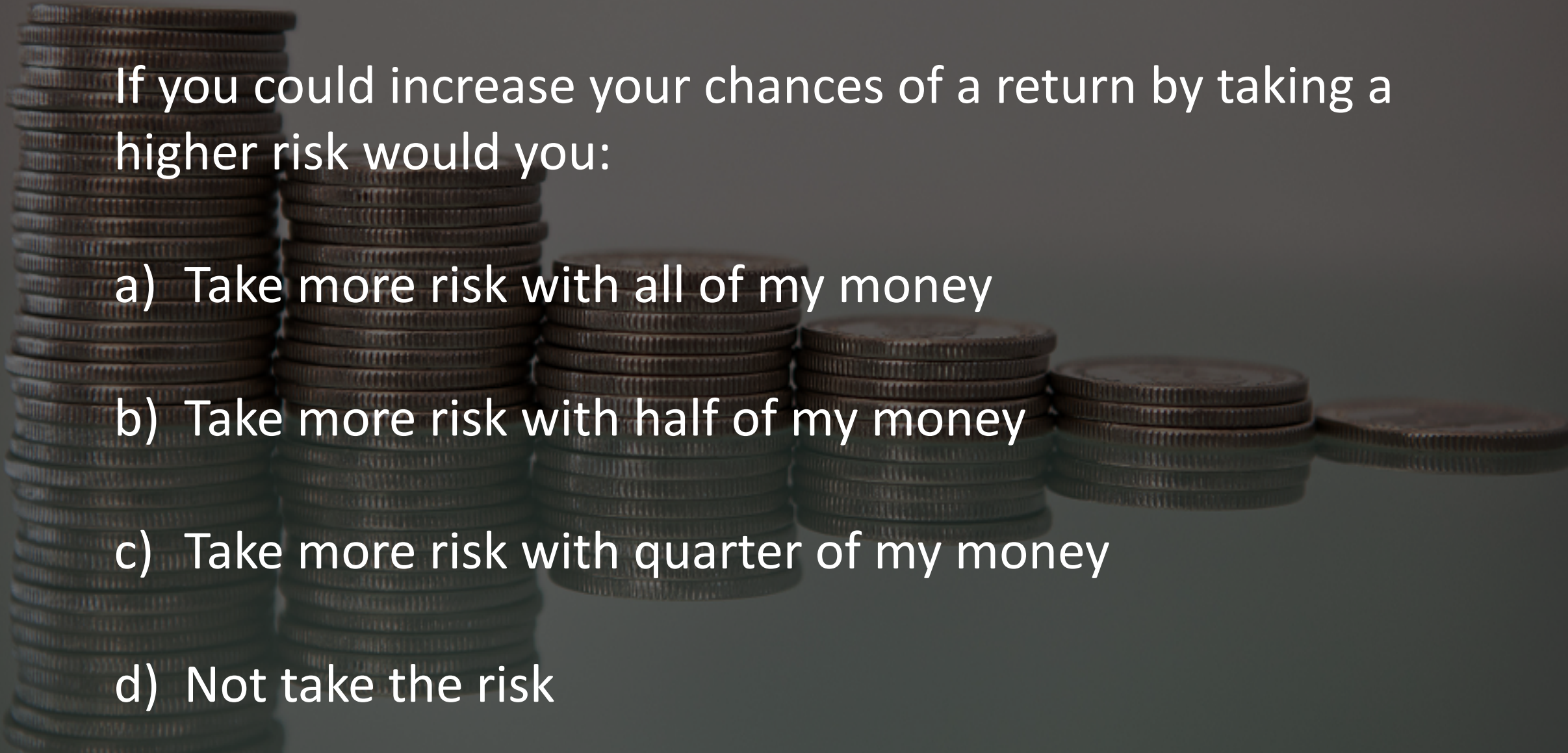
- Financial Advisors need to assess individual risk appetite
- Risk questionnaires are a commonly used approach to this



Assessing Investor Risk

If you could increase your chances of a return by taking a higher risk would you:

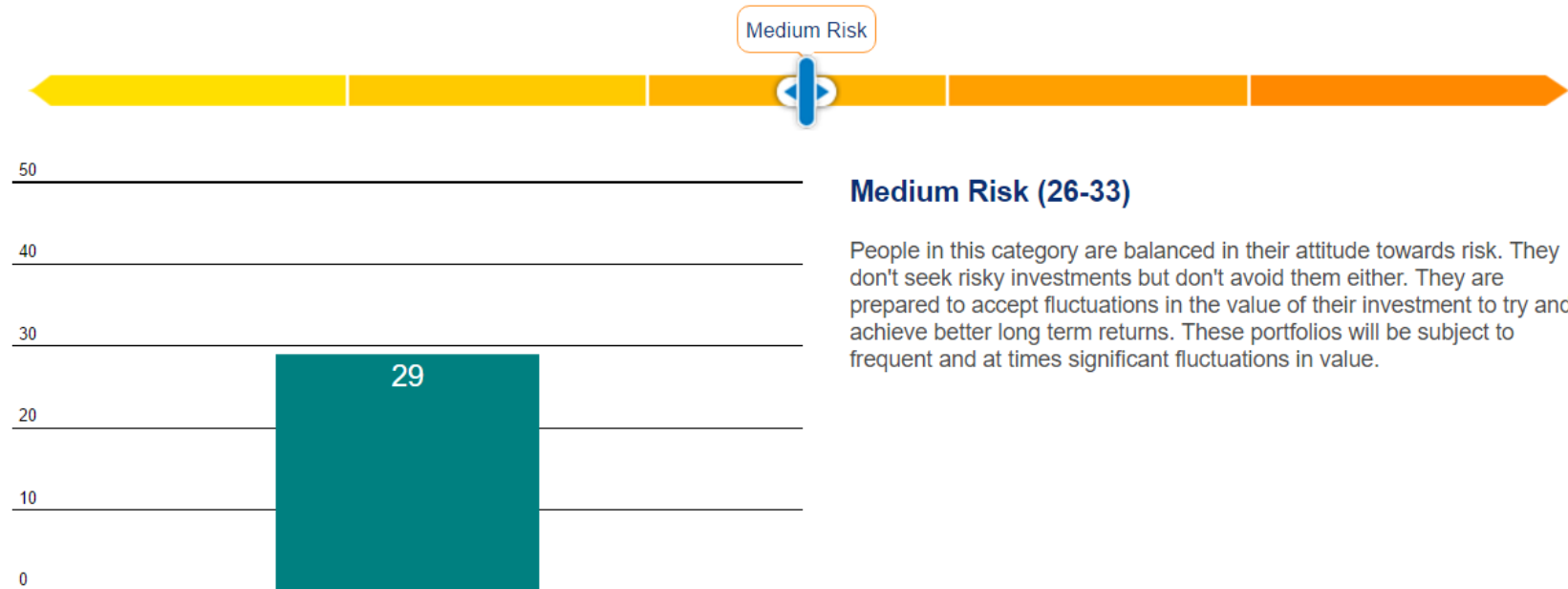
- a) Take more risk with all of my money
- b) Take more risk with half of my money
- c) Take more risk with quarter of my money
- d) Not take the risk



Assessing Investor Risk

Investment risk appetite

A risk score of 29 would put you in the medium risk category.



Medium Risk (26-33)

People in this category are balanced in their attitude towards risk. They don't seek risky investments but don't avoid them either. They are prepared to accept fluctuations in the value of their investment to try and achieve better long term returns. These portfolios will be subject to frequent and at times significant fluctuations in value.

[Retake risk questionnaire](#)

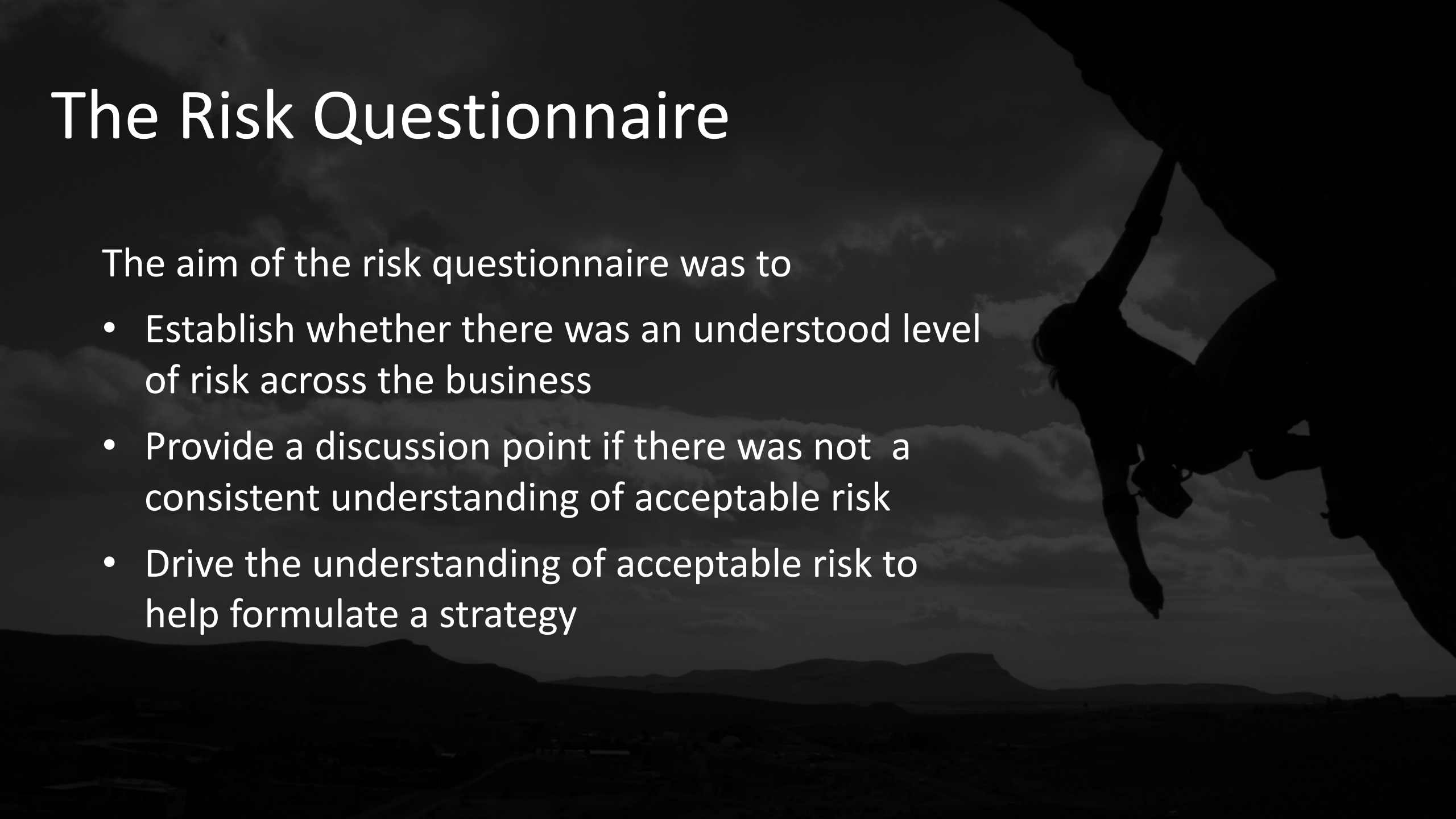
A close-up, low-angle shot of a glowing incandescent lightbulb. The bulb is mounted on a white, curved surface, possibly a ceiling or a lampshade. The filament inside is coiled in a complex, tangled pattern, resembling a scribble or a web. The light is warm and yellow, casting a soft glow on the surrounding surface. The background is dark, making the lightbulb the central focus.

A Testing Risk Questionnaire

The Risk Questionnaire

The aim of the risk questionnaire was to

- Establish whether there was an understood level of risk across the business
- Provide a discussion point if there was not a consistent understanding of acceptable risk
- Drive the understanding of acceptable risk to help formulate a strategy



The Risk Questionnaire

4 Categories of Questions

1. Business Risk
2. Development Risk
3. Perceived/Target Status
4. Time Spent on Testing Activities

1 was always the option relating to the highest risk position

5 was always the option relating to the lowest risk position



The Risk Questionnaire

Crafting the questions

- Not too generic - relevant to our customer and release context
- Not biased towards our own opinions or agenda
- Showing integrity in questions and response



Questions – Business Risk

Interaction between the Software and Customers

Rate the following questions on 1 - 5 from 1=Strongly agree 5=Strongly disagree

1. On time delivery is more important than taking longer to deliver a higher quality product
2. I am happy to accept the need for later effort in maintaining a product if we can deliver that product at a lower up-front cost
3. Our customers would knowingly accept a reduced level of rigour in development compared to other products in order to keep the cost of the software down
4. Putting the software in front of customers and responding to the issues they encounter is a cost effective way to prioritise fixing software problems
5. The cost of fixing issues in production software is now reduced to the point that this is an economically viable approach
6. Our product context is one in which we can adopt a relatively low level of rigour compared to other business facing software development organisations
7. I would be reluctant to see an entire sprint given over entirely to testing and bug fixing unless this was driven by issues encountered by the customer



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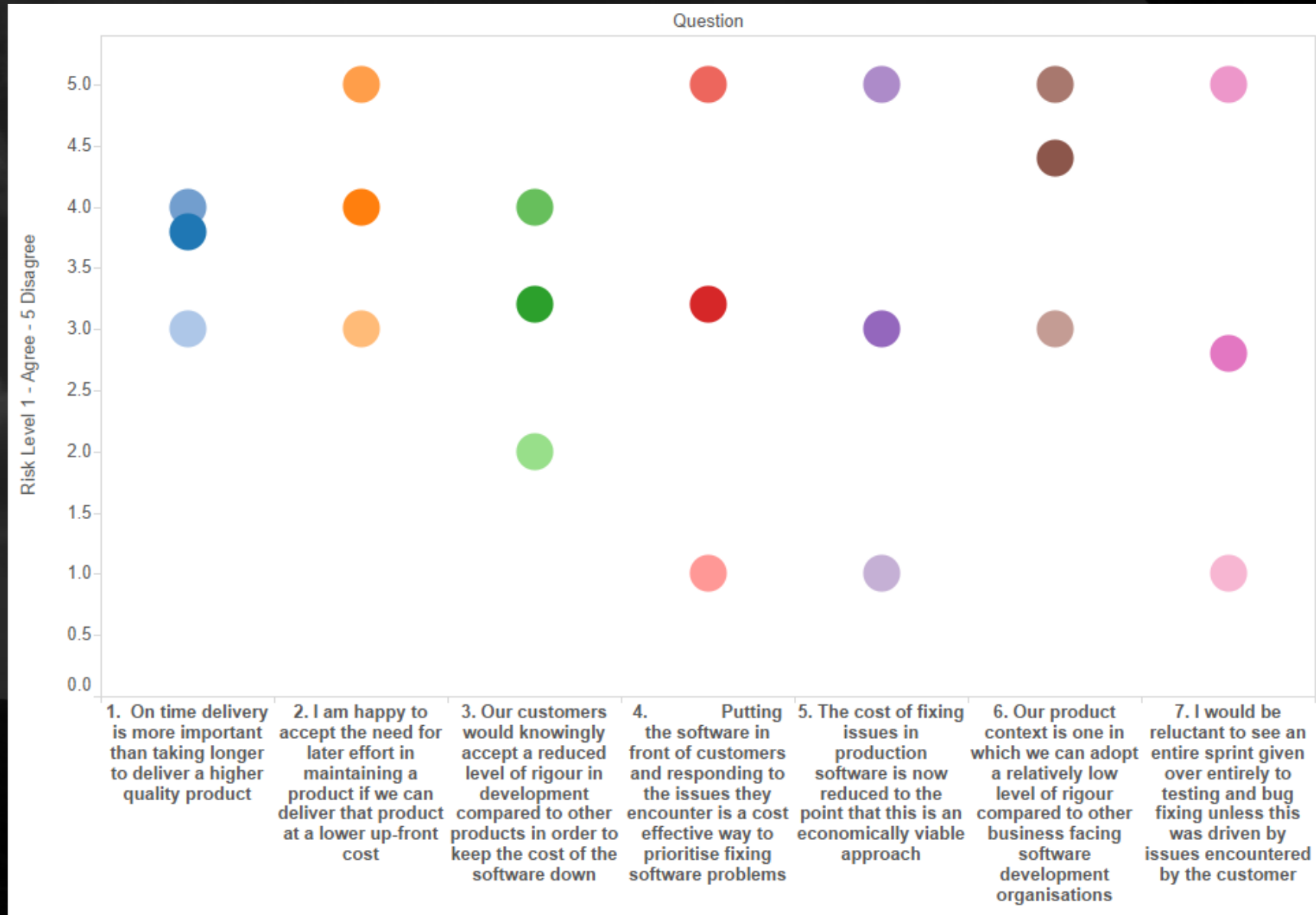
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Results – Business Risk



Questions – Development Risk

Risks Inherent in Our Development Activity

Rate the following questions on 1 - 5 from 1=Strongly agree 5=Strongly disagree

10. The effective application of developer/unit testing can eliminate the need for further devoted testing activity
11. Appropriate software design can eliminate the need for devoted performance and stability testing
12. Adding further development skills in our agile teams provides more value in our context than devoted testers
13. The testing of our products does not require specialist testing knowledge and could be performed by individuals with limited training in software testing
14. I would be reluctant to schedule specific testing tasks on a team's backlog without any associated development



Questions – Development Risk

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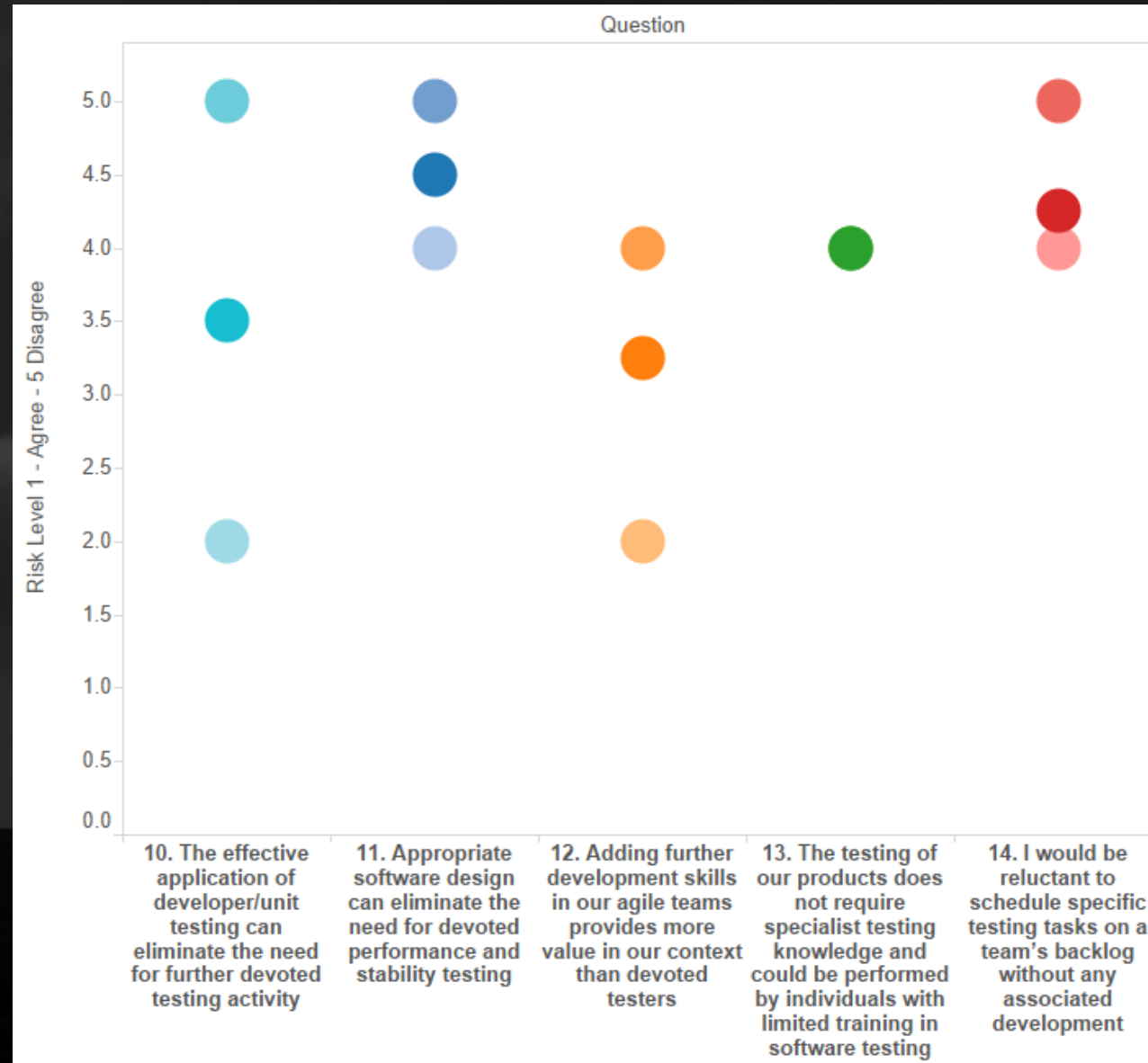
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Results – Development Risk



Questions – Perception

How do we perceive our current and target status in testing?

8. With 1 being lowest and 5 highest rate how you think the company currently stands in its typical level of rigour in software quality and testing?

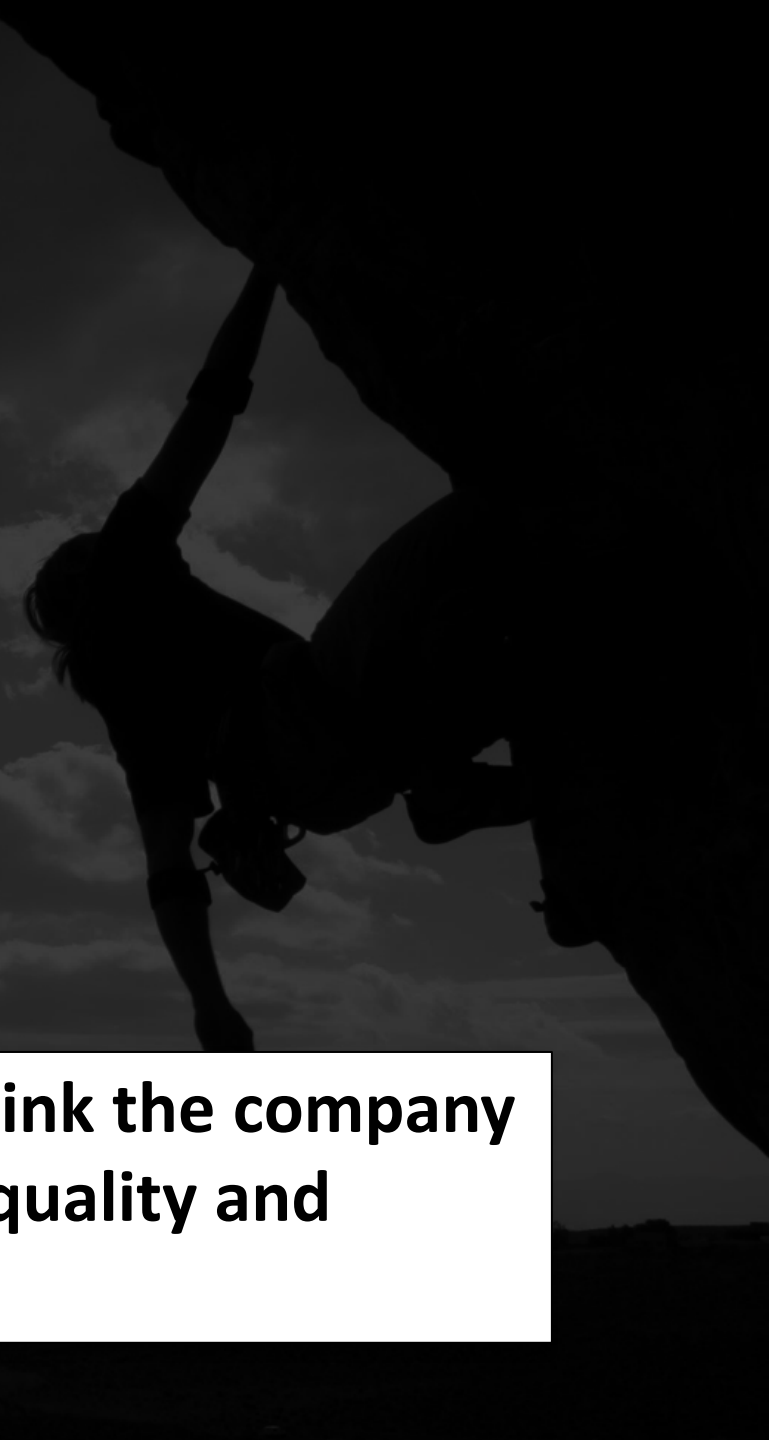
9. With 1 being lowest and 5 highest rate how you think the company should stand in its typical level of rigour in software quality and testing?

Questions – Perception

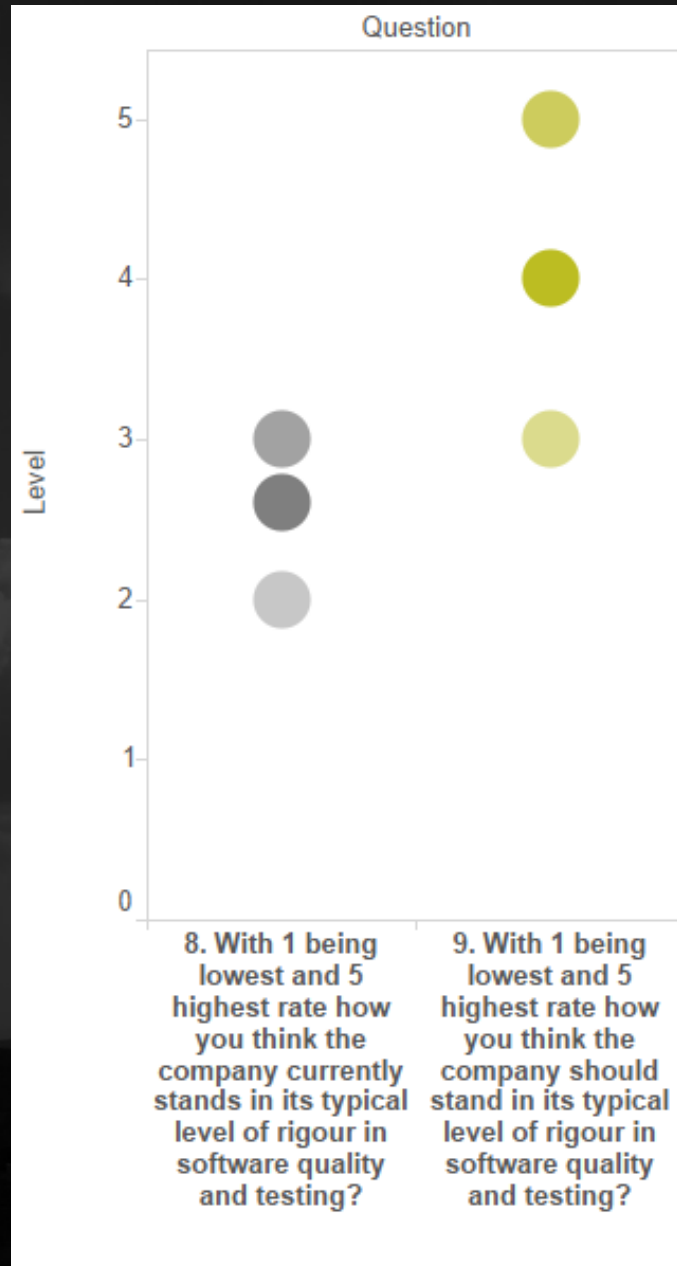
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Results – Perception



Creating a Test Strategy

What is a test strategy?

It used to be a document

No-one wanted to read it

Only testers knew what was in it

Only testers cared what was in it



Creating a Test Strategy

What is a test strategy?

It used to be a document

No-one wanted to read it

Only testers knew what was in it

Only testers cared what was in it



It's not a document

It is embodied in the people that we employ ...

... and the testing responsibilities that we give them

Creating a Test Strategy

What were our conclusions?

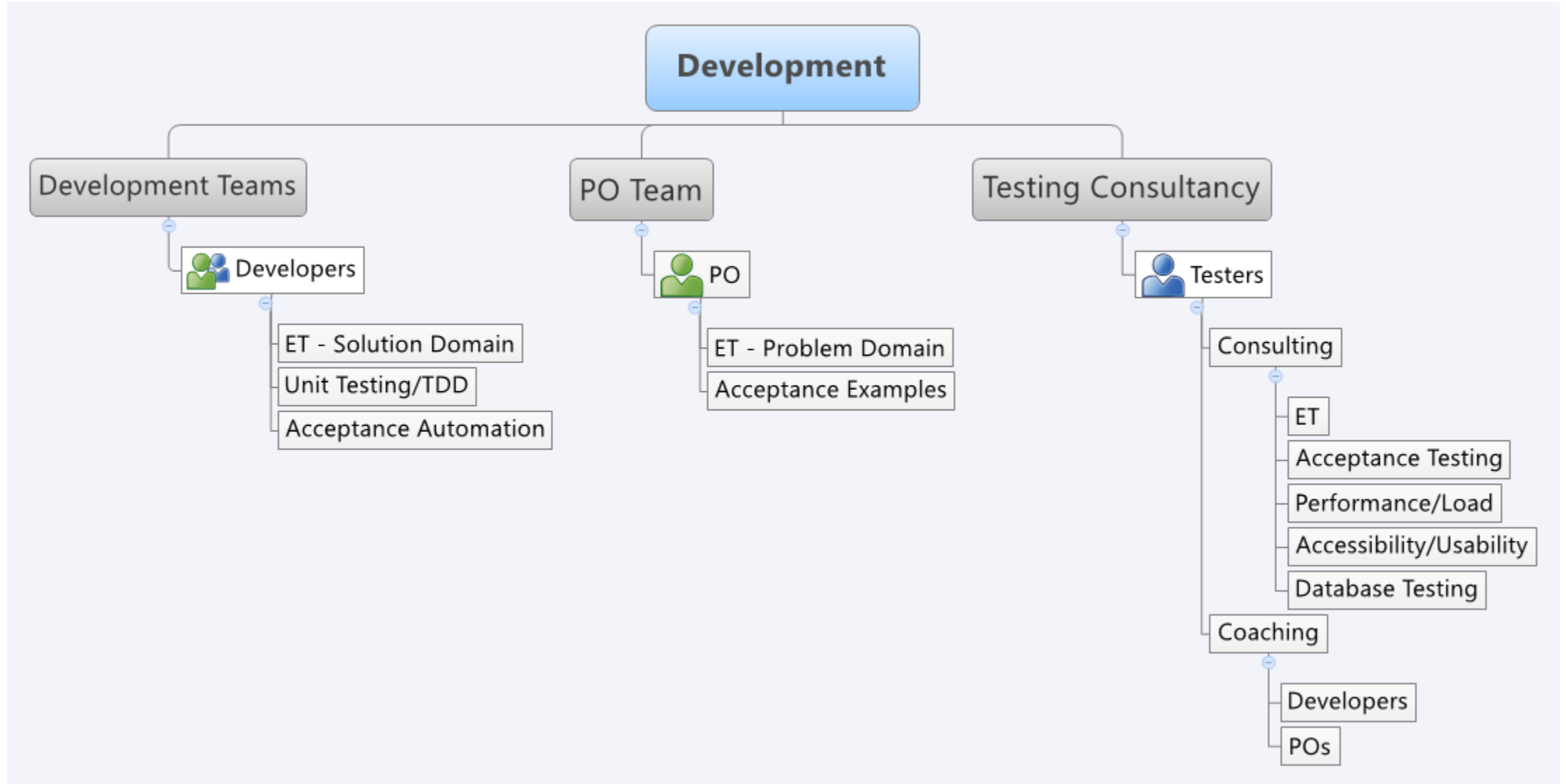
General pattern of responses indicated a desire for greater rigour than currently applied



There was a perceived need for specialist testing

There was less certainty about the idea of adding testers to each team

Testing as a Consultancy



The Risk Questionnaire - Learning?

- People assess risk based on 'availability' of relevant stories
- People gravitate to a predefined level of risk based on their perceptions
- Peoples' perception is based on availability of experiences or stories
- Managers are people ... and so are Testers
- Natural disparity between these roles in perception of risk
- A risk questionnaire helped us to promote understanding of risk and avoid the 'wave'
- Established a test strategy appropriate to the risk appetite of the business



Thank You

Twitter: @adampknight
Blog: a-sisyphean-task.com

Resources and References

- <http://riskhomeostasis.org/>
- <http://www.aviva.co.uk/car-insurance/motor-advice/safe-driving/article/what-risk-compensation/>

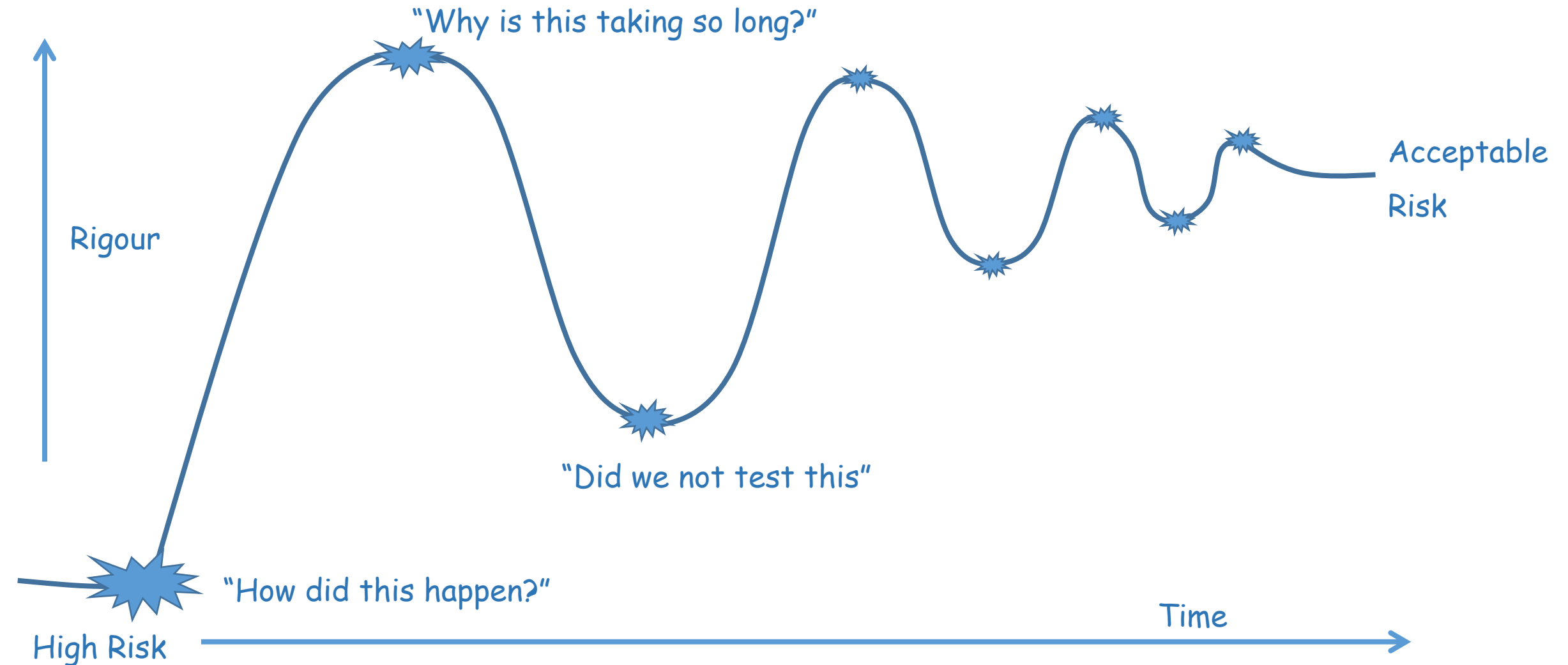
Contact me to be part of the River test consultancy



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The Wave of Acceptable Risk

Reaching Equilibrium



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The Risk Questionnaire

Image <https://www.flickr.com/photos/lastbeats/2550737319> Carl A