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Staidrimh

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Statistics  
Office

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# PX strikes back!

**PC-Axis 2018, Bilbao (SP)**

# New look

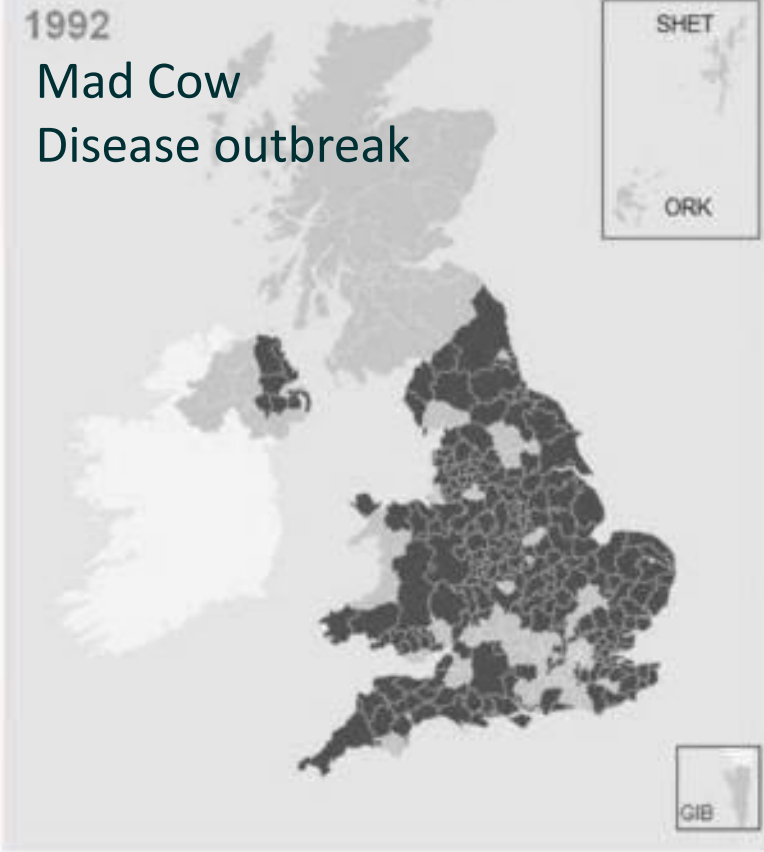
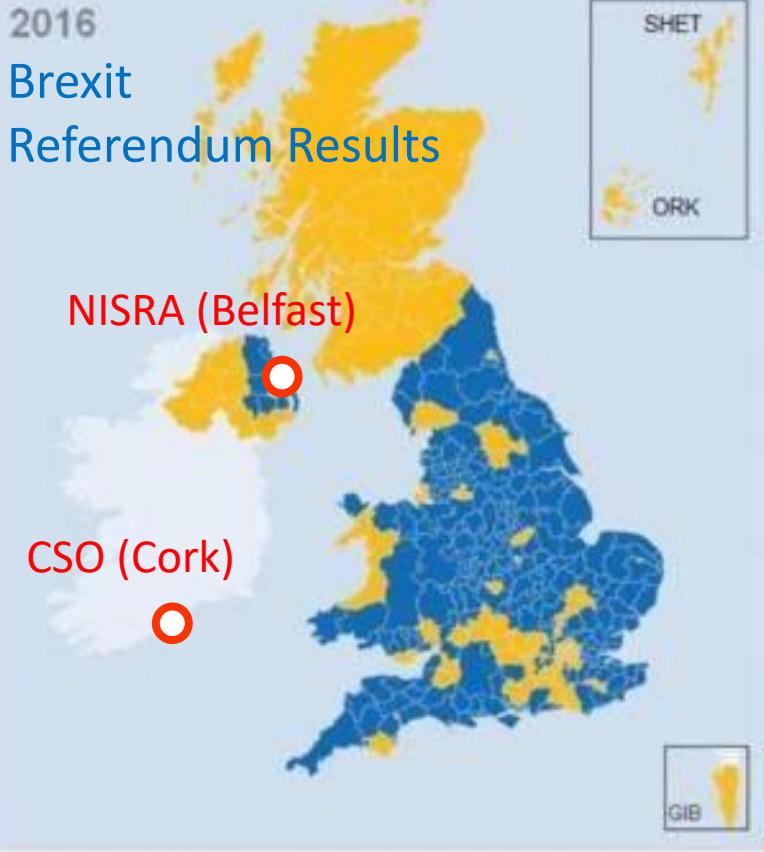


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Key:



Leave



Stay

Key:



Sick



Healthy



IT MAY, HOWEVER, BE A MISTAKE TO JUMP TO CONCLUSIONS



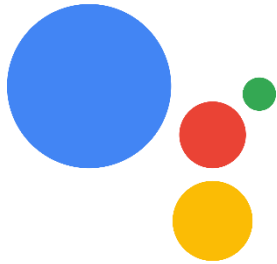
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# From API to M2M: Let's make it practical

- API – Application Program Interfaces
- M2M – Machine To Machine

# Talk to...



Google Assistant



Amazon Alexa



Facebook Messenger





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# The Options: Seeking for a good balance

\* UAT – User Acceptance Test

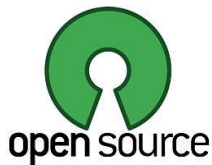
# PxWeb



Statistiska centralbyrån  
Statistics Sweden

- PC-Axis Community
- PX format
- API / JSON-Stat
- More...

# PxStat



- Best of both
- Controls & Workflows
- Open Source (for real)

## Learning from...

- PX Reference Group 2016
- PX Reference Group 2017

# .Stat Suite



# SIS-CC\*

- Data Management
- Modularity
- Open Source (almost)
- More...



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\* SIS-CC: Statistical Information System – Collaboration Community



- ➔ Open Source
- ➔ Responsive Design
- ➔ Modular Design
- ➔ 3 Tiers Architecture (goodbye MVC)
  - Abstracted Statistical Entity
  - Access & Confidentiality Controls
  - Version & Change Controls
  - Release & Approval Workflows
  - **Very Short Timeline**





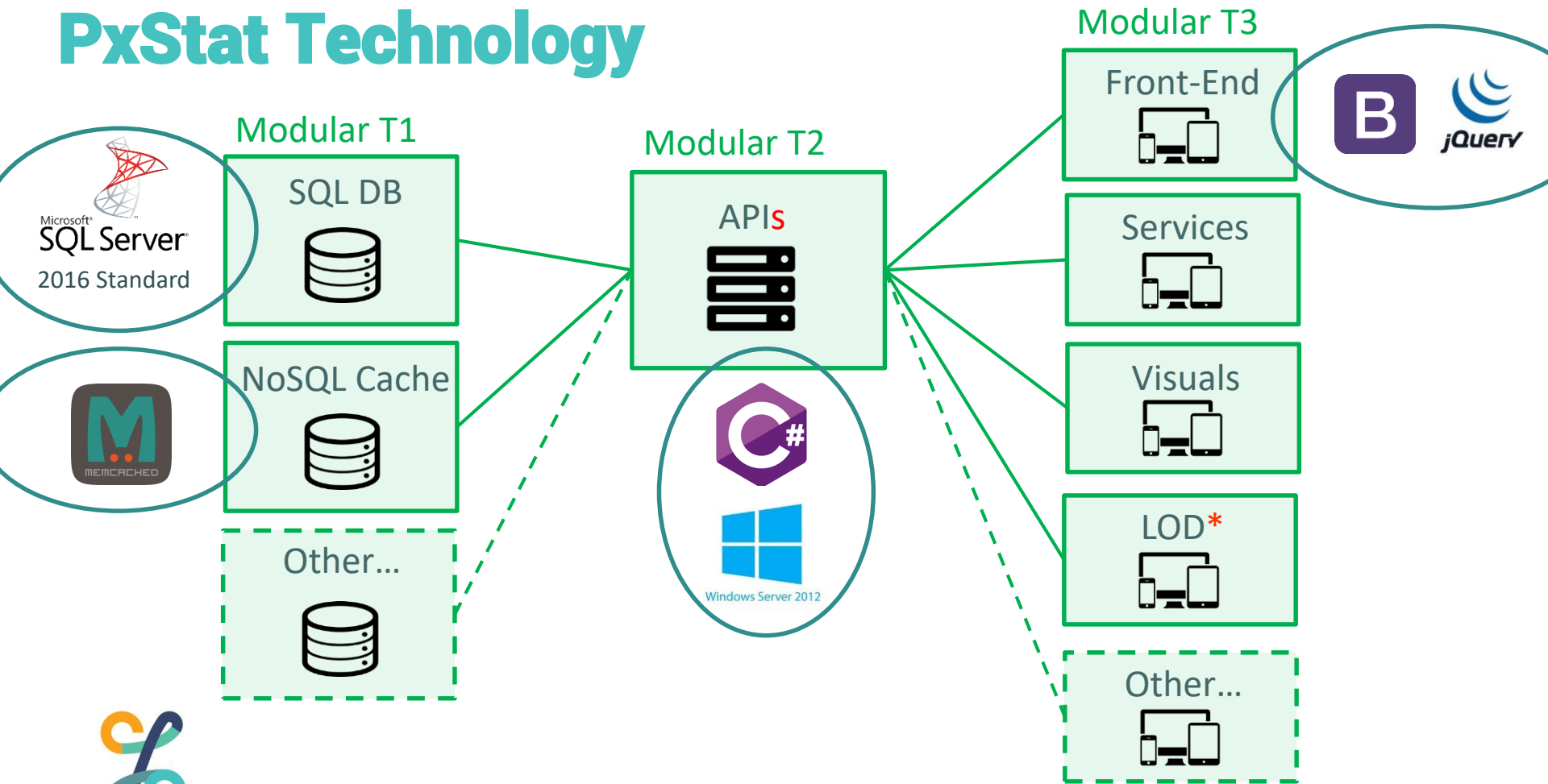
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# The Technology: Light, Modular, Flexible



# PxStat Technology



\* LOD – Linked Open Data



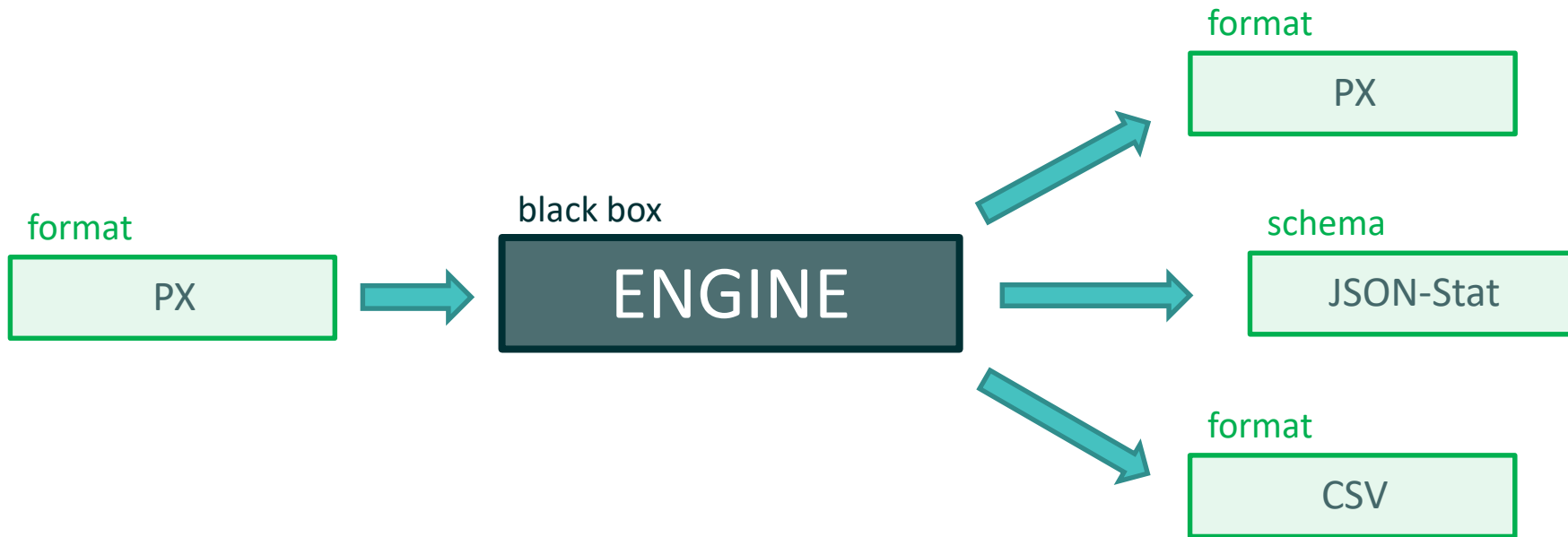
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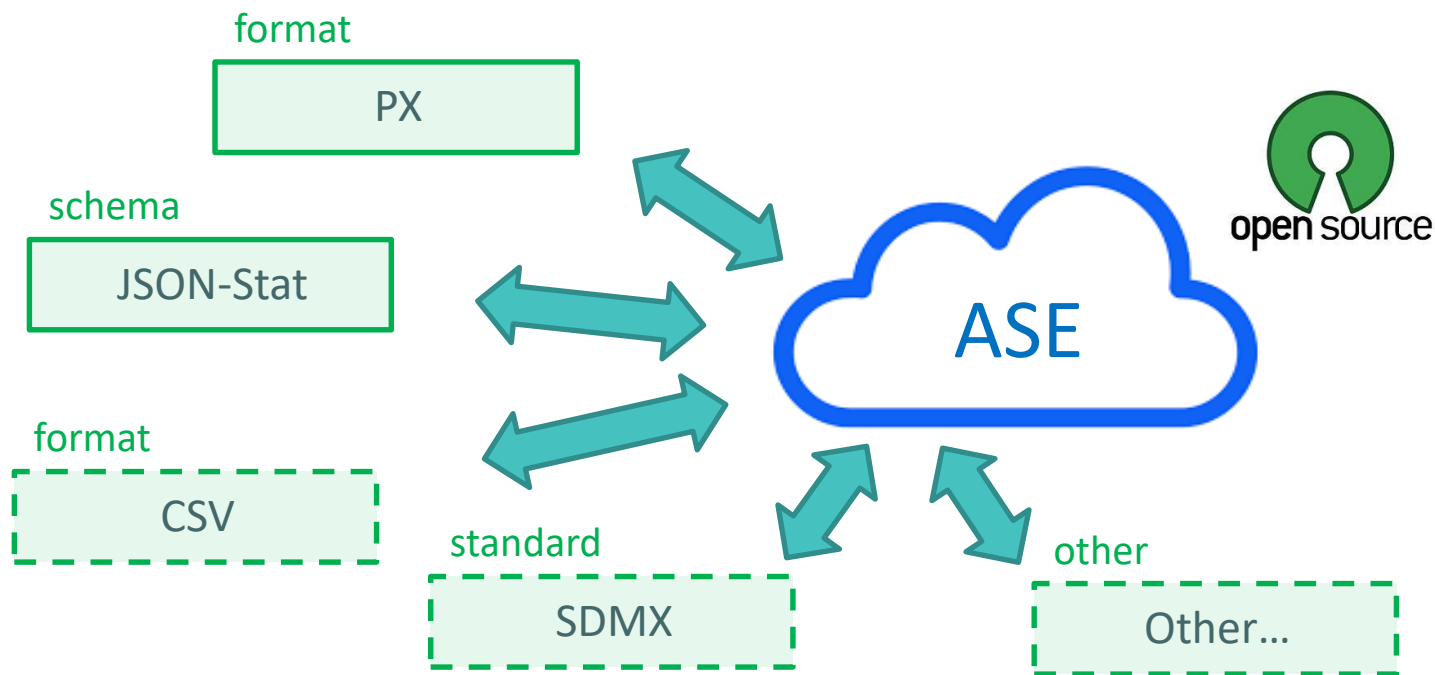
# ASE: Abstracted Statistical Entity

\* UAT – User Acceptance Test

# Current Scenario



# ASE - Abstracted Statistical Entity



# Performance with ASE

Like for like...

OVER 120 FASTER

Really?!

YES



\* UAT – User Acceptance Test

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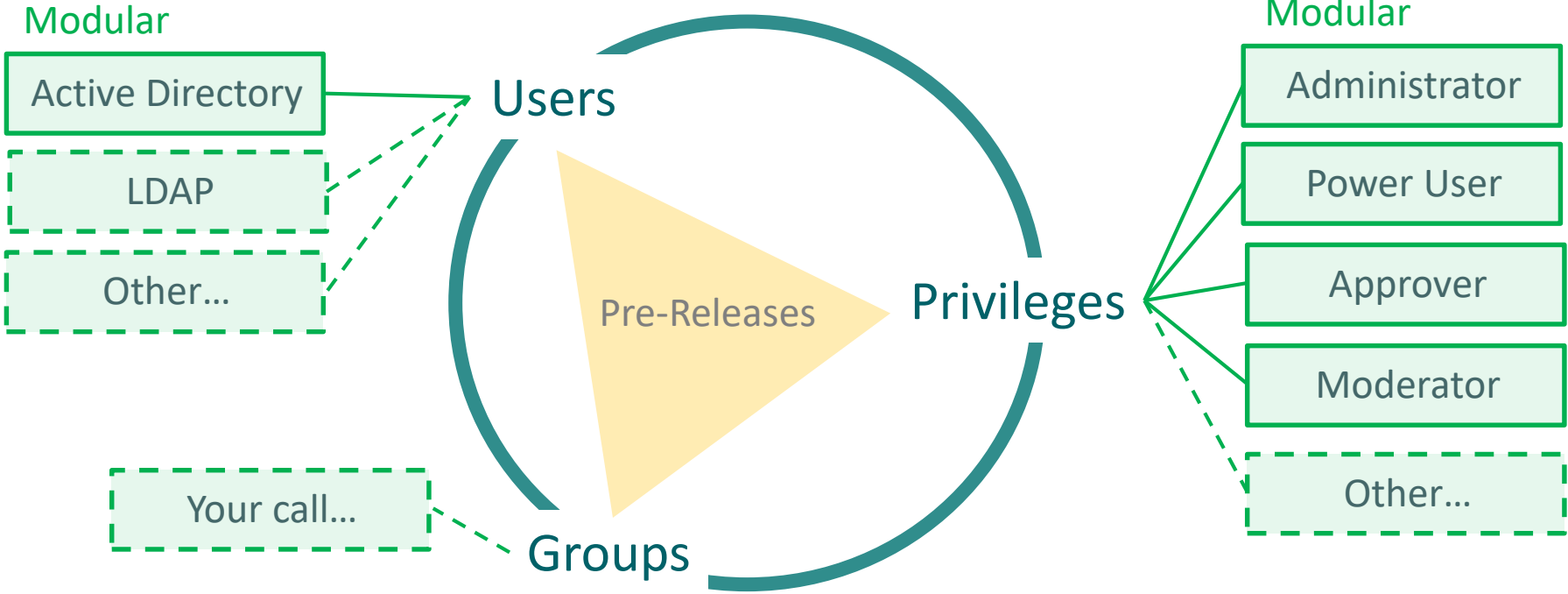
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# Access & Confidentiality Controls

## Who, What, Why

# Access & Confidentiality Controls



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### Are you interested in Access or Confidentiality Controls?

045

Yes, it is a requirement.



Yes, but it is NOT a requirement.



No, thanks.



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# Version & Change Controls History and Transparency

# Version & Change Controls

 Version: <b>1</b> Revision: <b>0</b>	Product: Consumer Price Index Release: September 2018 Date: <b>21<sup>st</sup> October 2018 at 09:00</b>	Reason: <b>Scheduled Release</b>
Version: <b>1</b> Revision: <b>1</b>	Product: Consumer Price Index Change: <b>Rounding fixed</b>	
Version: <b>1</b> Revision: <b>2</b>	Product: Consumer Price Index Change: <b>Figure fixed</b>	
Version: <b>2</b> Revision: <b>0</b>	Product: Consumer Price Index Release: September 2018 Date: <b>23<sup>st</sup> October 2018 at 13:08</b>	Reason: <b>Emergency Release</b> Change: <b>Rounding fixed</b> Change: <b>Figure fixed</b>



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## Are you interested in Version or Change Controls?

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Yes, but it is NOT a requirement.



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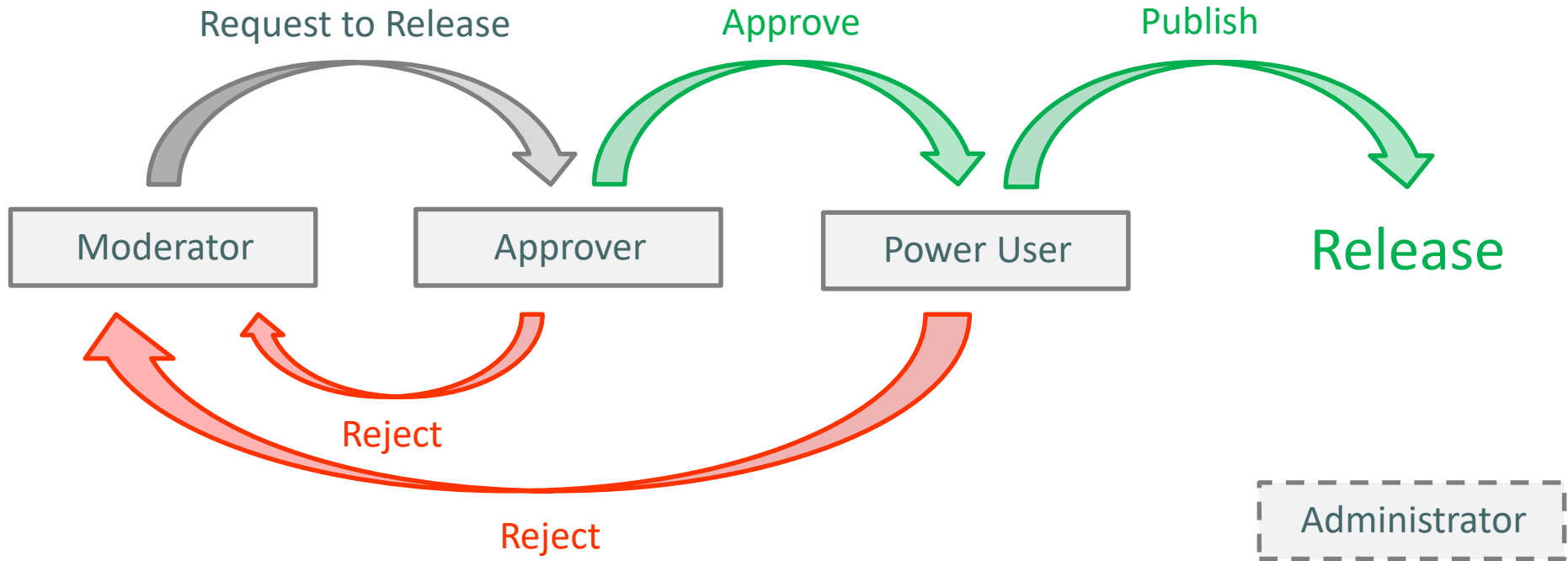


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# Release & Approval Workflows Schedule and Process

# Release & Approval Workflows



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## Are you interested in Release or Approval Workflows?

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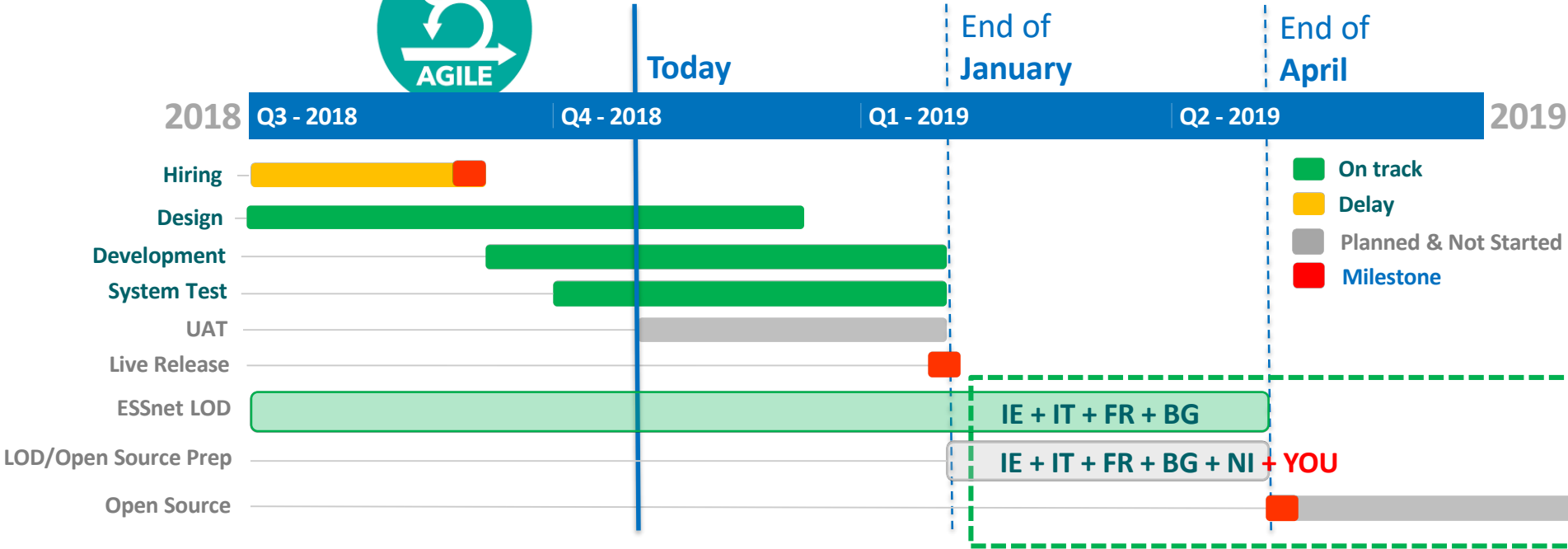
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# The Agenda: Making things happening





# Timeline





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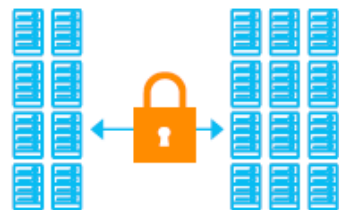
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# Always Encrypted: Confidential computing



# Encryption

By Infrastructure



In-Transit

Transport Layer Security  
(TLS)



At-Rest

Transparent Database Encryption  
(TDE)

By Design



In-use

Always Encrypted  
(confidential computing)



\* UAT – User Acceptance Test

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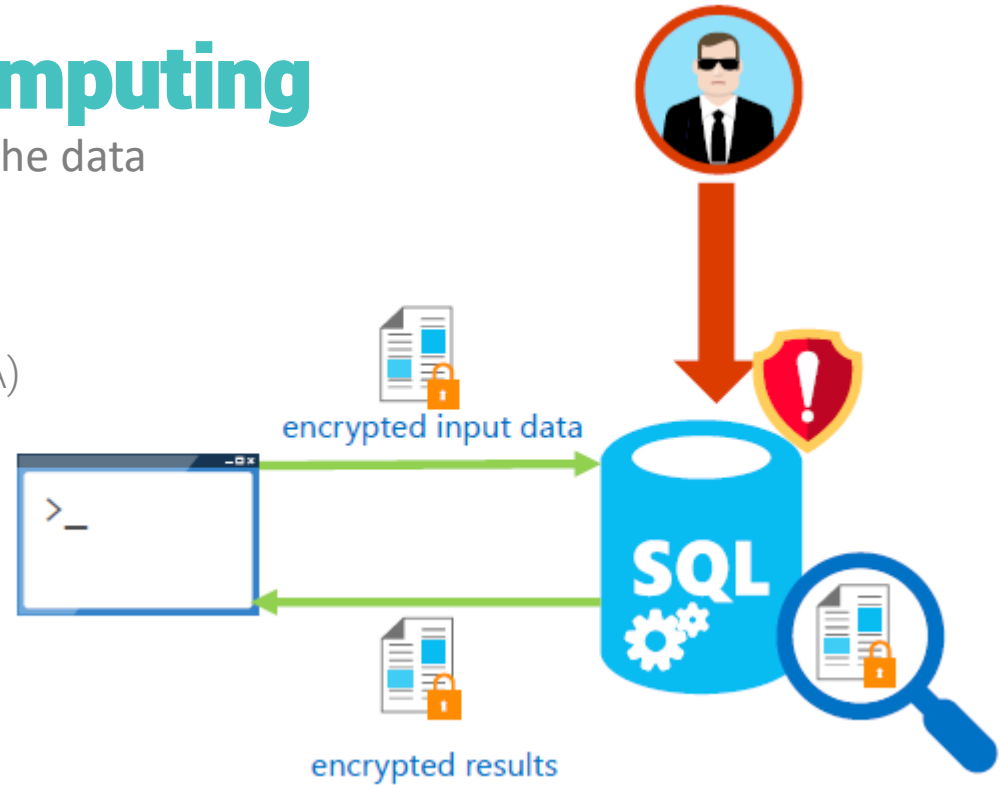


# Confidential Computing

Computations without seeing the data

Protecting data **in use** from:

- Malicious insiders (i.e. DBA)
- Rogue Admins
- Hackers and Malware
- Third party access
- Tampering



\* UAT – User Acceptance Test

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# Ask, don't be shy

...and I won't bite ;-)

