FACT SHEET

Grobman's Curve of maximizing threat defense effectiveness

Improving the lifespan of your security products

Early adopters of new cybersecurity solutions see immediate benefits from their investments, but as more organizations deploy the new products, cybercriminals have greater incentive to develop countermeasures. Cyberdefense capabilities actually become less effective over time as attackers develop countermeasures to evade or neutralize them, so organizations benefit most by adopting and deploying cybersecurity solutions as early as possible.

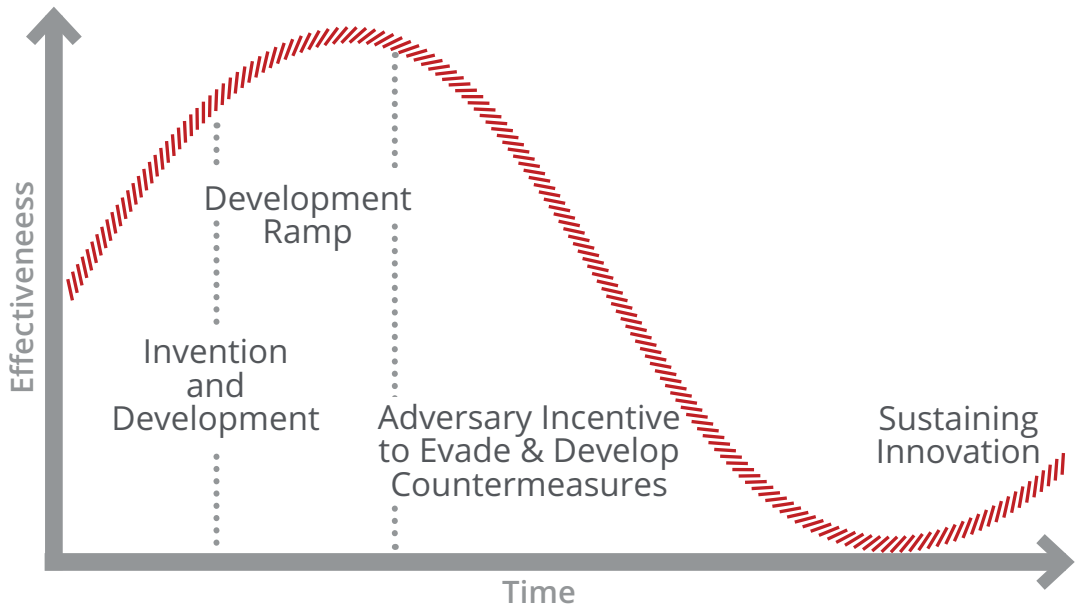

Figure 1. Grobman's Curve of Threat Defense Effectiveness

With Grobman's Curve as their guide the goal for cybersecurity professionals is to deploy new technologies as quickly as possible.

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Grobman's Curve provides a useful illustration of this concept. Grobman's Curve is named after Steve Grobman, senior vice president and chief technology officer for McAfee and lead author of the book, *The Second Economy: The Race for Trust, Treasure and Time in the Cybersecurity War.* Grobman developed the curve to illustrate the threat defense effectiveness of cybersecurity, which shows how cyberdefenses become less effective over time.

Early Adopter Benefits

As Grobman's Curve shows, threat-specific cyberdefense technologies are most effective right after they are invented. Early adopters find these tools very powerful at first because rapid deployment, configuration, and optimization of the new widget enable them to reap the maximum security benefits. At this point (at or near the top of Grobman's Curve), the early adopter is happy, because the widget is functioning as intended and the adversary is content to exploit a large population of underdefended organizations.

Cybercriminals Develop Evasions

Yet, as more organizations adopt the new technology farther along the curve, in an effort to inoculate themselves against the now not-so-new threat, the adversary has more and more incentive to restart their own innovation cycle. Attackers then work diligently to create countermeasures, workarounds, and new ways to evade detection and exploit vulnerabilities, rendering the once-powerful security widget increasingly ineffective. Organizations must then innovate again, to defend against the countermeasures and repel the renewed threat.

Extending the Curve and Security Effectiveness

With Grobman's Curve as their guide the goal for cybersecurity professionals is to deploy new technologies as quickly as possible, with the least amount of effort, so they can reap the benefits of threat effectiveness that come with early adoption (shown in Bulls Eye below). And the goal for cybersecurity software vendors is to prolong product effectiveness by anticipating potential countermeasures and building resiliency into their solutions with these evasion tactics in mind, as shown with a curve shift below.

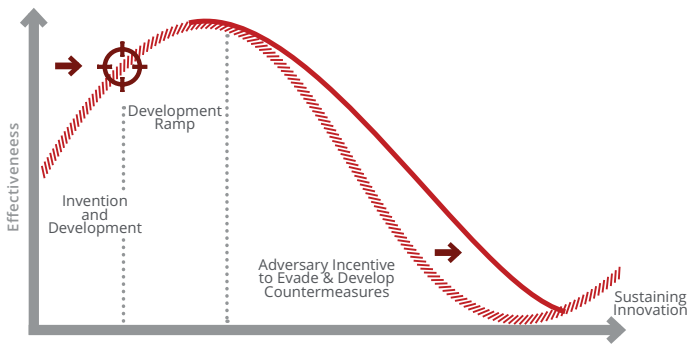

Figure 2. Extending Grobman's Curve and prolonging security solution effectiveness.

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McAfee® is one of the world's leading independent cybersecurity companies. Inspired by the power of working together, McAfee creates business and consumer solutions that make the world a safer place. By building solutions that work with other companies' products, McAfee helps businesses orchestrate cyber environments that are truly integrated, where protection, detection and correction of threats happen simultaneously and collaboratively. By protecting consumers across all their devices, McAfee secures their digital lifestyle at home and away. By working with other security players, McAfee is leading the effort to unite against cybercriminals for the benefit of all. Visit us at **www.mcafee.com**.

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NOVEMBER 2017