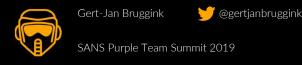
What happens when you build a CTI team in sync with a Red team?

Evolving your adversary playbooks; Incorporating red team findings



This is me

Gert-Jan Bruggink

(without the hair)

Roles



- Manager @ Deloitte Netherlands
- Capability lead cyber threat intelligence
 - Bluetivist

Recent projects

- Intelligence led red teaming exercises
 - Strategic threat assessments
 - CTI capability building

Focus

- Look at the bigger picture, help business understand what's going on and what's next
- Assisting leaders in making informed decisions by utilizing cyber threat intelligence









Personal goal

- Pioneer new ways to enable business through effective and efficient risk management
- Find and enable synergy between teams



I like

- Do cool projects with cool people
- Stay on top of things. Did I tell you I was in CTI?
- Have loads of fun with the family



I don't like

- If we already get caught during the recce
- Magic tricks. Seriously, they annoy me

Our journey in adversary research

Gather around folks, let me tell you a story



Exploring synergy





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Exploring synergy

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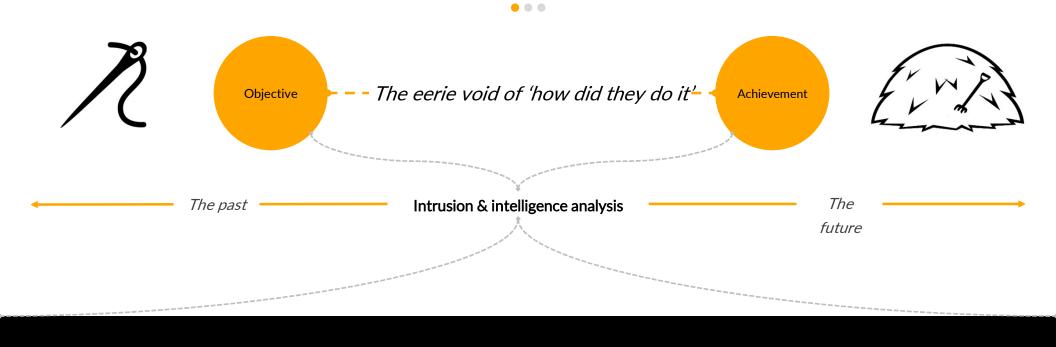
Exploring synergy Simplified approach to adversaries

000



Exploring synergy

The general CTI approach to adversary tracking



✓

IOC research & feeds

~

Signatures Ad

~

Adversary playbooks



Digital footprint



Intelligence products



Threat Libraries

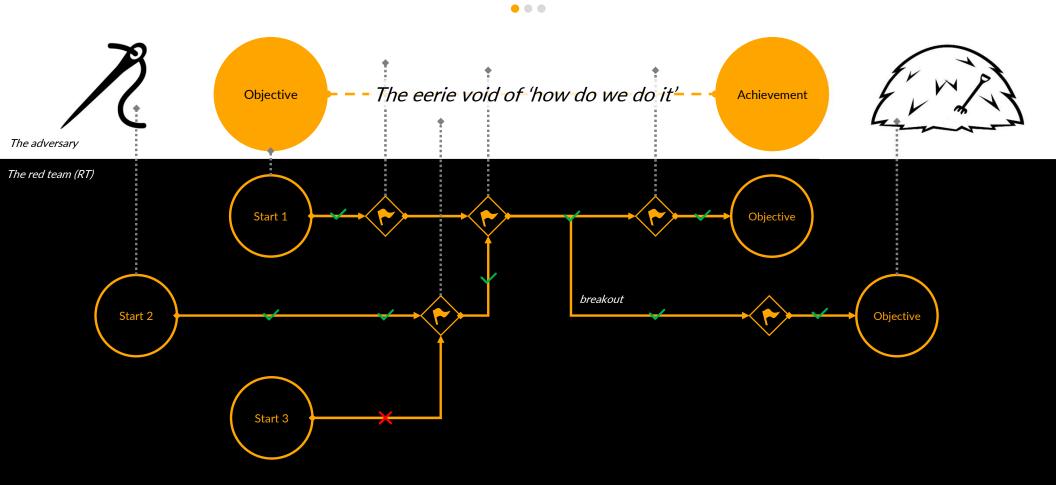
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Exploring synergy

The general RT approach to adversary simulation



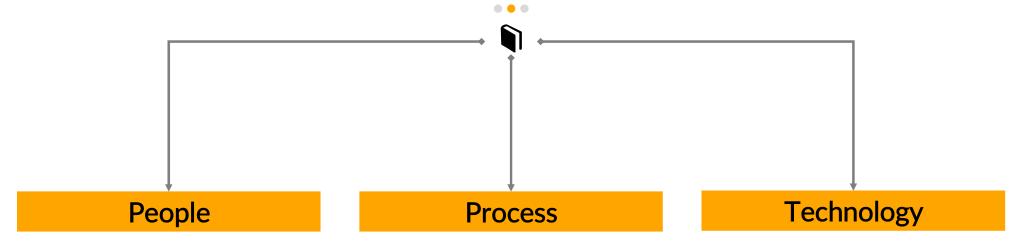
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Establish the playbook What is a playbook and how is it used for synergy 000 Store it in a place where you can easily find stuff **Understand deeper meaning Understand sequential steps** e.g. Diamond model e.g. Cyber Kill Chain Threat library Understand post compromise behavior Analytical "Joie de Vivre" e.g. ATT&CK Human analysis Intrusion Y Intrusion Z Intrusion X Manual **Automated** Prerecorded data & validation tooling Red teaming. Penetration testing. Threat (e.g. Mordor by @Cyb3rWard0g & hunting. Crisis management exercises. @MITRE Caldera). Signatures (e.g. Yara Threat modeling. rules by @cyb3rops). Threat modeling. Benchmarking & measurement.

Lessons learned

Integration in operations

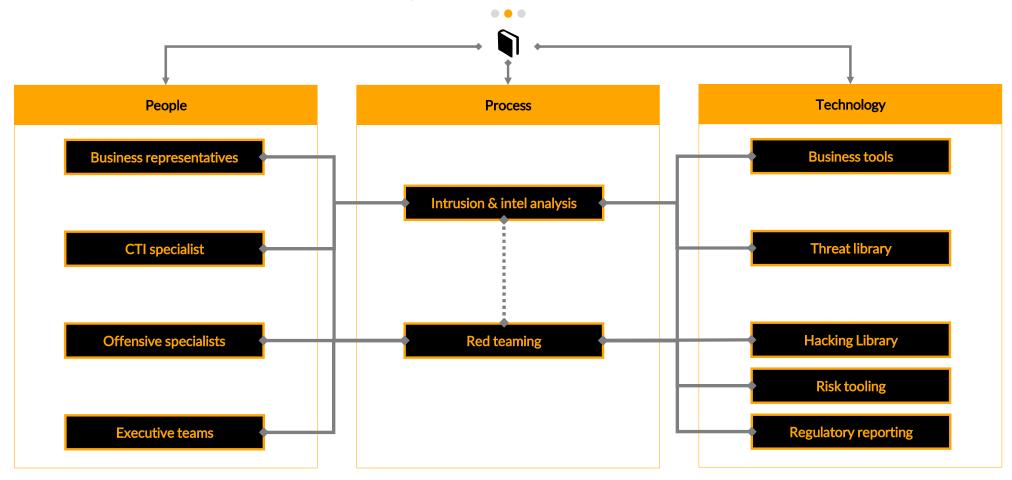
Pragmatic integration of adversary playbook workflow



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Integration in operations example

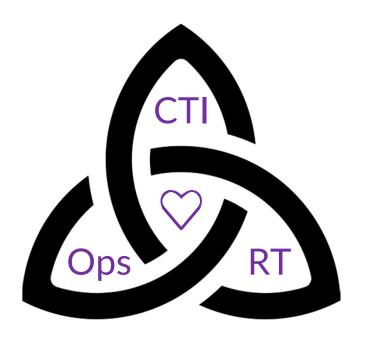
Playbook-based red team scenario's



Four important lessons learned

Evolving adversary playbooks





CTI jargon to manage uncertainty is not for everyone

The industries emphasizes IOC research, rather than emphasizing how the research affects specific situations

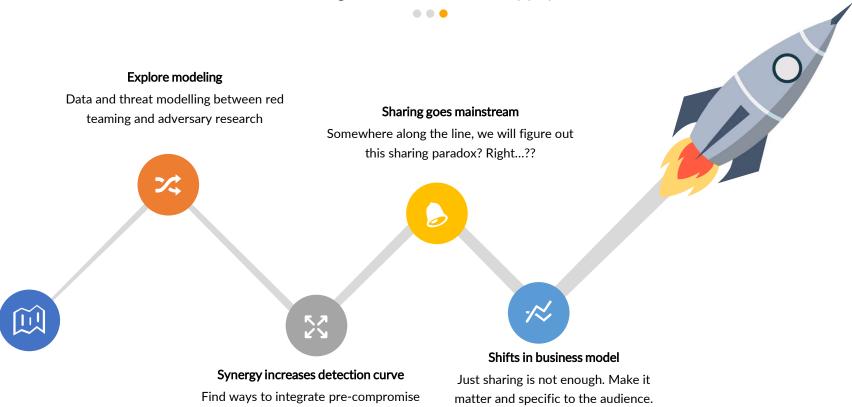
Setup explicit rules of engagement for purple team exercise, makes discussing RT results way more effective and less emotional

RT findings and indicators are amazing to use for forecasting, we should model it!

Forecast

Future of the field

Forecasting the evolution of adversary playbooks



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activities (e.g. PRE-ATT&CK) or increased automation of playbooks

THANK YOU

See you next time!

Gert-Jan Bruggink

Twitter & LinkedIn /gertjanbruggink

Shout out to Givan Kolster & @OlafHartong; Thx for the support gents!

