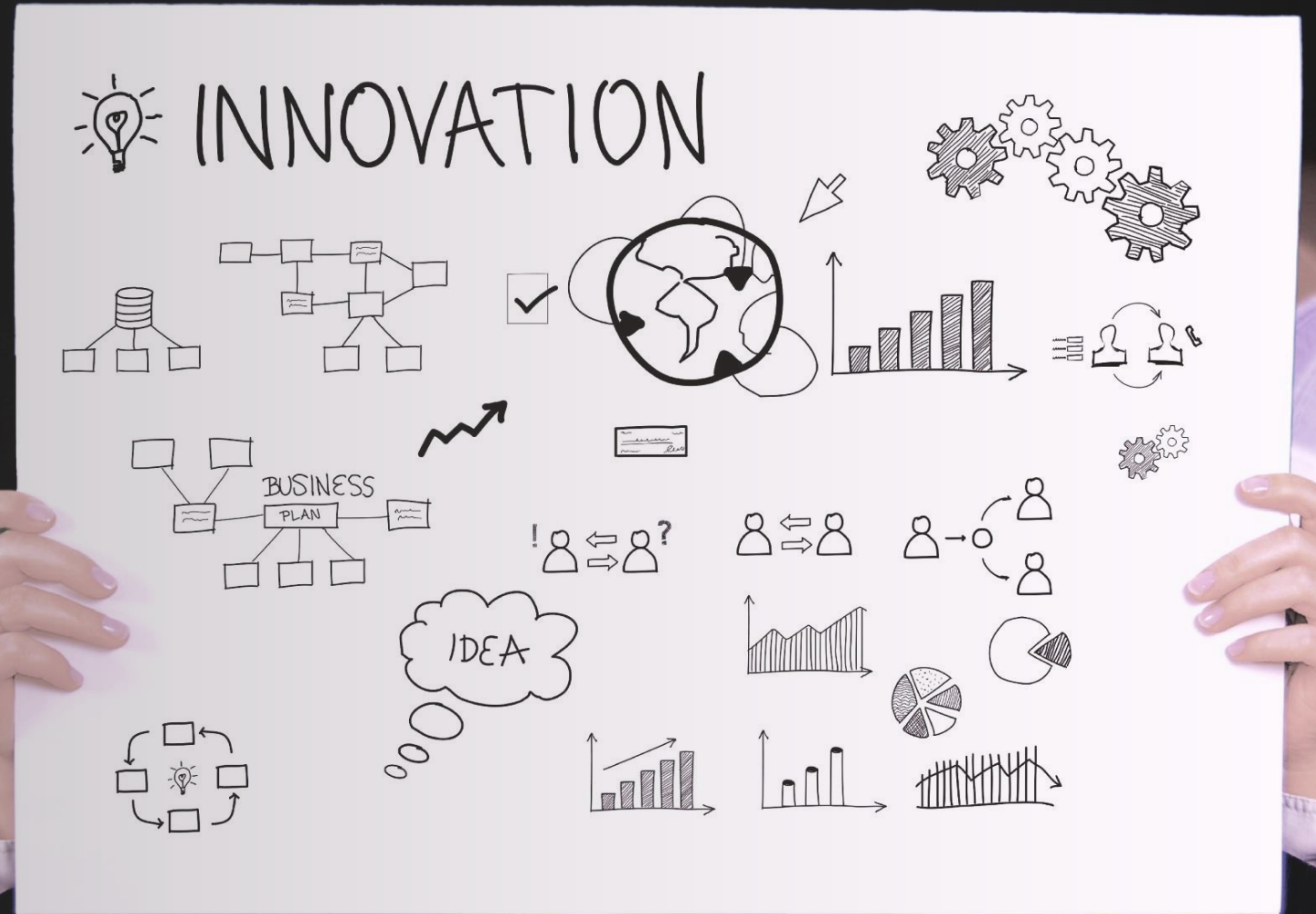
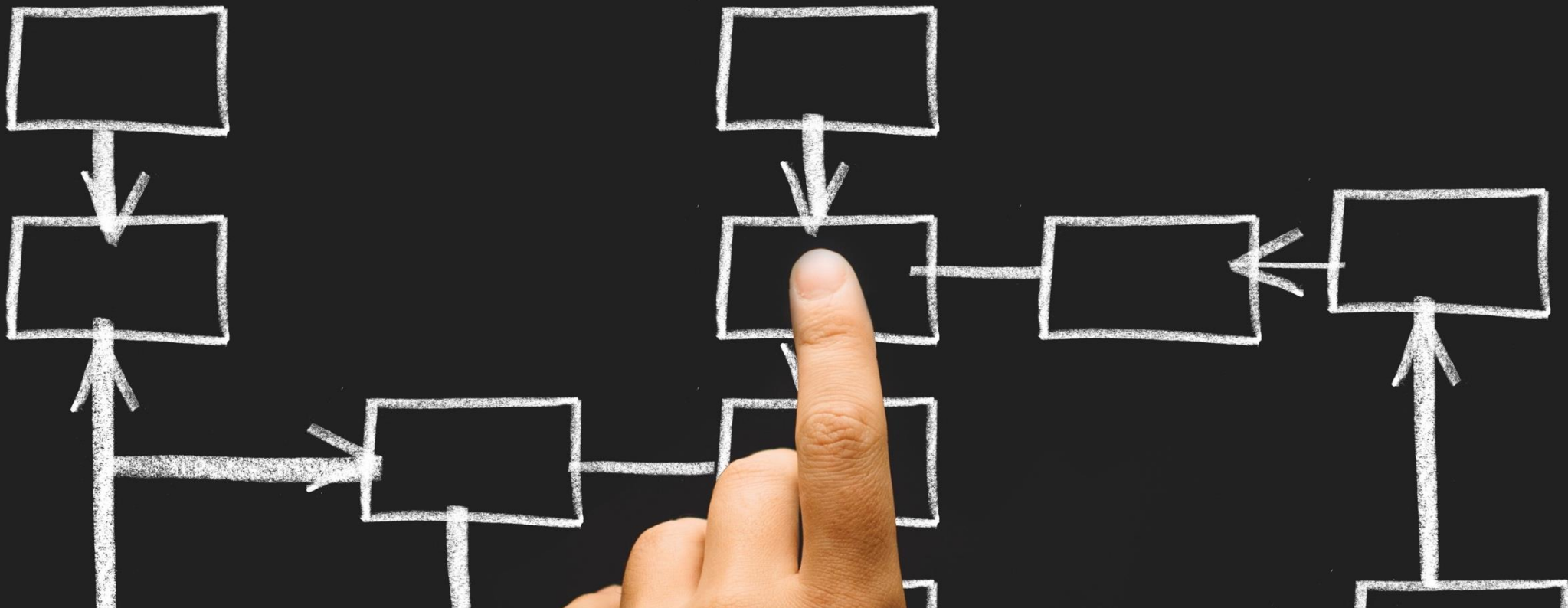


# CQRS for human beings


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# A story of a workflow...



# A trivial approach

Instances		
	<b>Id</b>	[guid]
	<b>Payload</b>	[xml]
	<b>DateCreated</b>	[datetime]
	<b>DateModified</b>	[datetime]

UserTasks		
	<b>Id</b>	[guid]
	<b>UserId</b>	[guid]
FK	<b>InstanceId</b>	[guid]
	<b>DateCreated</b>	[datetime]
	<b>DateModified</b>	[datetime]

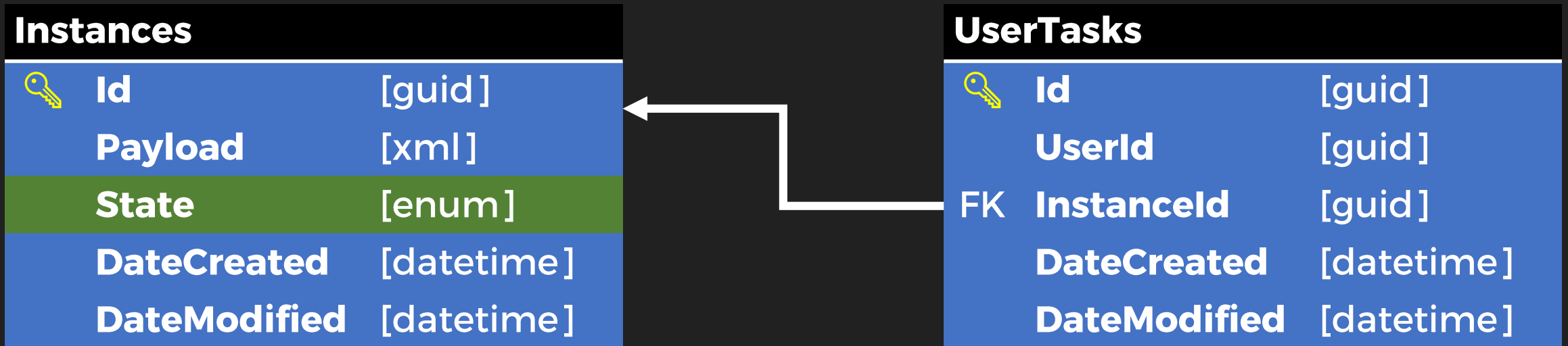




...blamed  
the PO




# We “fixed” it!





**So we  
blamed the  
PO... again!!!**




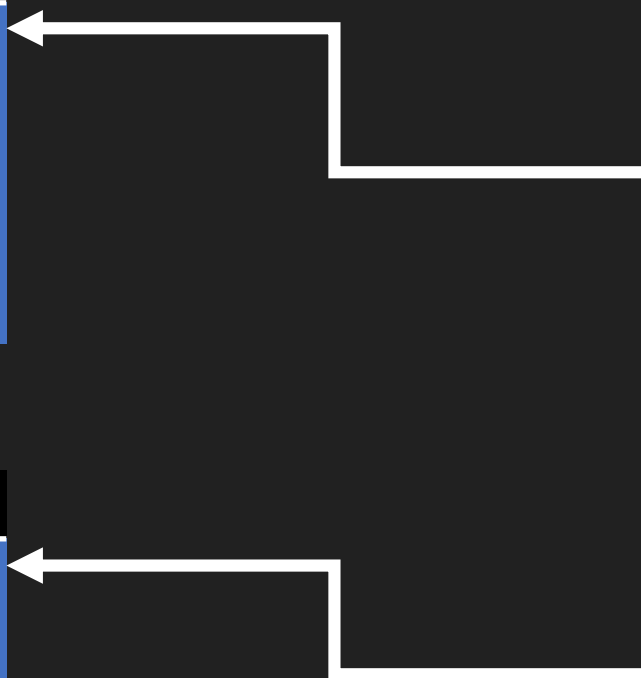
# We “fixed” it again!

Instances		
 <b>Id</b>		[guid]
<b>Payload</b>		[xml]
<b>State</b>		[enum]
<b>DateCreated</b>		[datetime]
<b>DateModified</b>		[datetime]

UserTasks		
 <b>Id</b>		[guid]
<b>UserId</b>		[guid]
FK <b>Instanceld</b>		[guid]
<b>DateCreated</b>		[datetime]
<b>DateModified</b>		[datetime]

History		
 <b>Id</b>		[guid]
<b>State</b>		[enum]
<b>DateCreated</b>		[datetime]
<b>DateModified</b>		[datetime]

HistoryDetails		
 <b>Id</b>		[guid]
<b>Data</b>		[xml]
FK <b>Instanceld</b>		[guid]
<b>DateCreated</b>		[datetime]
<b>DateModified</b>		[datetime]





**We  
had  
many  
different  
problems...**



**CQRS to  
the rescue!!!**



# Command Query Responsibility Segregation





# Separated Read & Write Side







**We read way more  
than we write**

**GET  
Tasks**

**330k**

**POST  
Confirm**

**30k**

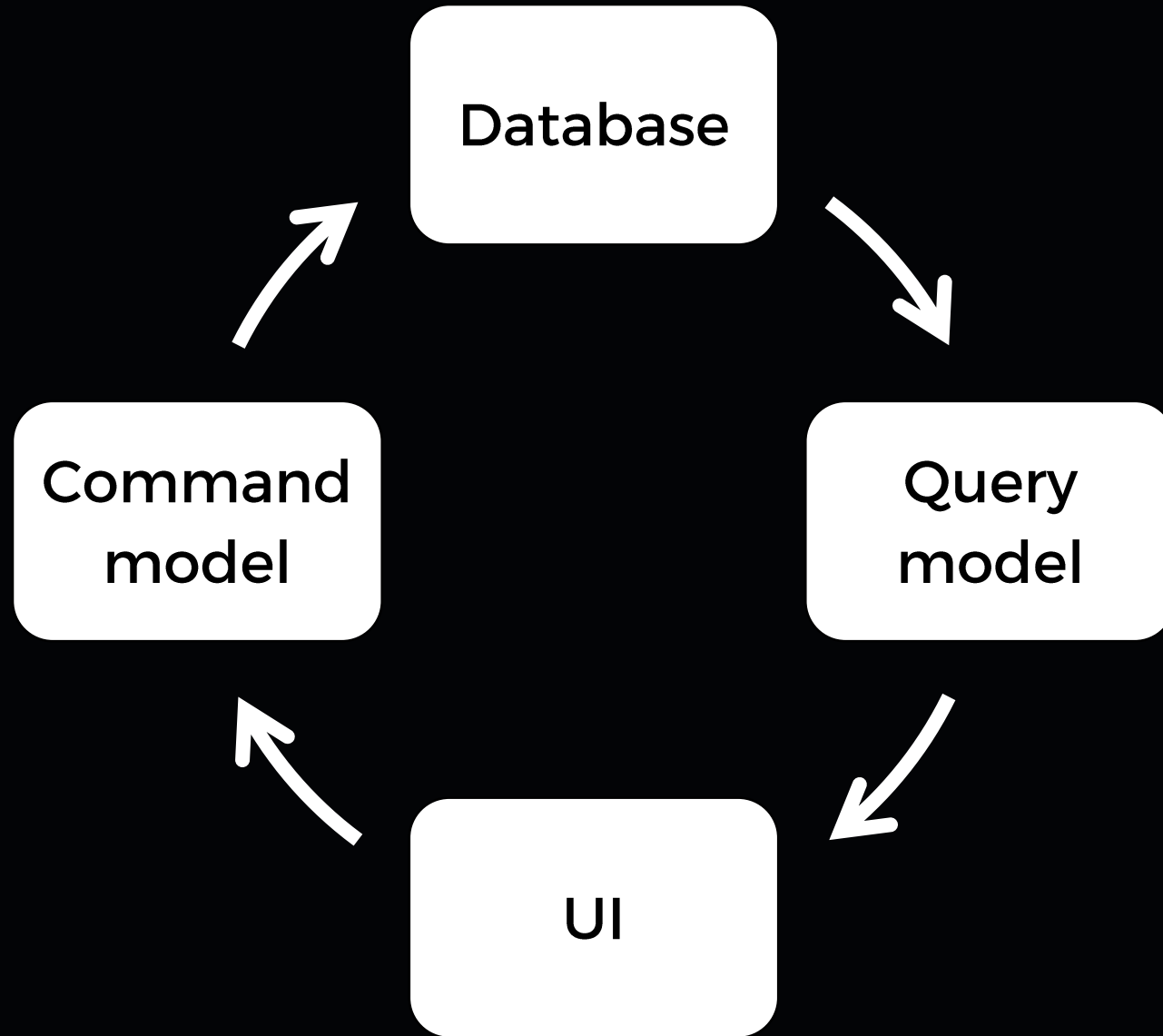




**READ**



**WRITE**







# Good stuff

- Scale independently
- Read side denormalization
- Write side non UI dependent
- Microservices & cloud friendly



# Bad stuff

- Eventual consistency
- Growing complexity
- More models to handle

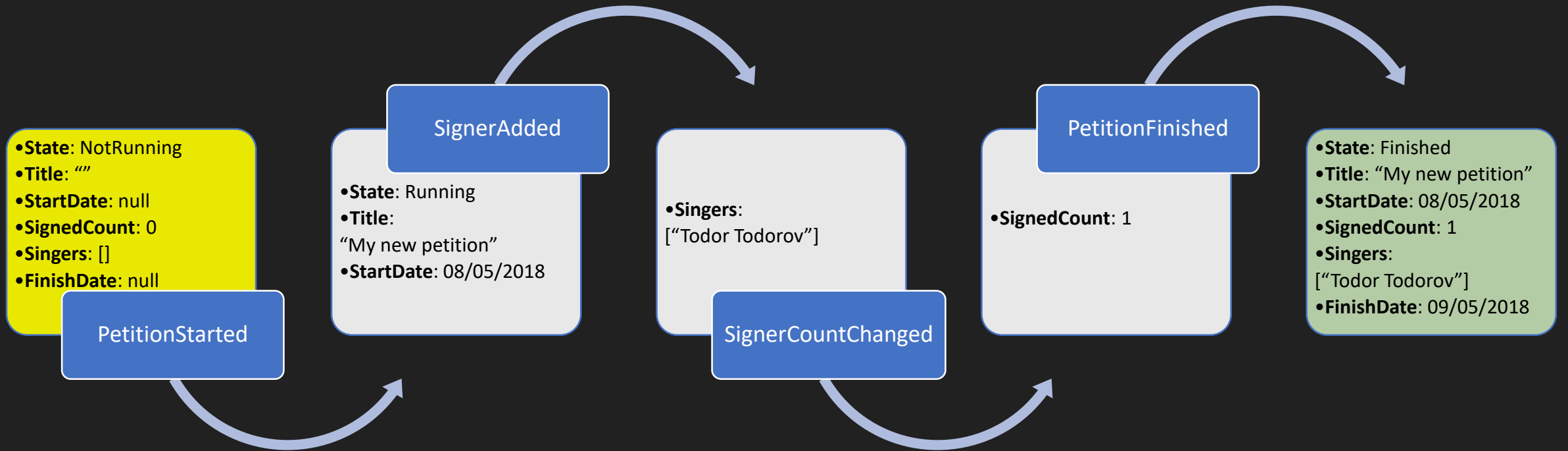




# Event Sourcing



# PetitionAggregate





What about data size  
and performance?



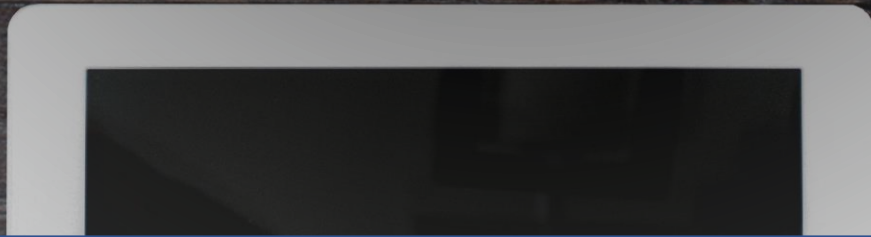




- **Databases are fast**
- **EventStore**
- **Snapshotting**
- **Google Protobuf**



DEMO





A silhouette of a person standing on a cliff with their arms raised in triumph, set against a sunset sky with scattered clouds. The sun is low on the horizon, casting a warm glow over the scene. The foreground is dark, showing the silhouette of the cliff and some vegetation.

So much win!

So what did we **achieve** with  
this so far?

# GetTasks request in seconds



- CQRS
- Monolithic





- Independent scaling
- Better codebase
- Data for UI is there
- Fancy design patterns in our resumes

...no it's not...



# Must read:

- ["CQRS" by Martin Fowler](#)
- ["CQRS, Task Based UIs, Event Sourcing agh!"](#)  
[by Greg Young](#)
- [CQRS in MSDN](#)
- ["CQRS Journey" - book by MSDN](#)
- [Event Sourcing in MSDN](#)
- [Event Sourcing: The Good, The Bad & The Ugly](#)  
[by Dennis Doomen](#)

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**g:** [www.github.com/totollygeek](https://www.github.com/totollygeek)