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NOVEMBER 6, 2019

Shifting the DevSecOps Culture –
Taking Away The Sugar Piece & Giving The Pile To Ants

Vandana Verma Sehgal

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Who Am I

- Security Architect
- Application and Cloud Security
- Heading InfoSec Girls
- Co-Founder of OWASP Seasides
- Co-Organizer - BSides Delhi
- Chapter Leader - OWASP Bangalore
- Secretary : WIA OWASP
- Lead: Women of Security WoSec India

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Agenda

- About DevSecOps
- DevSecOps Myths
- Culture Challenges in the Organizations
- Culture Shift Approaches - DevSecOps
- Security Team Responsibilities
- Use Cases
- key takeaways
- Resources

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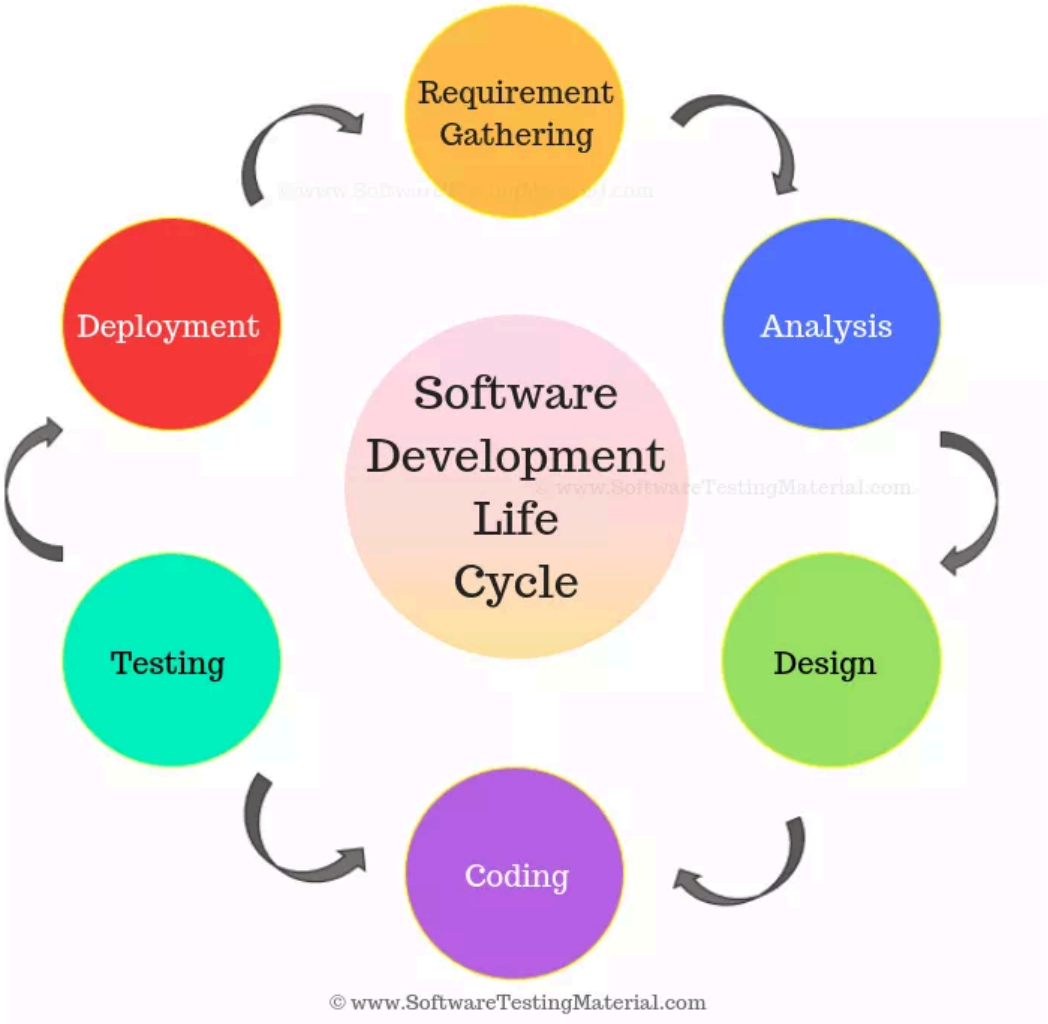
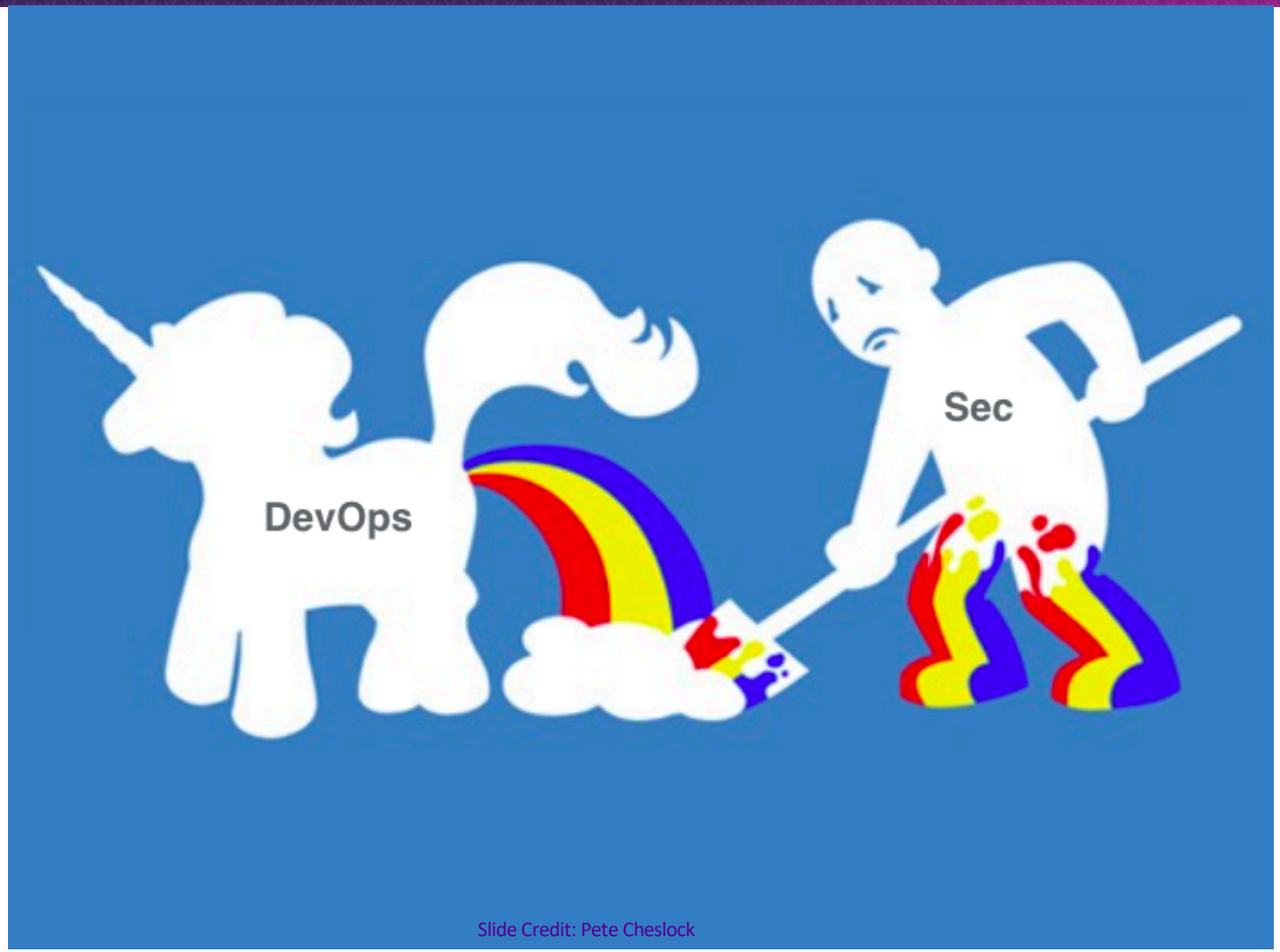
The Traditional Way





Slide Credit: Pete Cheslock

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Blame Game

Dev

Ops

Security

https://www.deviantart.com/mibu-no-ookami/art/ACC-It-s-your-fault-328942263

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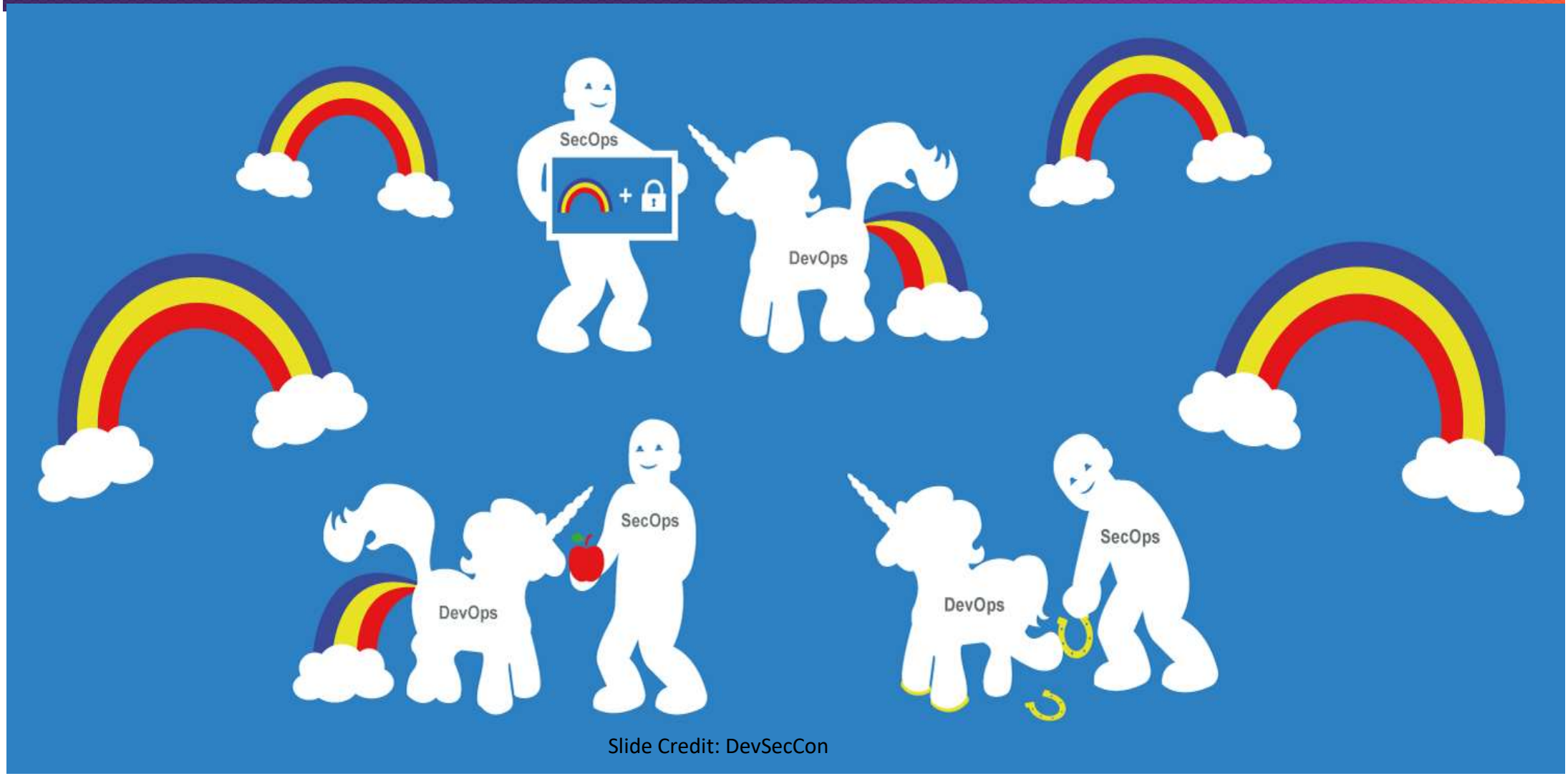

Slide Credit: DevSecCon

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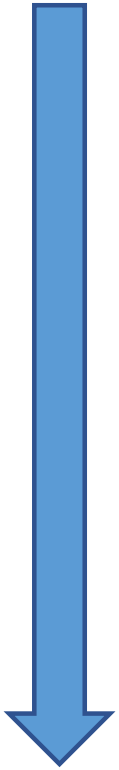
What is DevSecOps?

Integrating security practices within the DevOps process.

DevSecOps fosters a blameless culture and focused on secure delivery of software.

Top Down Approach



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Making security as part of the everyday process

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Don’t enforce anything and everything

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Build relationships between teams, don’t isolate

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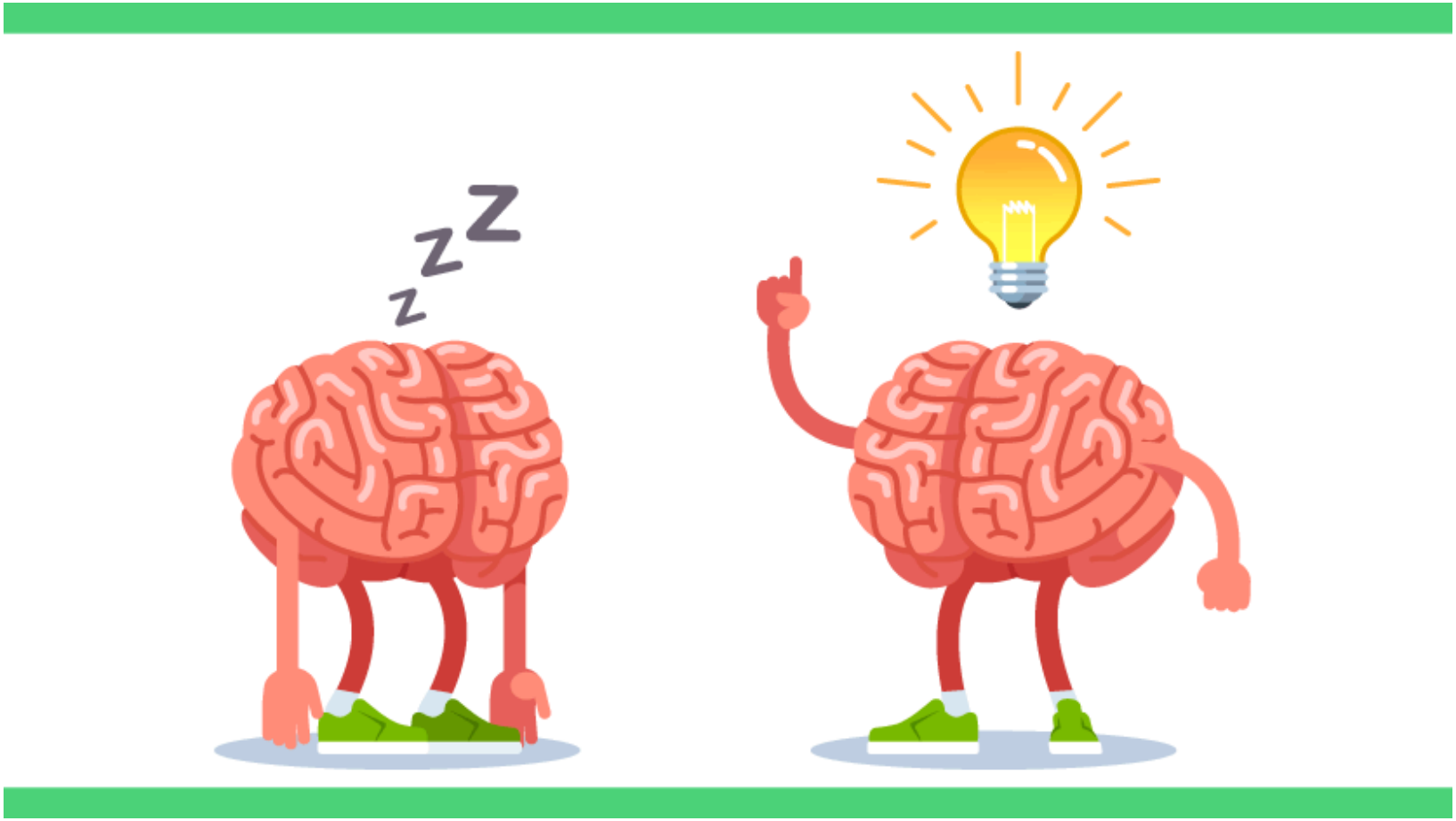
Encourage security mindset outside sec team



https://capetownguy.co.za/wp-content/uploads/2018/10/skills-shortage-in-South-Africa.jpg

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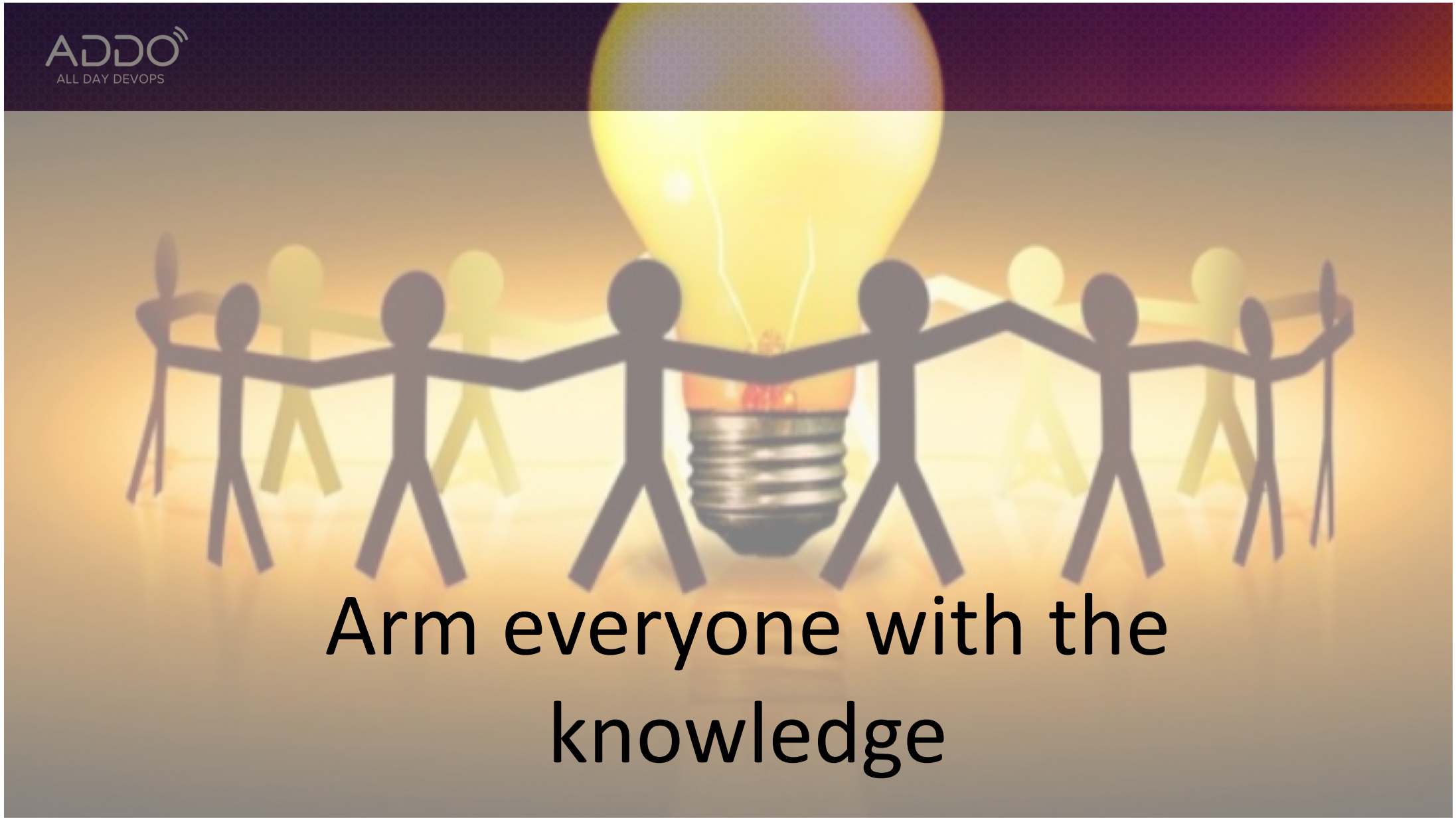
Establish a training program

Ongoing education and training for software developers and Operations Team

https://www.ravepubs.com/wp-content/uploads/2015/05/ongoingtraining.png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Arm everyone with the knowledge

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Improve the Skills with Secure code training

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Launch Internal Bug Bounty Program

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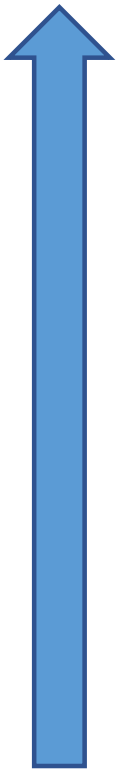
Bottom Up Approach



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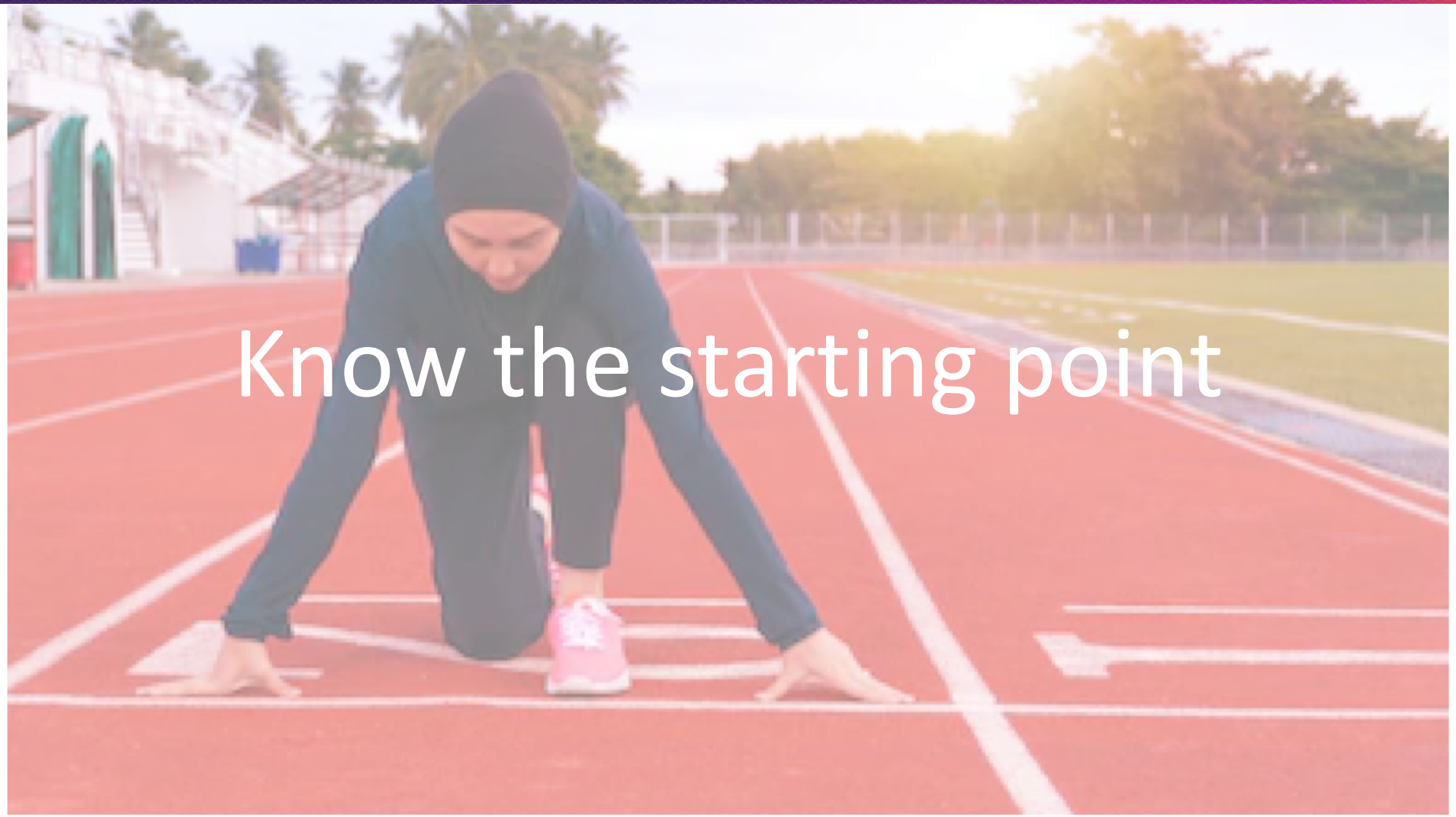

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Interacts with multiple departments, assets, and resources

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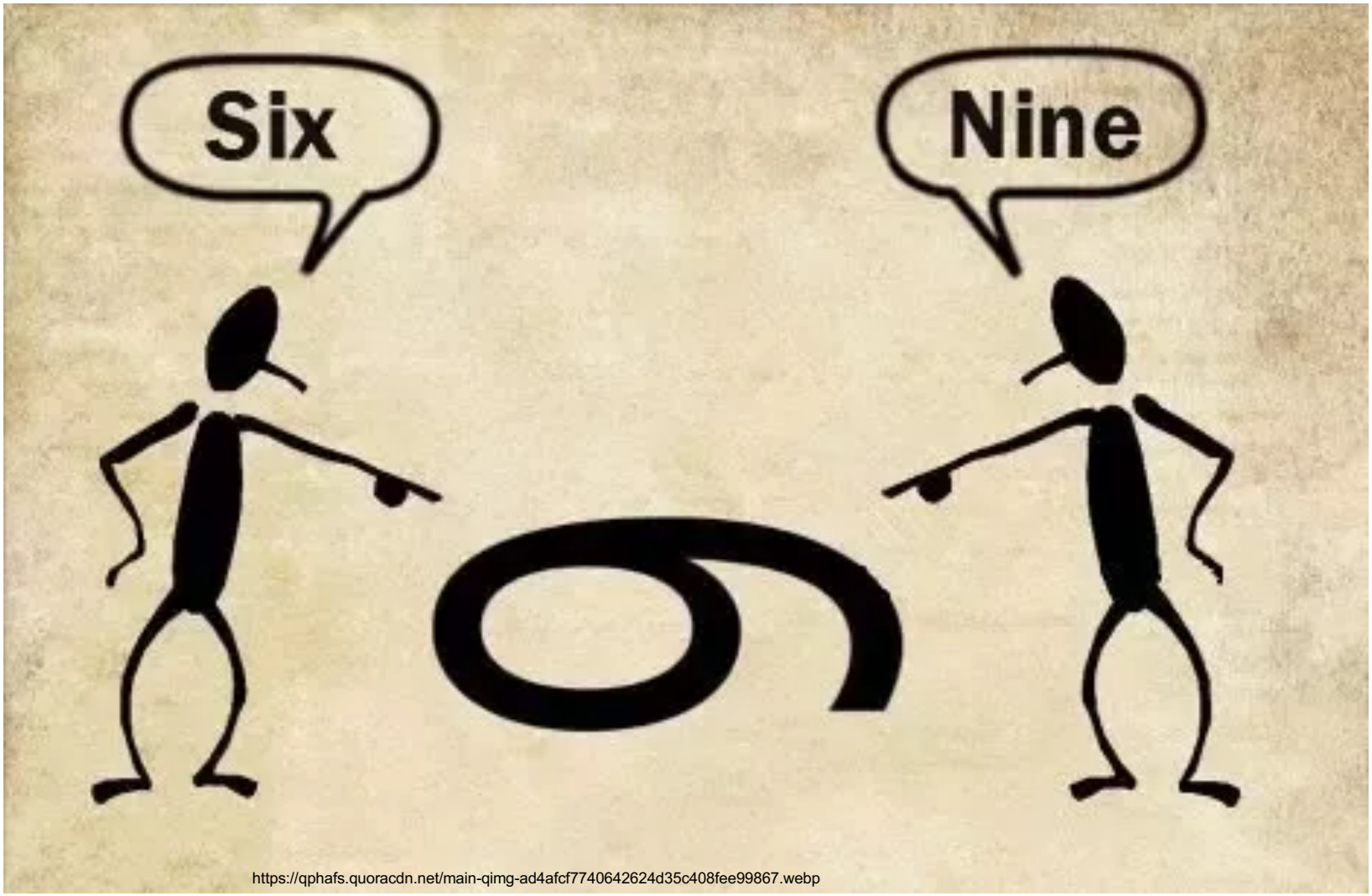
Respect others expertise and opinion



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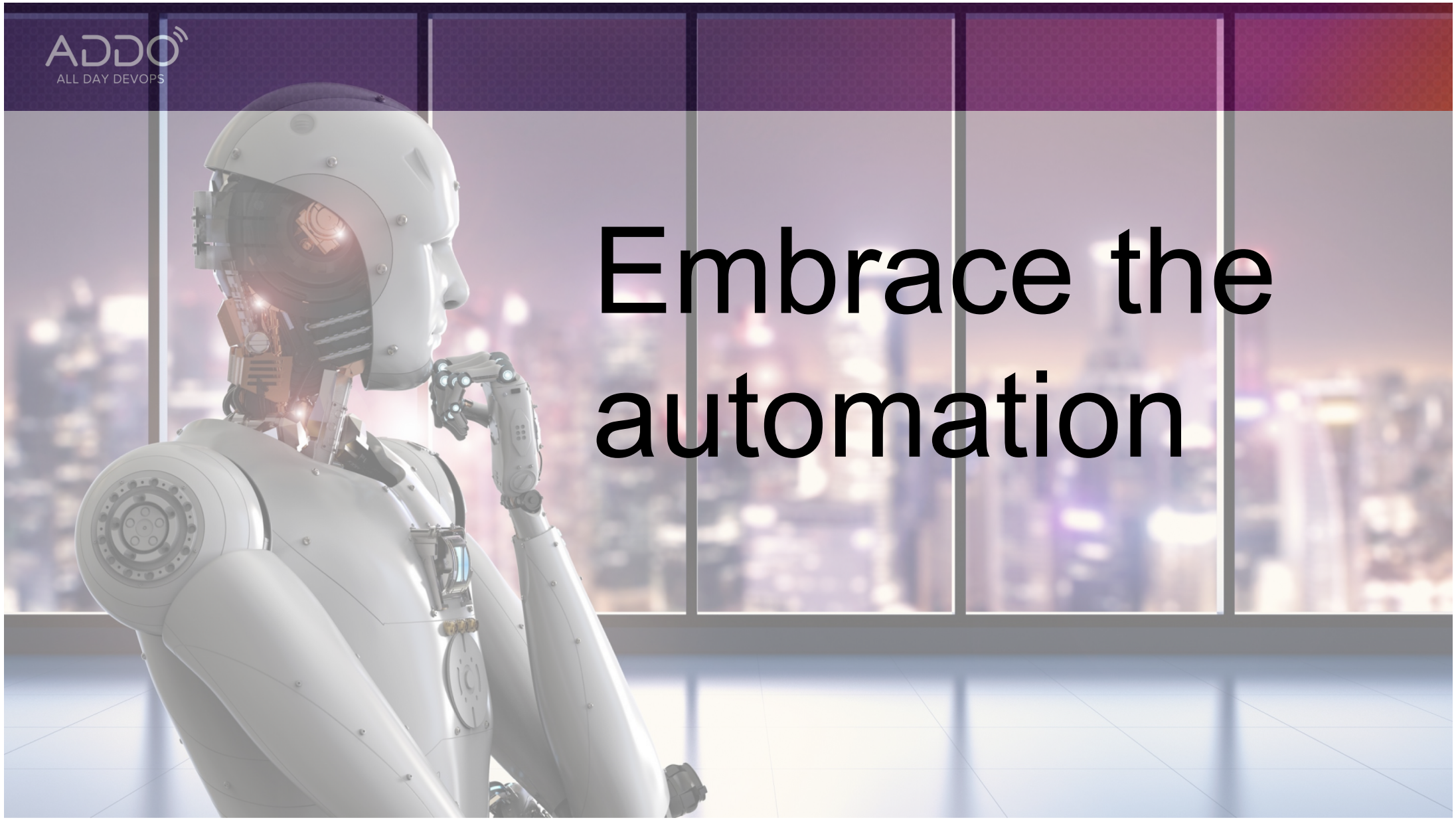
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Embrace the automation

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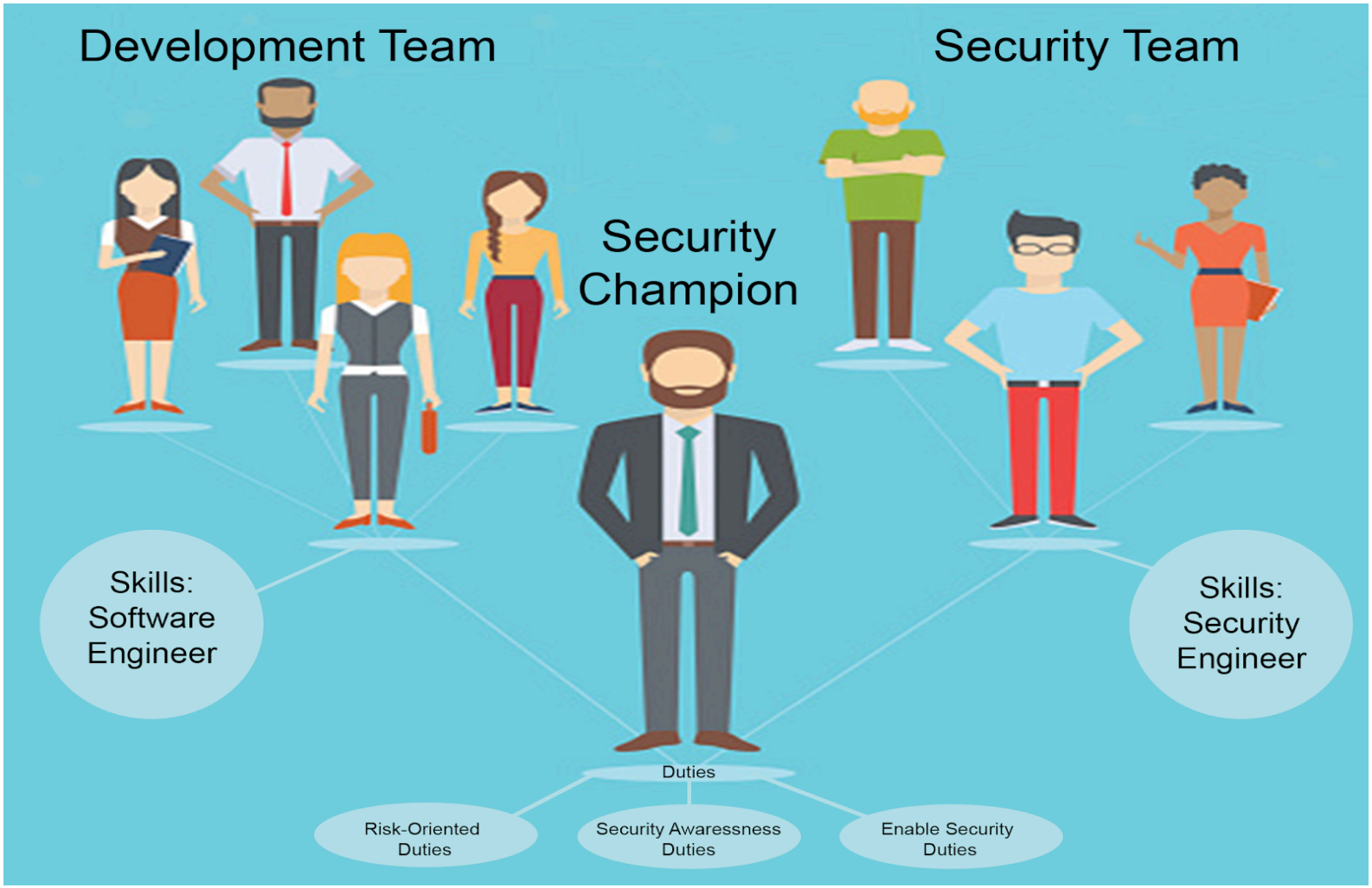
Create more Security Champions



Ref:- https://safecode.org/wp-content/uploads/2019/01/champs-pic-768x549.png

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Cross Skilling

https://www.accuprosys.com/wp-content/uploads/2014/09/42.jpg

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Empower Dev /Ops to deliver better and faster and secure, instead of blocking.

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Inviting Dev and Ops to participate in Security Activities

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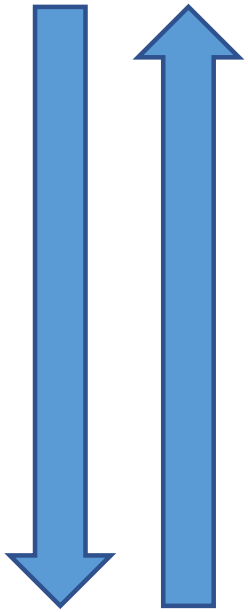
Top Down Approach

- Let developers lead the way
- Organizational transparency
- Breaking Down Barriers and Silos



- Teams collaboration and inclusive culture
- Build Champions and collaborate them
- Speak in executives speak!

Bottom Up Approach

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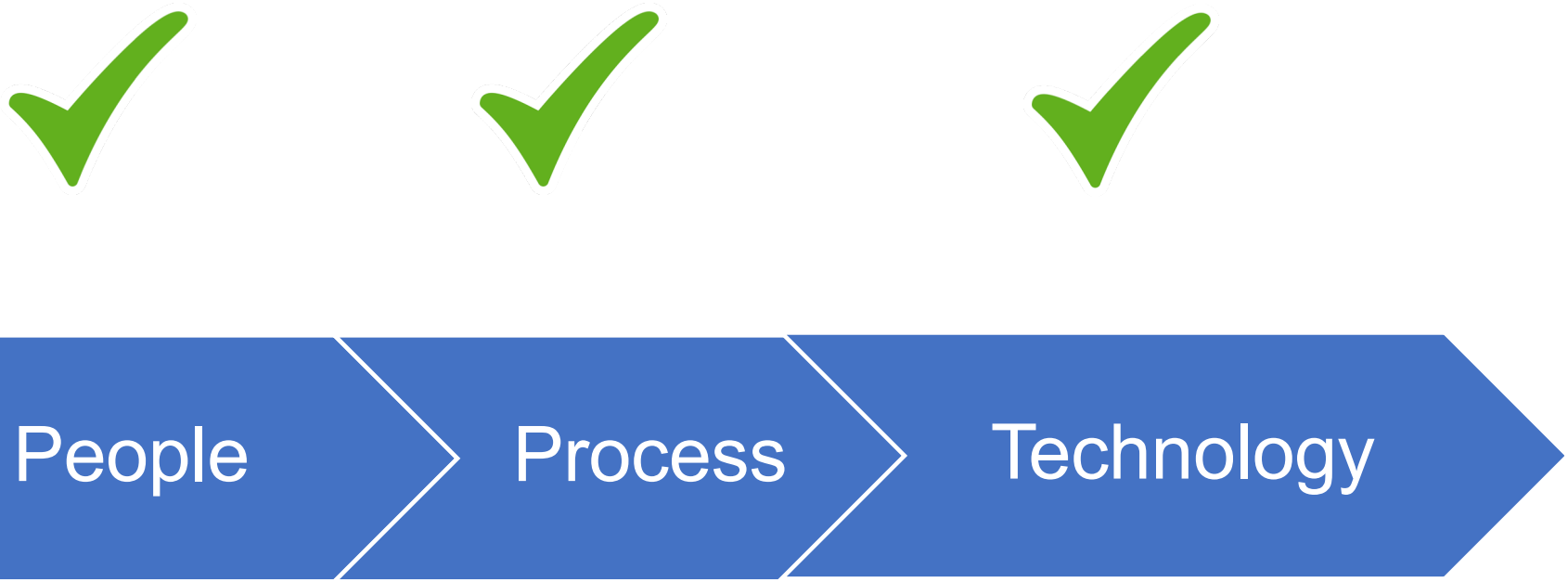
For DevSecOps to succeed



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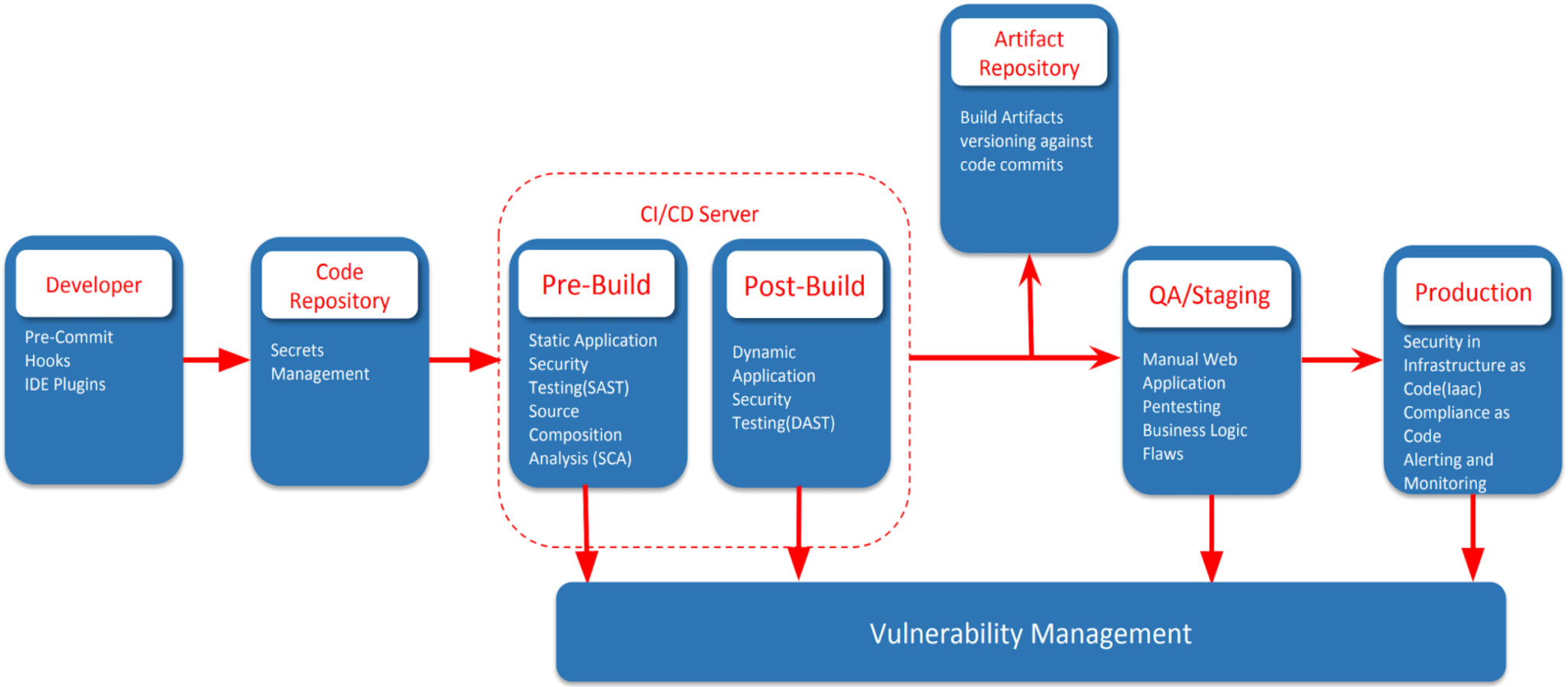
Sample DevSecOps Architecture



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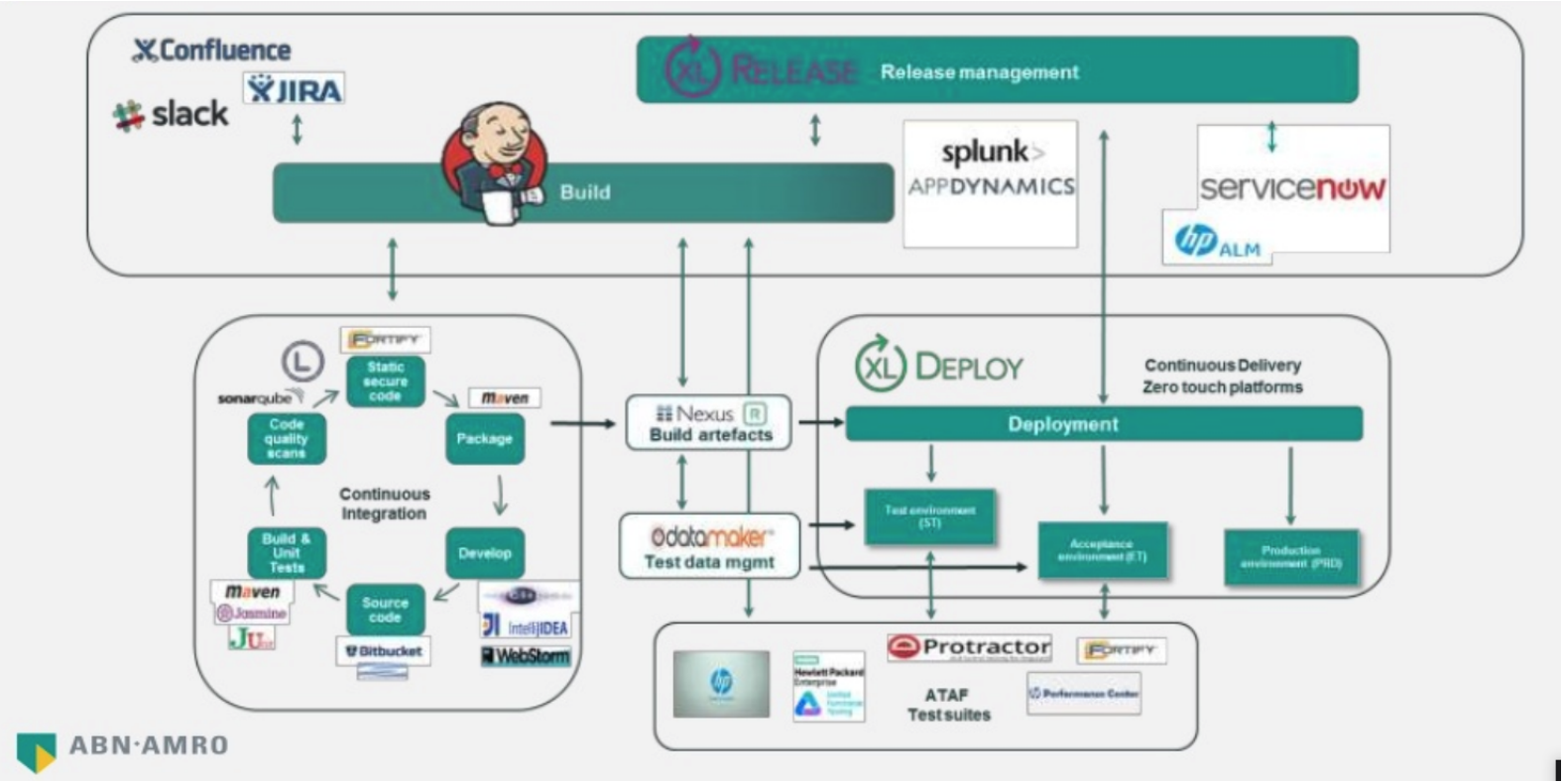
Case Studies – ABN Amro



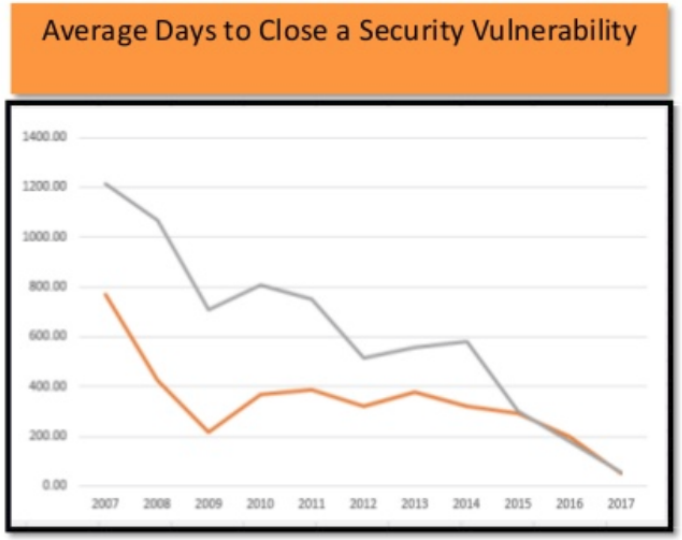
https://www.slideshare.net/derweeksglobal/abn-amro-devsecops-journey

Case Studies – Fannie Mae

DevSecOps @ Fannie Mae – The Results

Delivering the Promise

- Average days to close a vulnerability improved by 74%
- Automated code quality scanning shows overall security code scores has increased by 10%
- More than 60% of application teams are performing security tests before release
- Critically vulnerable open source components (CVE 7.5+) downloaded has decreased from 18% to 6.25%
- ~ 55% of technical debt and security defects identified as a result of periodic testing have been dispositioned
- ~ 77% of older technical debt and security defects have been remediated, have a remediation plan in place, or have been addressed through managed retirements of assets



https://www.slideshare.net/derweeksglobal/abn-amro-devsecops-journey

Key takeaways

- Prepare your Umbrella Before it Rains (Early AppSec in Pipeline)
- Security is everyone’s responsibilities
- DevSecOps won’t replace your pentesting activity
- Create a Parallel security pipeline for more in-depth testing
- Don’t take on risk to generate business value

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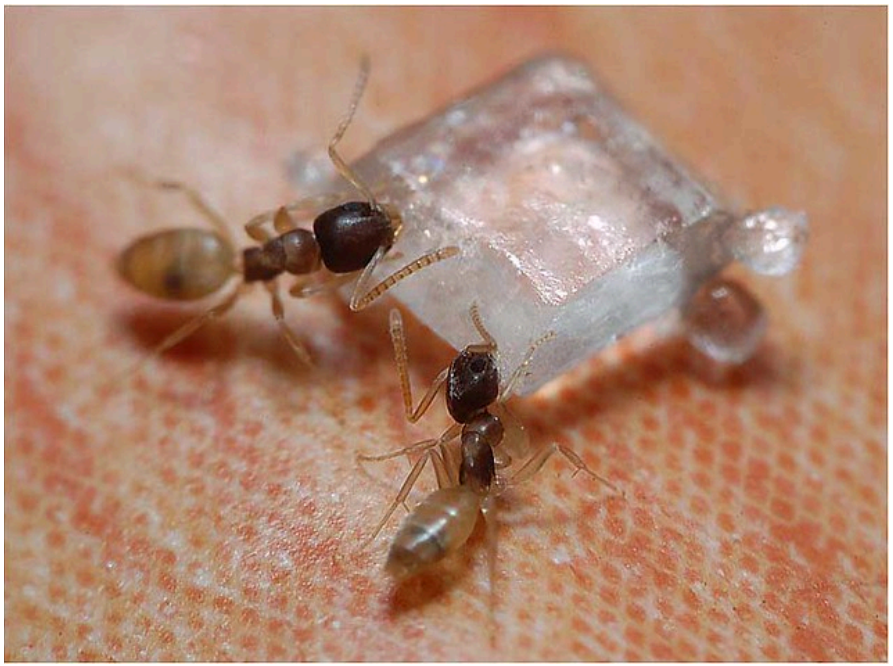
End Goal



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