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Enabling Risk Management Programs That Actually Work

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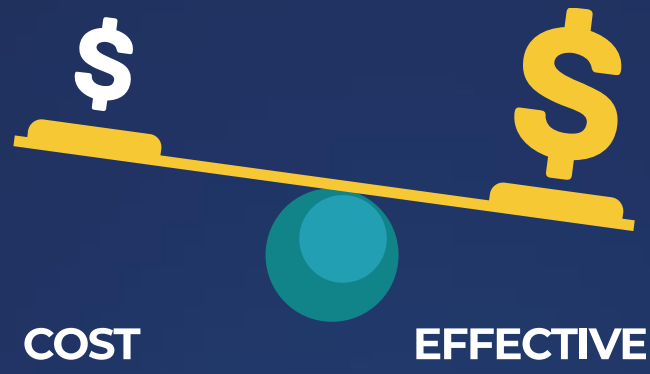

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...cost-effectively

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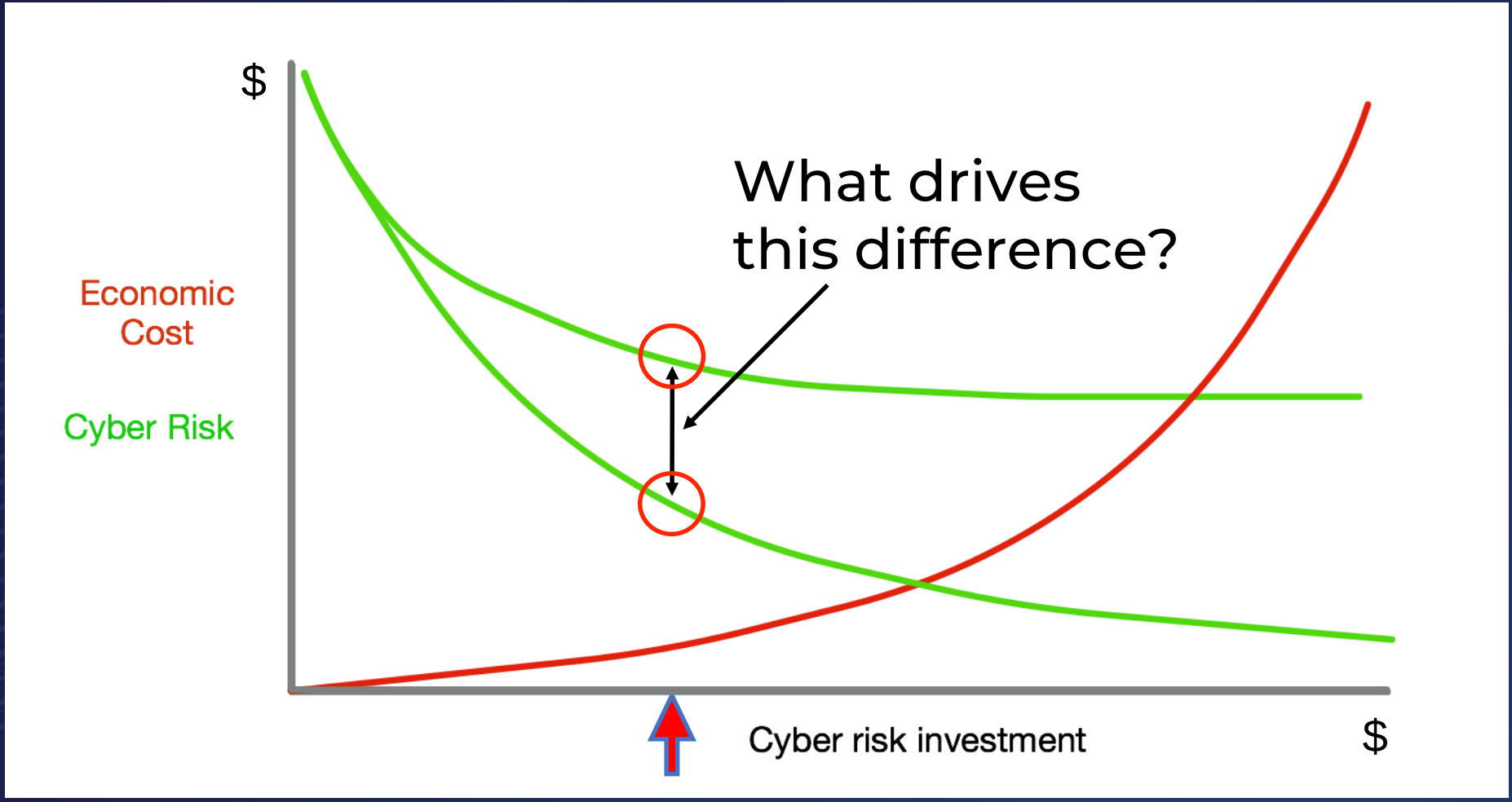
What is the cost of a $5,000,000 risk management program*?

*Salaries, benefits, services, technologies, etc.

Why it matters...



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Decisions

How cost-effectively we apply our risk management resources.

Prioritization

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- A vulnerability scanner identifies a web application with a SQL injection weakness. The scanner's scoring model (CVSS) labels the weakness as "critical".
- Software development resources are redirected from other work to correct this weakness.
- However, this application is: a) not Internet-facing, b) requires authentication in order to find and exploit the SQL injection flaw, and c) doesn't have access to sensitive information.
- If the organization had postponed remediation, it is extremely unlikely to experience a significant loss event. Therefore, resources could have been better applied to other, higher-risk concerns.

Prioritization

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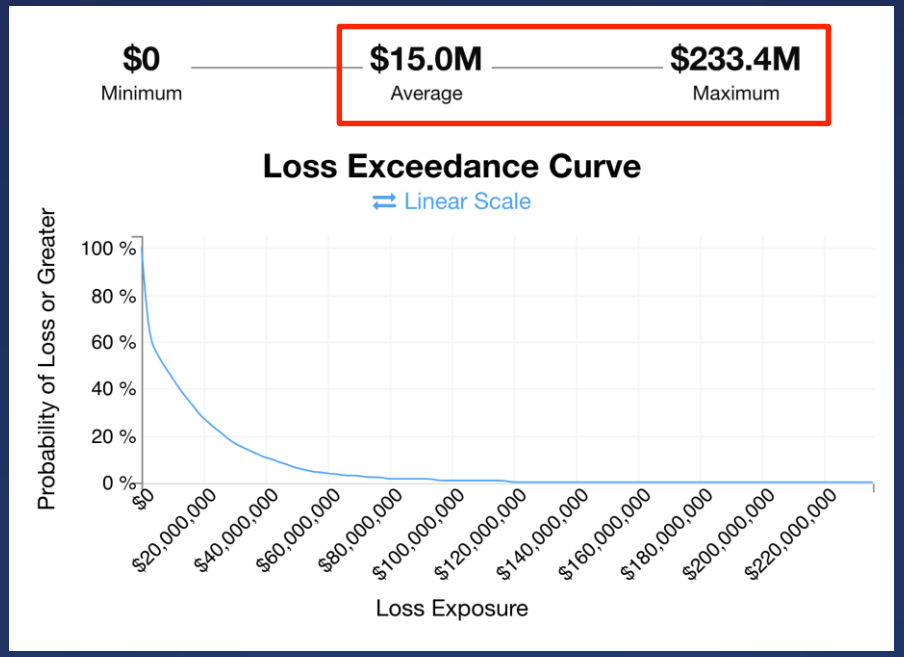
An audit discovered that privileges are not consistently being updated for user accounts with access to a customer service application containing credit card numbers.

A security assessment determined that the organization was unlikely to be able to identify when a cyber criminal breaches its network perimeter.



What's the ROI for "fixing" it?

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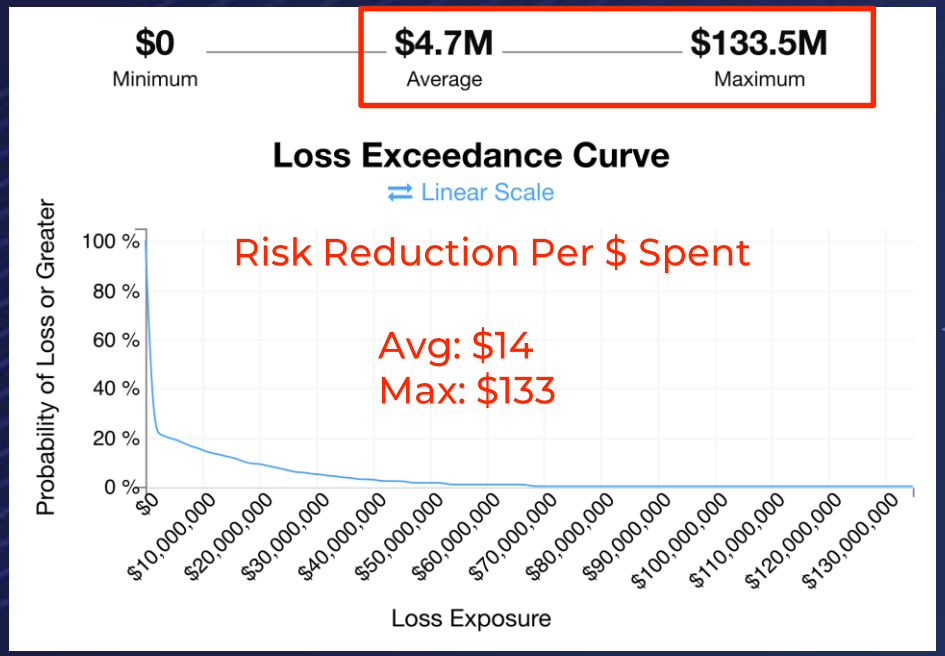
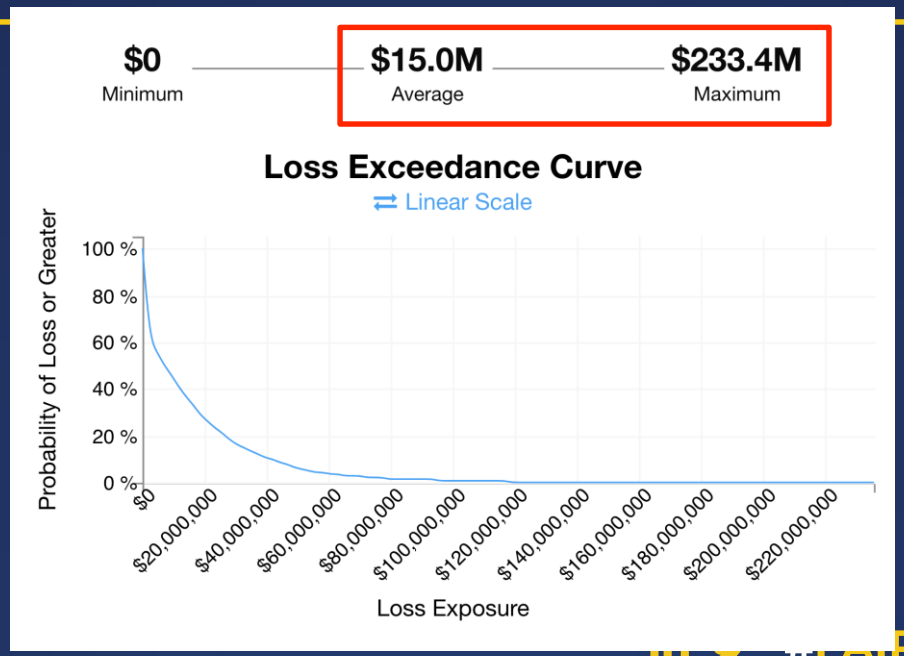
A risk reduction solution was identified that was going to cost $750k in year 1, and approx. $300k yearly thereafter.

A security assessment determined that the organization was unlikely to be able to identify when a cyber criminal breaches its network perimeter.





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Top risks…

- The “cloud”
- E-mail
- Reputation
- Phishing
- Ransomware
- Internet of things (IoT)
- Insiders
- Patching
- Shadow IT
- Technology debt

What is expected to happen when top risks have been identified?

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The problem is fairly obvious, but…

Culture — The Biggest Hurdle?

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- Culture boils down to beliefs, which drive values and behaviors
- If stakeholders believe…
  - Quantitative analysis is too hard (or impossible), and/or
  - Qualitative measurement has been working well enough so far

…then you have to overcome those beliefs

Education Regarding Qualitative Limitations

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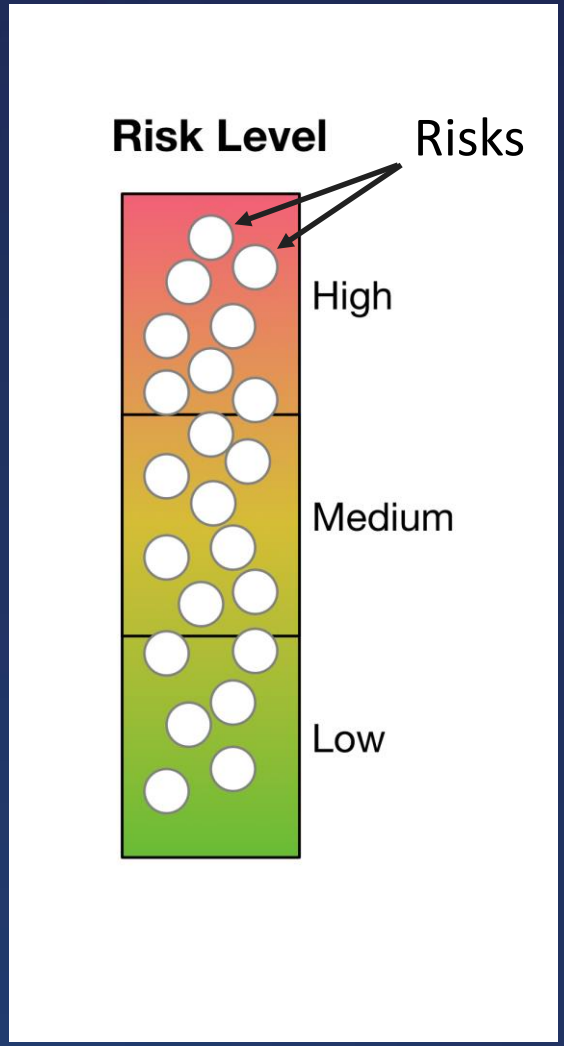
- How much more risk does the highest “high” represent than the lowest “high”? (And do we even agree on which one is highest?)
- How much more risk does the lowest “high” represent than the highest “medium”?
- How much risk is there in aggregate?
- Why are the lines drawn where they are?

Are these reasonable questions?

How would you defend your responses?



But Logic Often Isn't Enough…

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You have to demonstrate meaningful value at an acceptable cost

Keep in mind you're competing against a zero-cost current state (zero accounting cost)

Elements of a Roadmap

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Quantitative Risk Management Continuum

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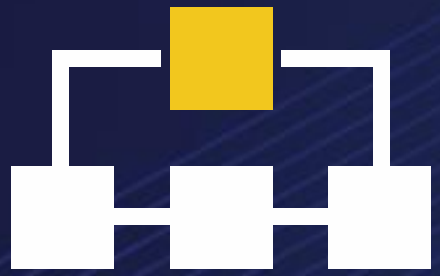
Risk Landscape Clarity	Operational Decision Support	Strategic Decision Support	Automated Operational Decision Support
Top risk identification	Top risk measurement	Risk aggregation	Patch prioritization
Risk register cleanup	Cost-benefit analysis	Risk appetite definition and trending	3rd party landscape monitoring
Intra- and inter-team communication	Audit finding prioritization	Portfolio analysis	Near real-time risk landscape dashboard
Reduction in religious arguments	Policy exception request reviews	Board reporting	NOTE: Not yet a reality
	Zero-day analysis	M&A analysis	
	High value 3rd party analysis		

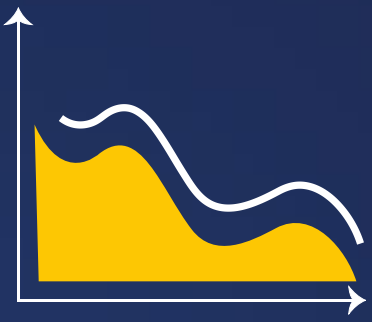
What Capabilities Enable Improvement?



Models

Skills

Data



Tools

Models

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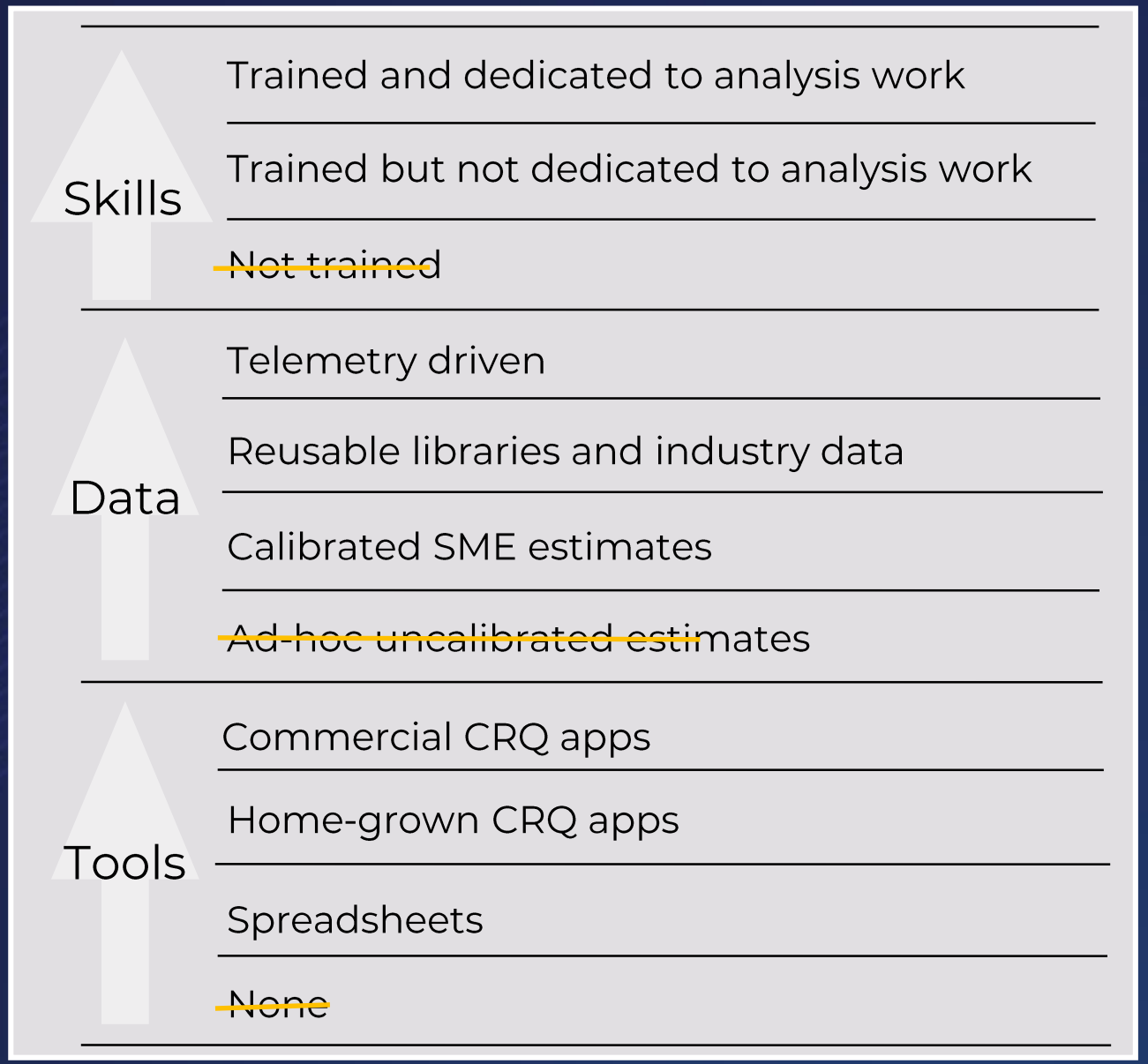
TESTED

vs.

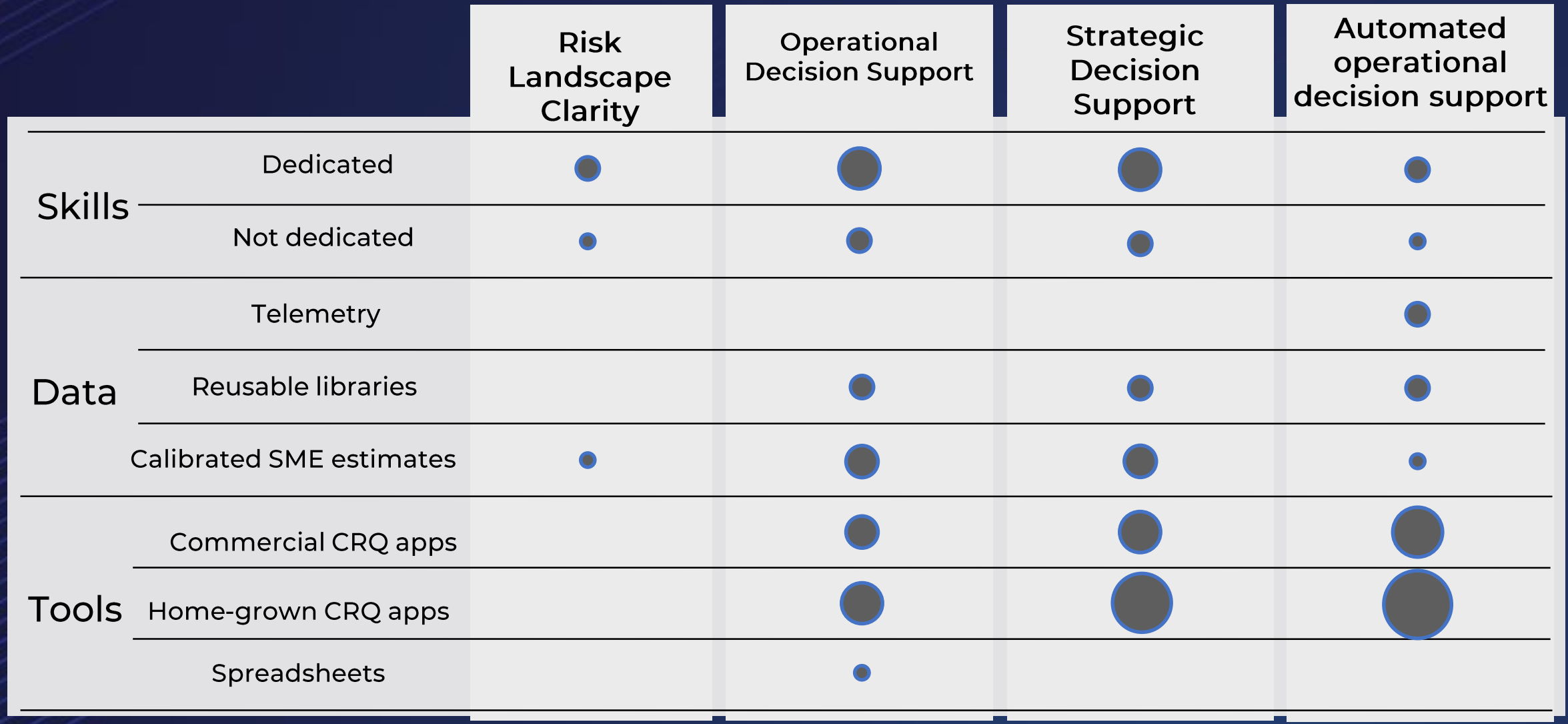
Mental Models

Capability Levels



Cost Implications

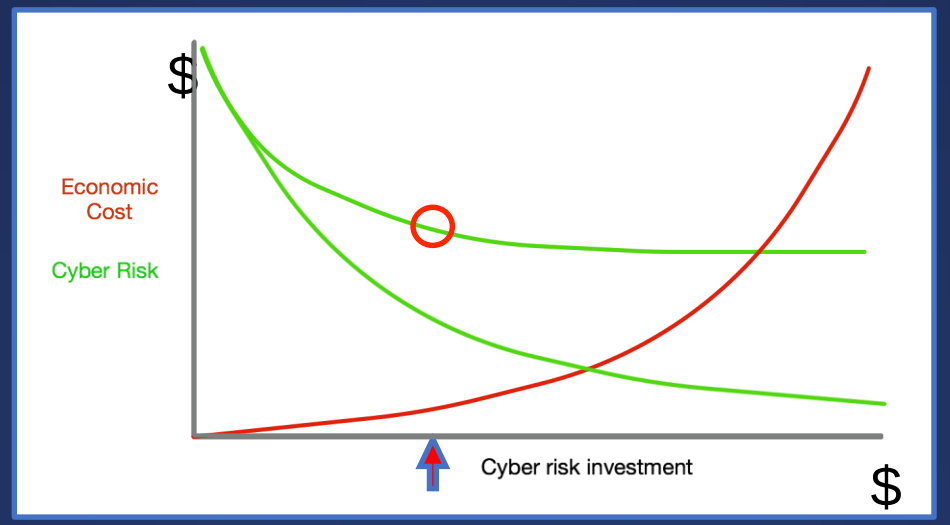
(Circle size reflects relative cost levels)



The Usual Starting Point…

- Mental models
- Uncalibrated ad-hoc estimates
- Untrained personnel
- No analysis tool

Low Cost
Low Efficacy



Roadmap Considerations

- Do you have executive support?
  - If not, where can you rapidly demonstrate obvious benefit at the lowest possible cost?
  - If so, identify their pain
- Budget?
- Available skills? (critical thinkers)
- Potential allies (and obstacles)

All Roadmaps Begin with…

Critical thinking skills

Risk analysis training

A clearly defined initial objective

An Example Starting Point

Evolving to…

The First Steps are the Hardest

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Start doing analyses

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Wrapping up…

- We have a responsibility to help our organizations and industry manage risk as cost-effectively as possible.
- This requires that we continually evolve our ability to measure risk.
- Every organization will need to define a roadmap that fits its risk management objectives and constraints.
- As leaders in our profession, our ability to drive cost-efficacy into our programs will differentiate us from those who are driven by checklists and mental models.

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Questions?

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