

ALL DAY DEVOPS

NOVEMBER 6, 2019

Gert Jan van Halem

Compliance as Code



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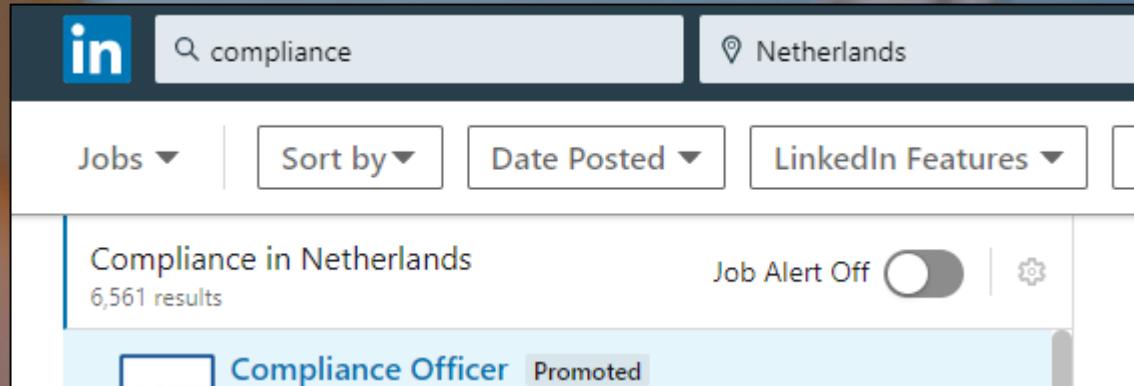
 #2019addo-devsecops



“In general, compliance means conforming to a rule, such as a specification, policy, standard or law.”

- Wikipedia

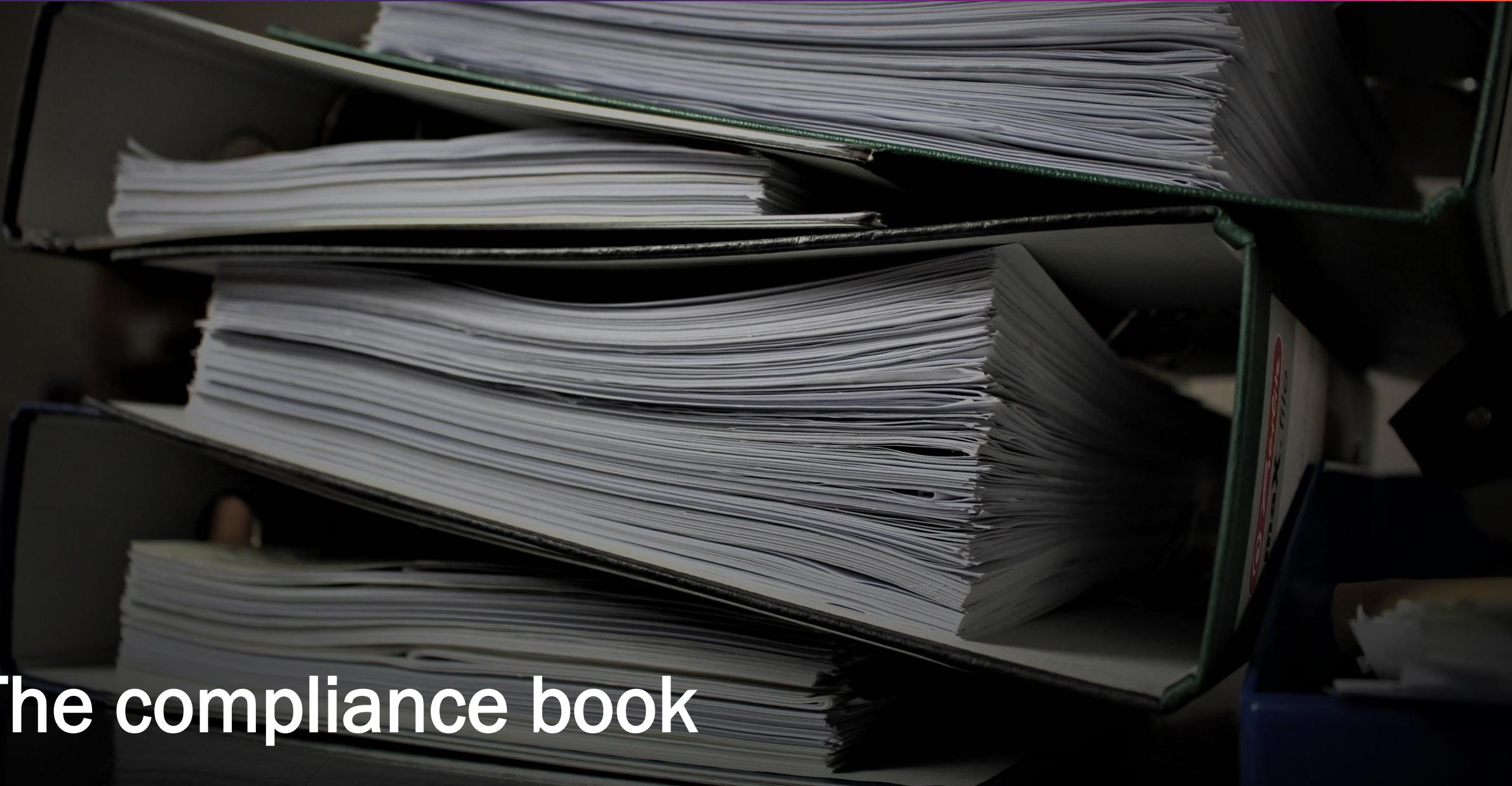






What happened?





The compliance book



Randomly select a couple of changes



Walkthrough meeting





What it feels like...

And then we made it worse...

From a compliance perspective at least

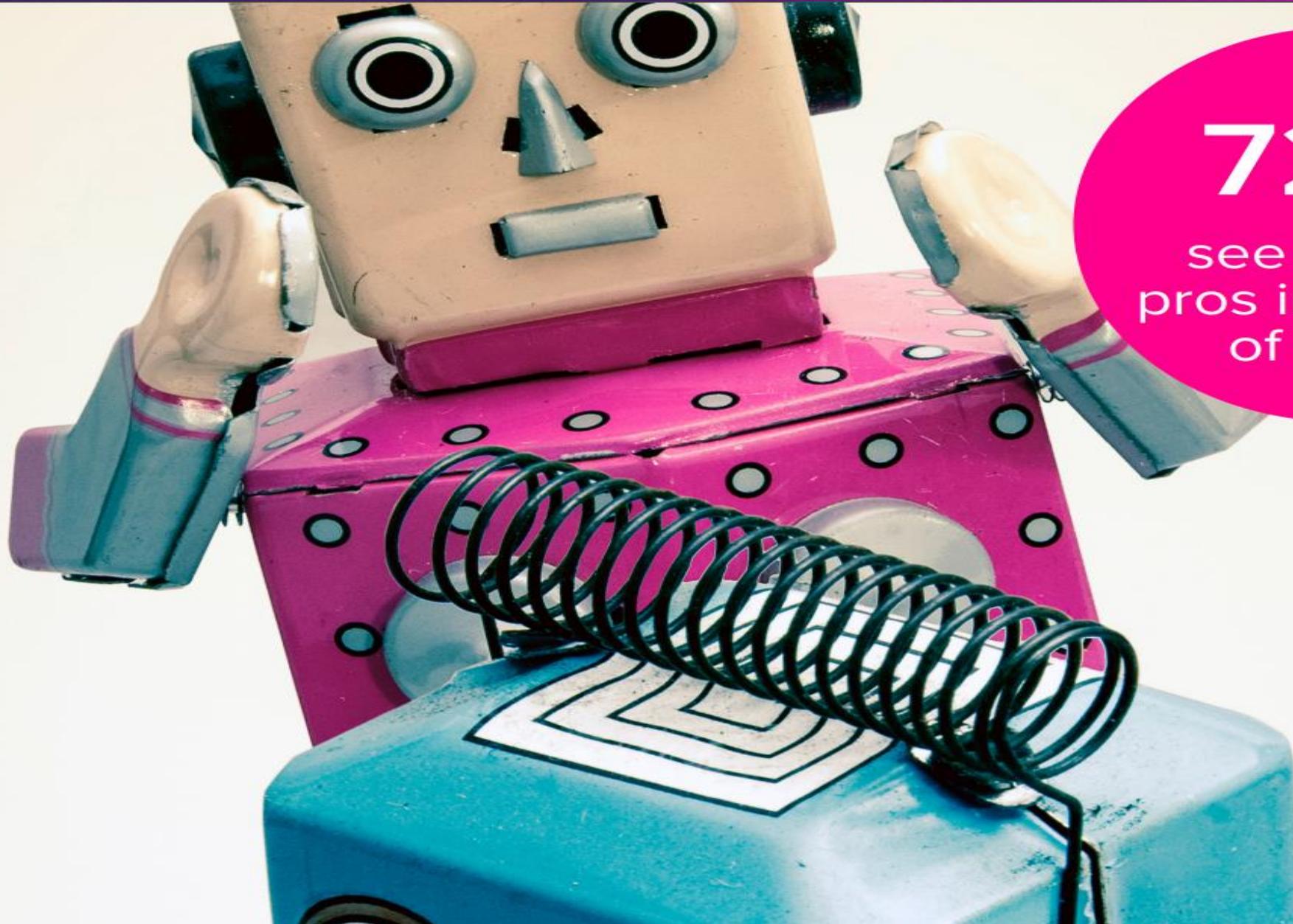




Autonomous teams



Thou shall be compliant!



72%

see security
pros in the role
of “nag”.

Security is part of everyone's role.

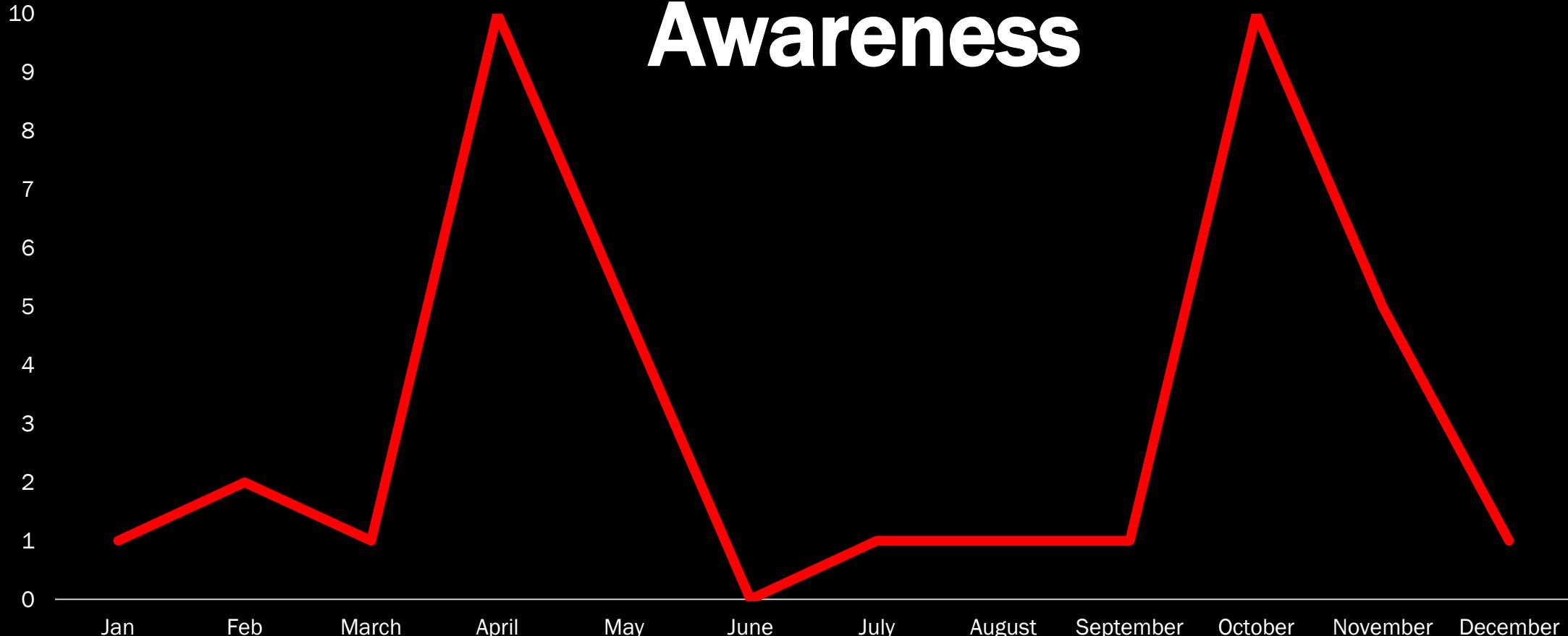
78%
Agree

2018 No DevOps Practice

91%
Agree

2018 Mature DevOps
Practice

Awareness





Process not Product

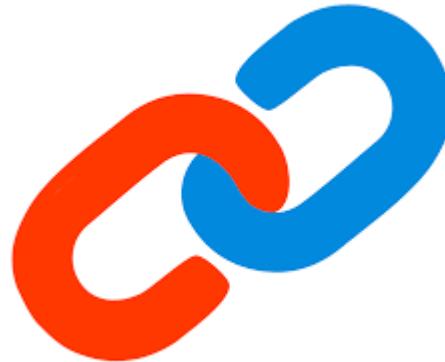


Shift it left



NYU

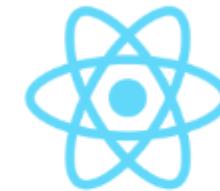




in-toto

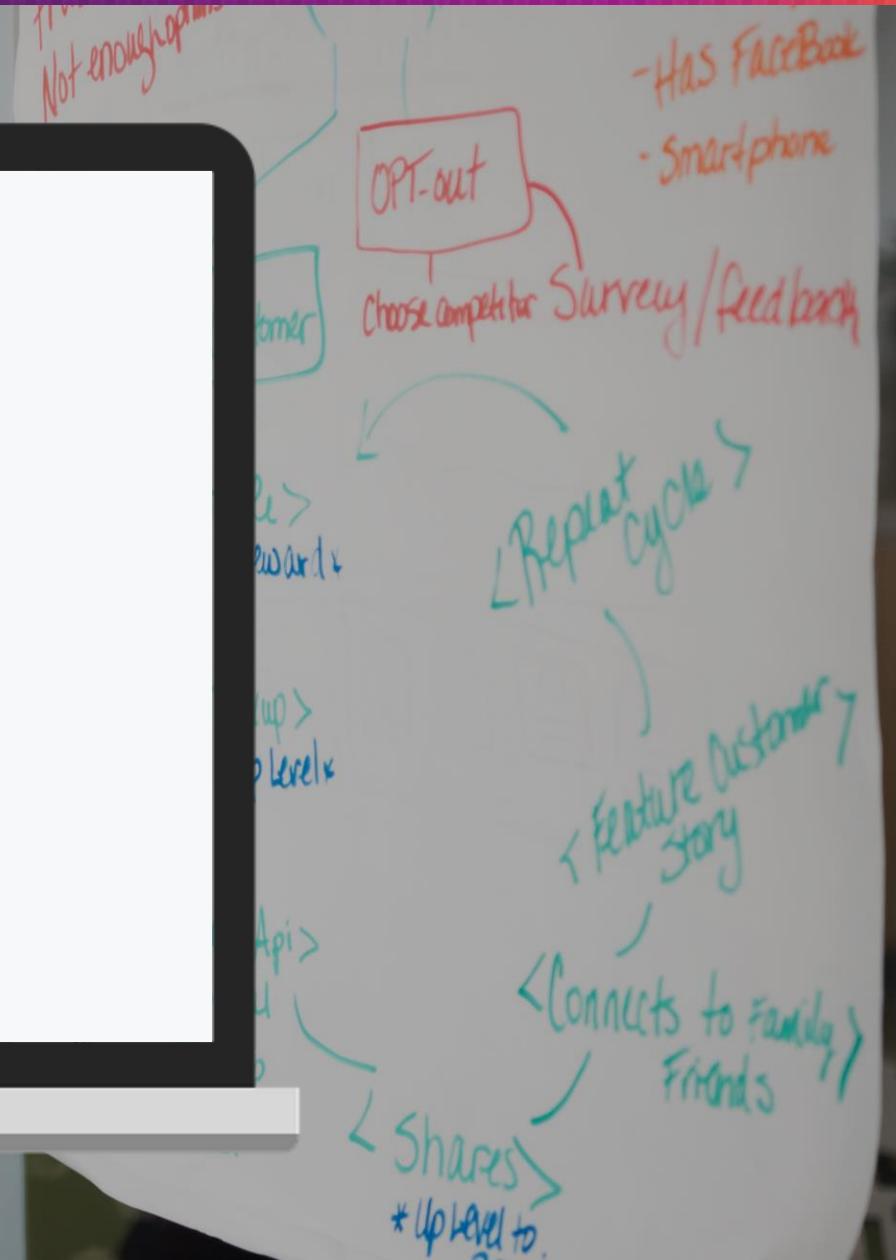
A framework to secure the integrity of software supply chains





Layout

```
{ "_type" : "layout",
  "expires" : "EXPIRES",
  "readme": "README",
  "keys" : {
    "KEYID" : "KEY",
    "...": ...
  },
  "steps" : [
    {"...": ...}
  ],
  "inspections" : [
    {"...": ...}
  ]
}
```



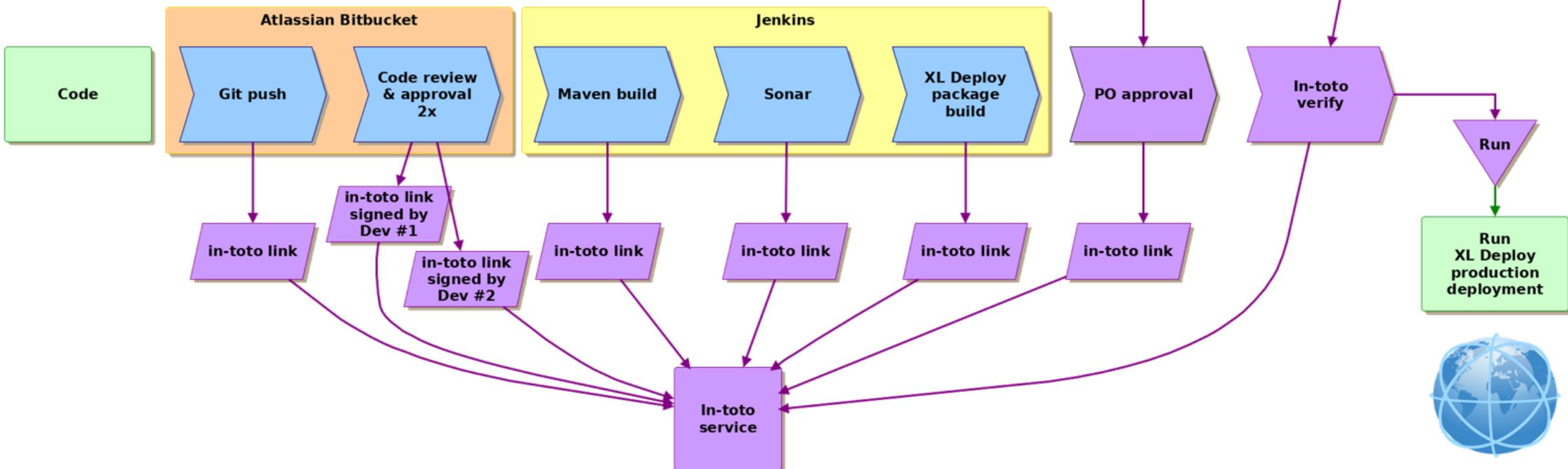
```
{  
  "_name": "NAME",  
  "threshold": "THRESHOLD",  
  "expected_materials": [  
    ["ARTIFACT_RULE"],  
    "..."  
  ],  
  "expected_products": [  
    ["ARTIFACT_RULE"],  
    "..."  
  ],  
  "pubkeys": [  
    "KEYID",  
    "..."  
  ],  
  "expected_command": "COMMAND"  
}
```

Steps

Inspect

```
{  
  "_name": "NAME",  
  "expected_materials": [  
    "ARTIFACT_RULE",  
    "..."  
  ],  
  "expected_products": [  
    "ARTIFACT_RULE",  
    "..."  
  ],  
  "run": "COMMAND"  
}
```

Securing the software supply chain



```
{ "_type" : "link",
  "_name" : "NAME",
  "command" : "COMMAND",
  "materials": {
    "PATH": "HASH",
    "...": "..."
  },
  "products": {
    "PATH": "HASH",
    "...": "..."
  },
  "byproducts": {
    "stdin": "",
    "stdout": "",
    "return-value": ""
  }
}
```

Link

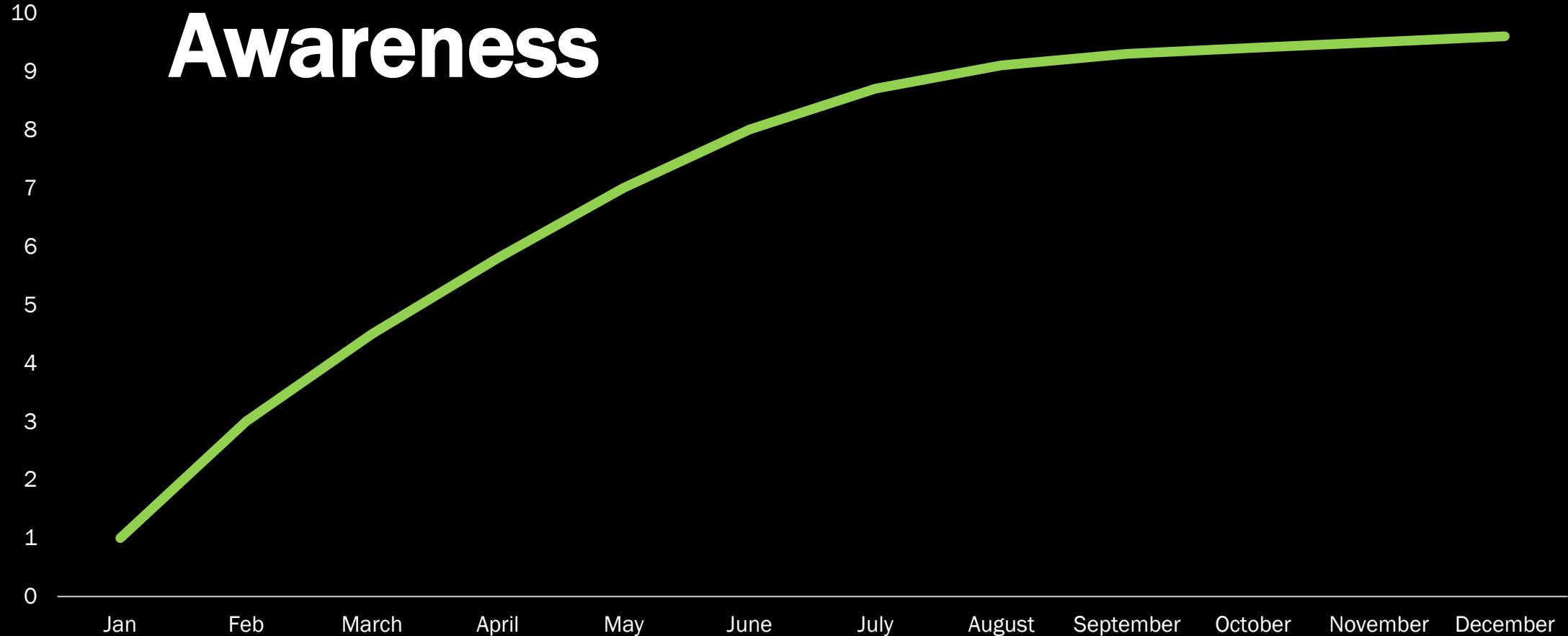


Verify



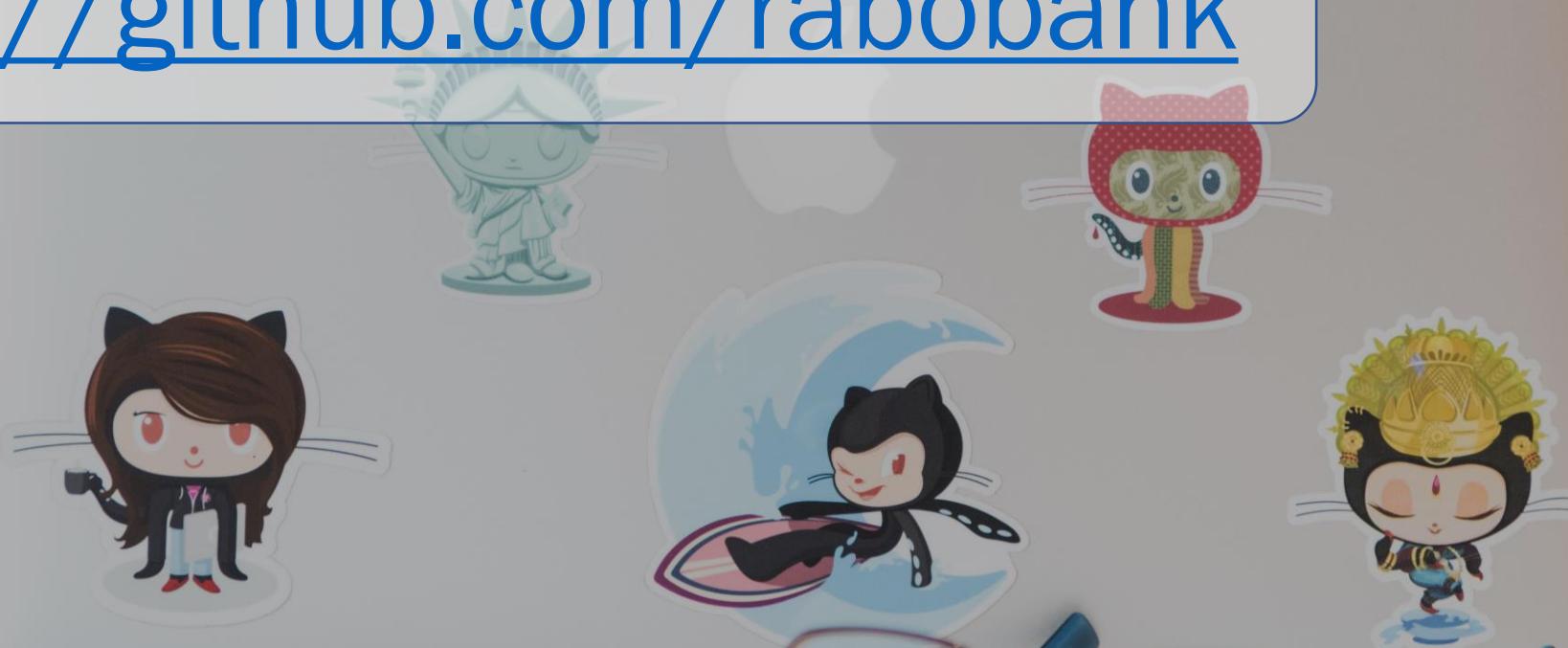
Process AND Product

Awareness



<https://github.com/in-toto>

<https://github.com/rabobank>



Thanks

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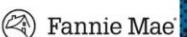
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