AGILITÉ PAR LE CODE GRÂCE À **CQRS** ET **EVENTSOURCING**

WORKSHOP

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WHO ARE WE ?

- 4 PASSIONATE GUYS INITIATED THIS WORKSHOP IN 2015
- FEEL FREE TO GIVE SOME FEEDBACK ON GITHUB

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Florent
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Jean
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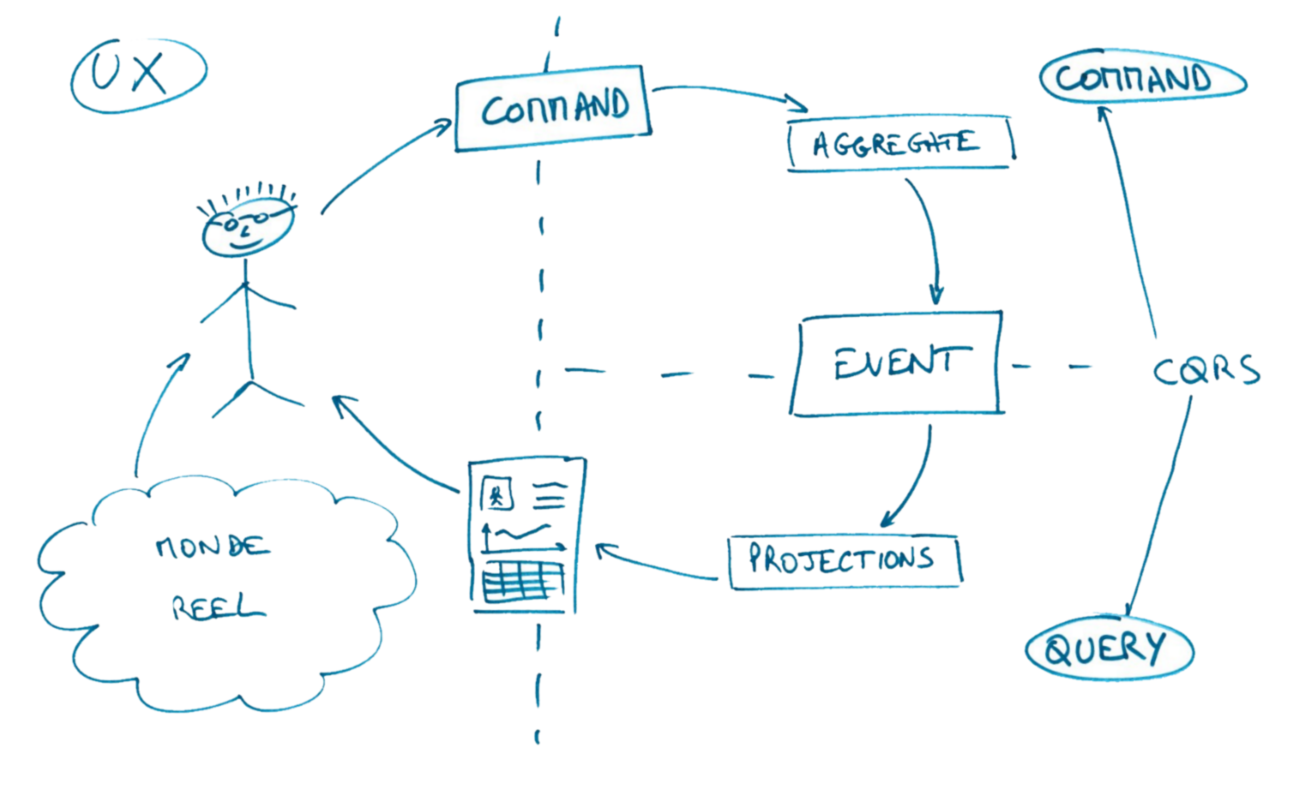
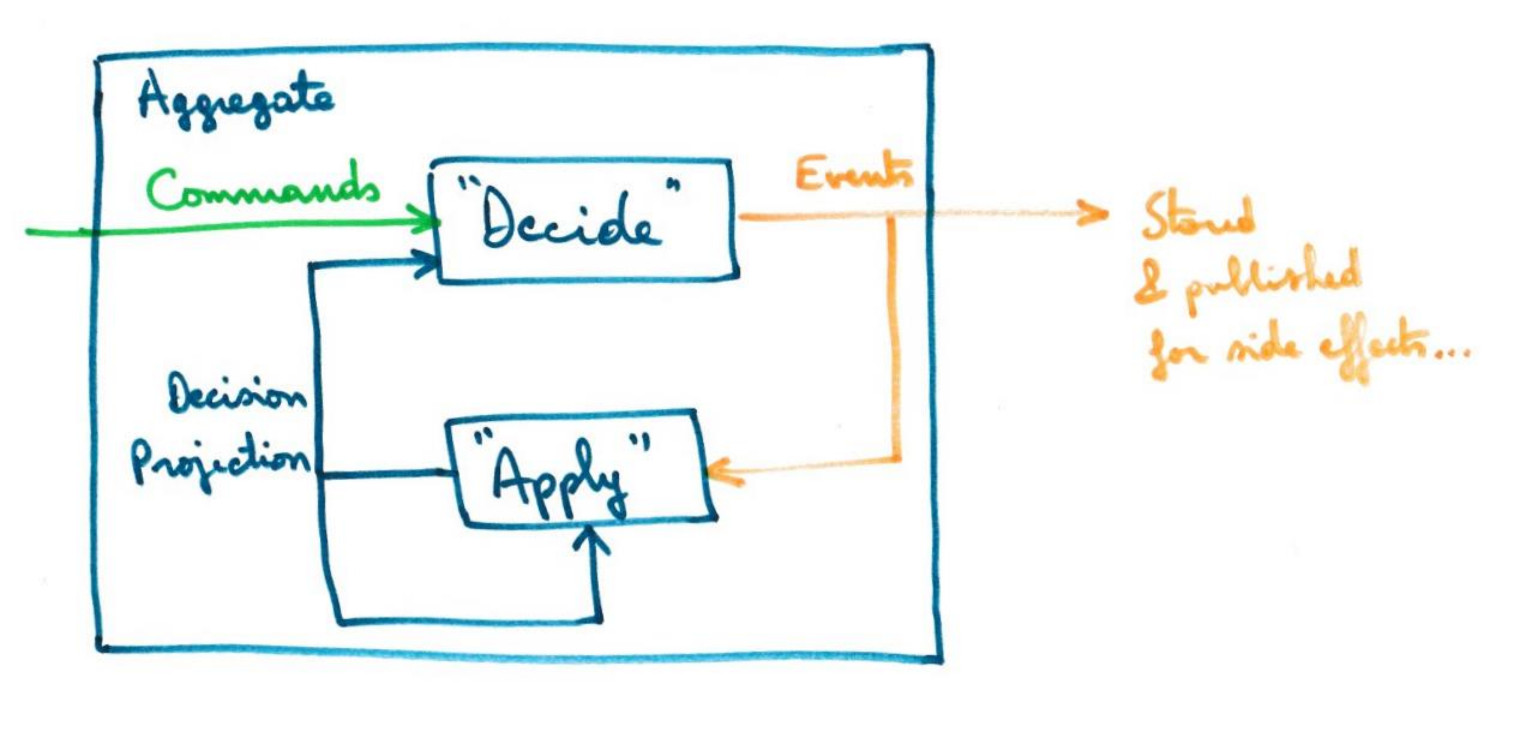
CQRS CONCEPT



Ref. "Conceptual CQRS" - Alberto Brandolini

EVENT SOURCING CONCEPT



NB : DecisionProjection is also called State

Ref. Jérémie Chassaing

THE NEW UNICORN!

We’ll revolutionize the web!

We’ll create a product like Twitter but better ...

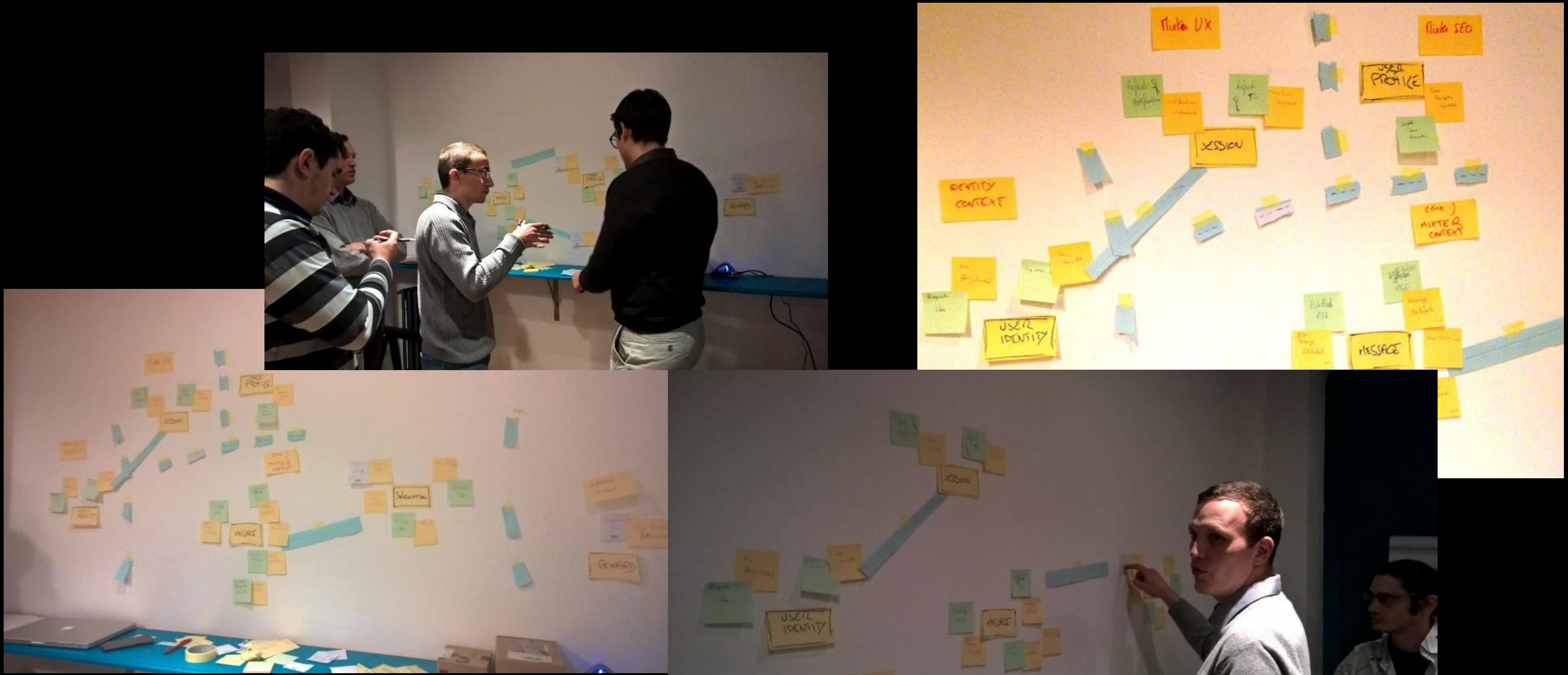
A revolution!

MIXTER

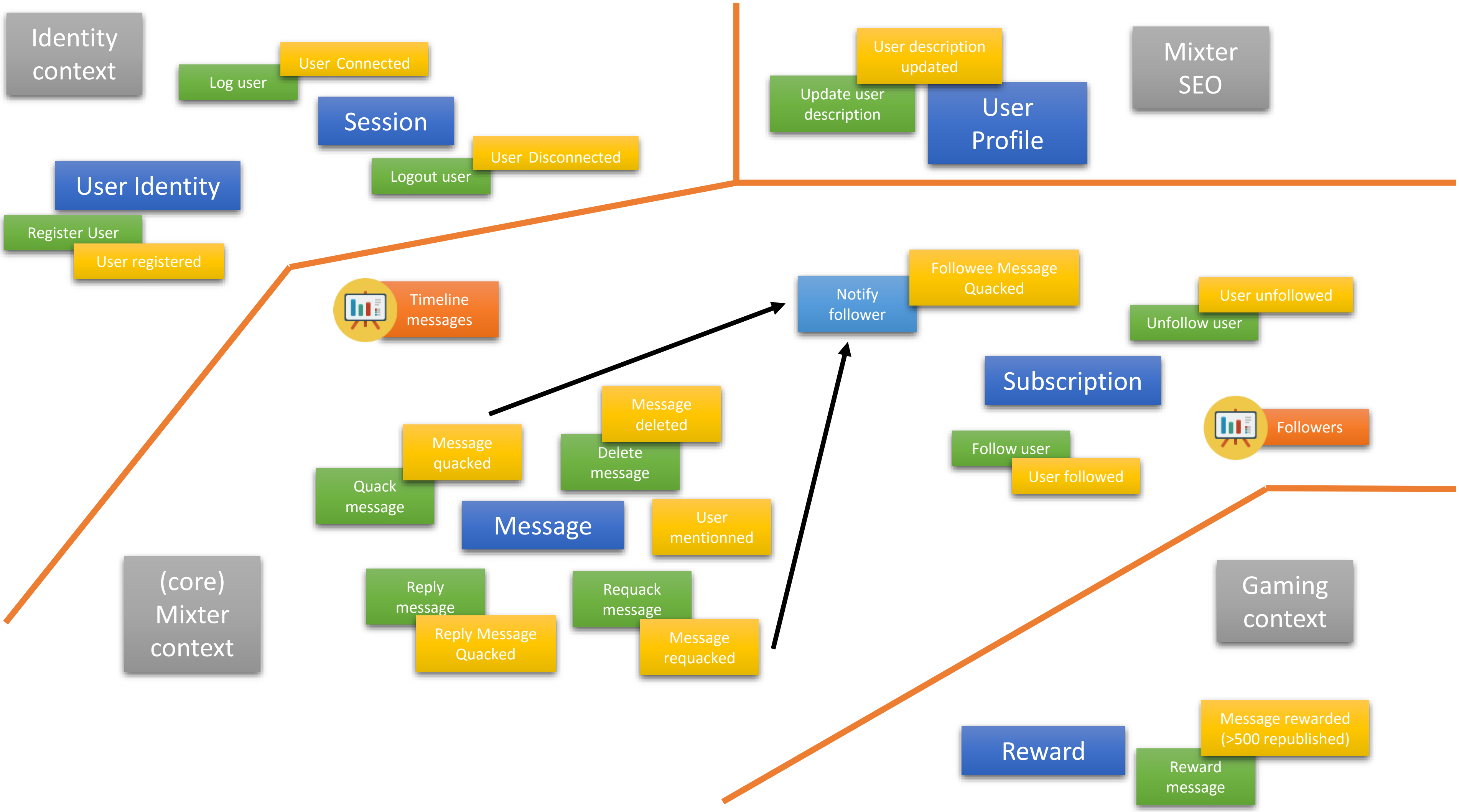
Instead tweet…

we'll quack!

EVENT STORMING MIXTER



Ref. "Event Storming" - Alberto Brandolini



Identity context

Log user

User Connected

Session

User Disconnected

Logout user

User Identity

Register User

User registered

Update user description

User description updated

User Profile

Mixter SEO

Timeline messages

Notify follower

Followee Message Quacked

User unfollowed

Unfollow user

Subscription

Followers

Follow user

User followed

Message deleted

Delete message

Message quacked

Quack message

Message

User mentionned

(core) Mixter context

Reply message

Reply Message Quacked

Requack message

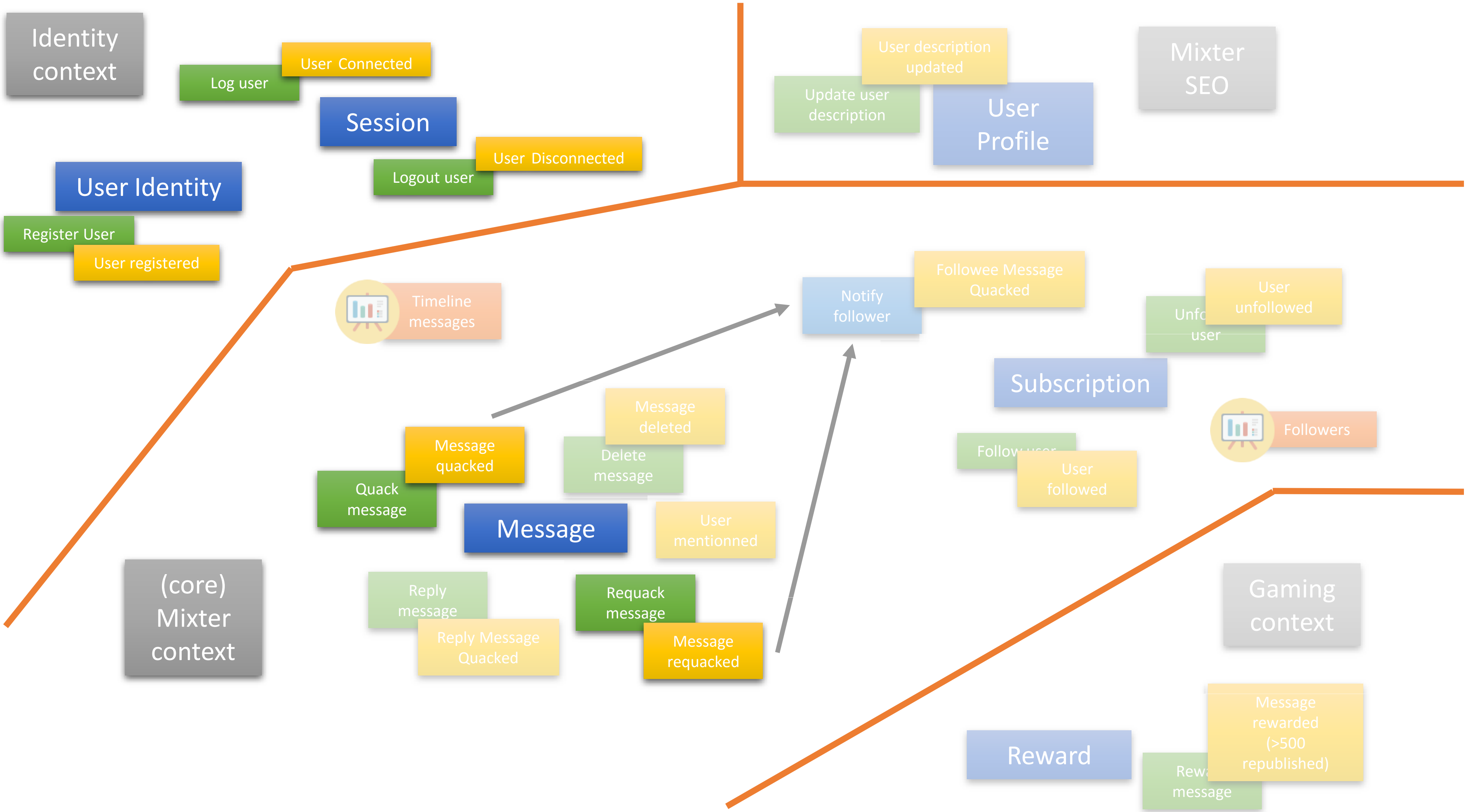
Message requacked

Gaming context

Reward

Message rewarded (>500 republished)

Reward message



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Subscription

Followers

Follow user

User followed

Message deleted

Delete message

Message quacked

Quack message

Message

User mentionned

Reply message

Reply Message Quacked

Requack message

Message requacked

(core) Mixter context

Gaming context

Reward

Rew message

Message rewarded (>500 republished)

TEST DRIVEN WORKSHOP

- Working in pairs
- Execute run script and read instructions

- Red test => Green test

- 3 steps (+2 bonus)
  - Command DeleteMessage
  - Query Timeline Message
  - Events in aggregate

FOCUS ON CORE DOMAIN

- Do not change
  - Tests code
  - Infrastructure code

- You can see Identity context implementation as example

REPOSITORY GIT

git clone **https://github.com/DevLyon/mixter.git**

./run

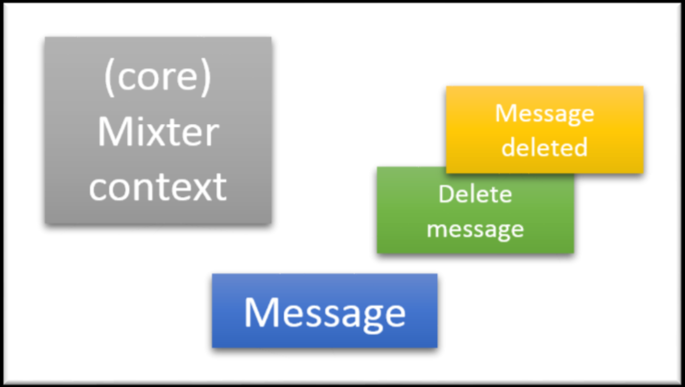
Slide :
https://github.com/devlyon/mixter/raw/master/slide.pdf

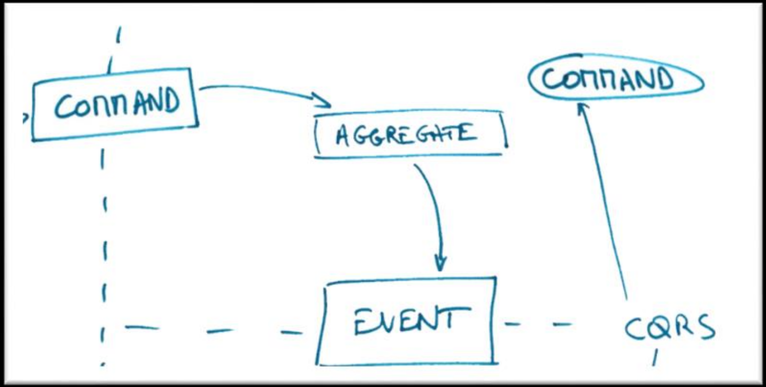
1. DELETE COMMAND

WHAT WE WILL LEARN

- PUBLISH EVENTS FROM AGGREGATE,
- USE PROJECTION FOR DECISION INSIDE AGGREGATE (CONTAINS ONLY "STATE" FOR FUTURE DECISION, DO NOT KEEP ALL STATE LIKE IN AN ENTITY)
- IMPLEMENT "BUSINESS RULES" THAT INSURE AGGREGATE CONSISTENCY (BASED ON DECISION PROJECTION AND COMMAND=METHOD PARAMETERS)

IN BRIEF : THE C OF CQRS



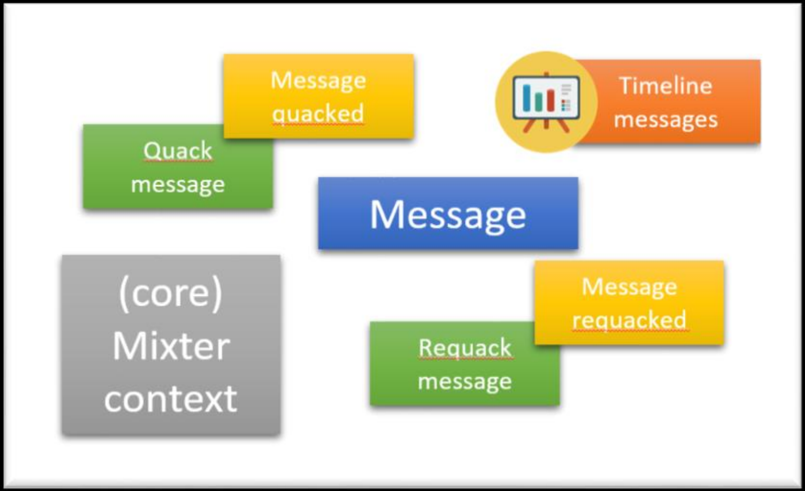


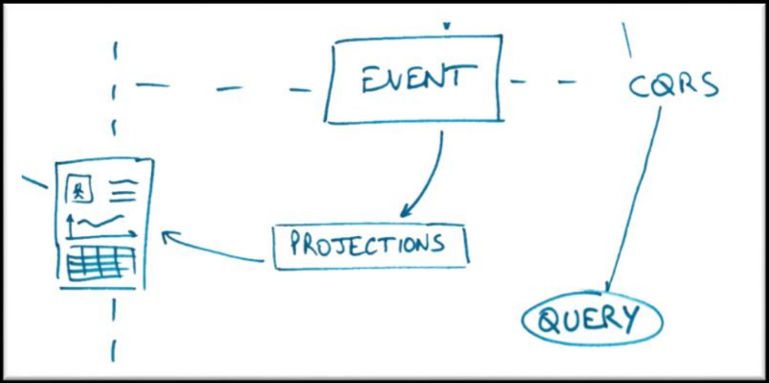
2. TIMELINE MESSAGES PROJECTION

WHAT WE WILL LEARN

- CREATE ANOTHER MODEL FOR QUERY (PROJECTION, TIMELINEMESSAGEPROJECTION)
- TRANSFORM EVENTS IN A PROJECTION MODEL THROUGH AN EVENTHANDLER
- A PROJECTION REPOSITORY (IN-MEMORY) WITH ITS INTERFACE IS GIVEN

IN BRIEF : Q OF CQRS



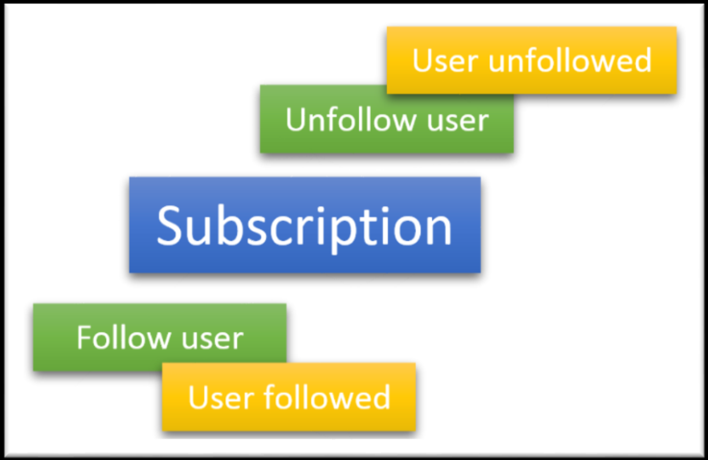


3. SUBSCRIPTION AGGREGATE

What we will learn

- Create a new aggregate (Subscription)
- Raise events from it : UserFollowed and UserUnfollowed
- Create a decision projection for it
- Implement replay of events (event sourced aggregate)

In brief : C of CQRS + Event Sourcing



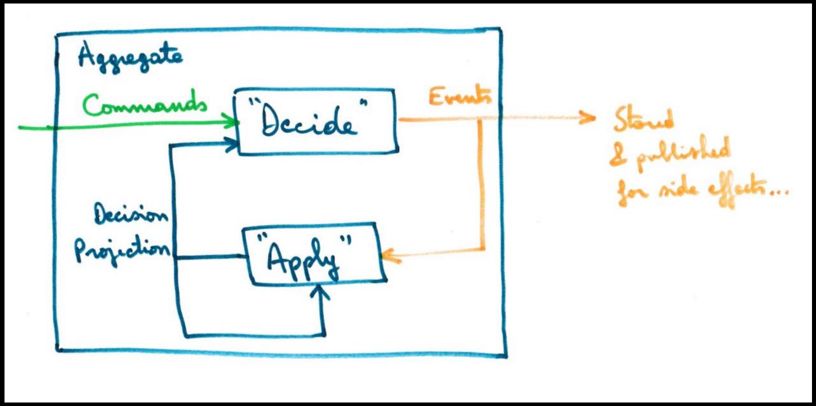
User unfollowed

Unfollow user

Subscription

Follow user

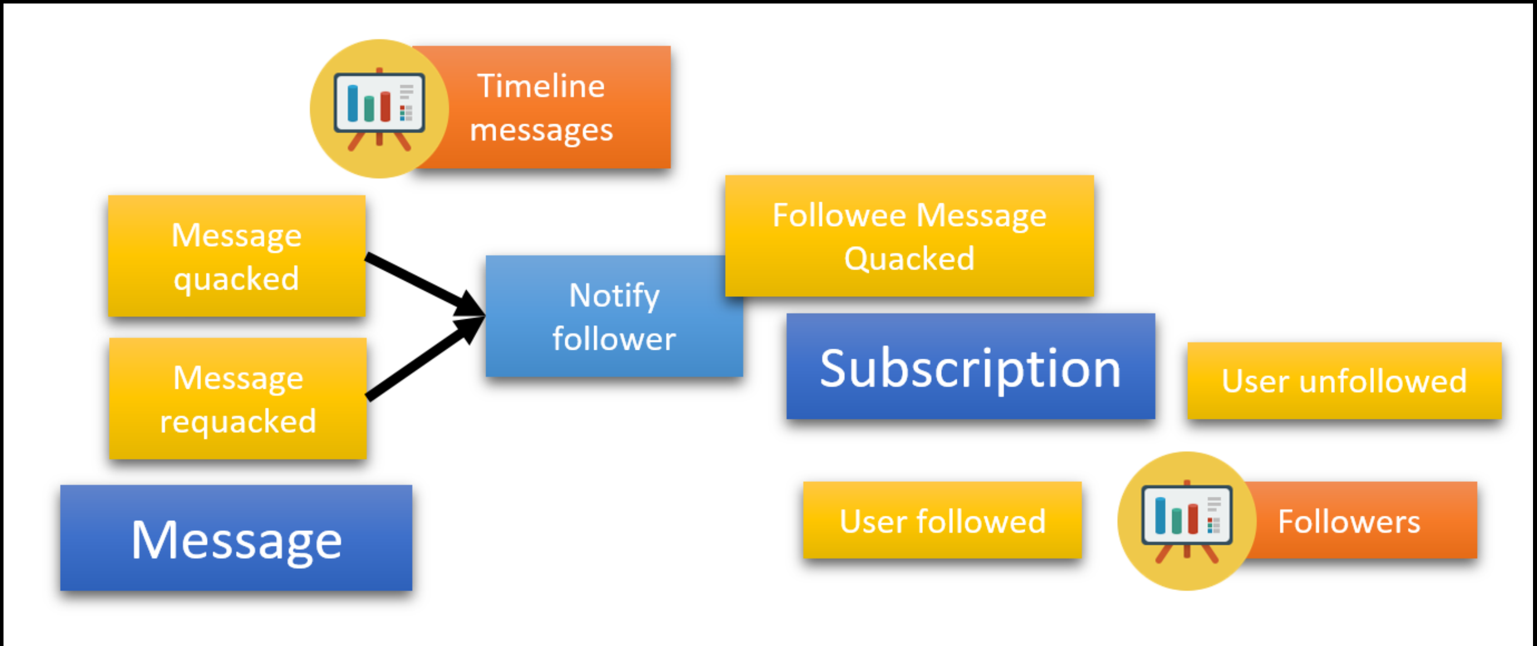
User followed



4. AGGREGATES INTERACTION

WHAT WE WILL LEARN

- COORDINATE SEVERAL AGGREGATES TO LIMIT COUPLING
- CONCEPT OF " EVENTUAL CONSISTENCY"



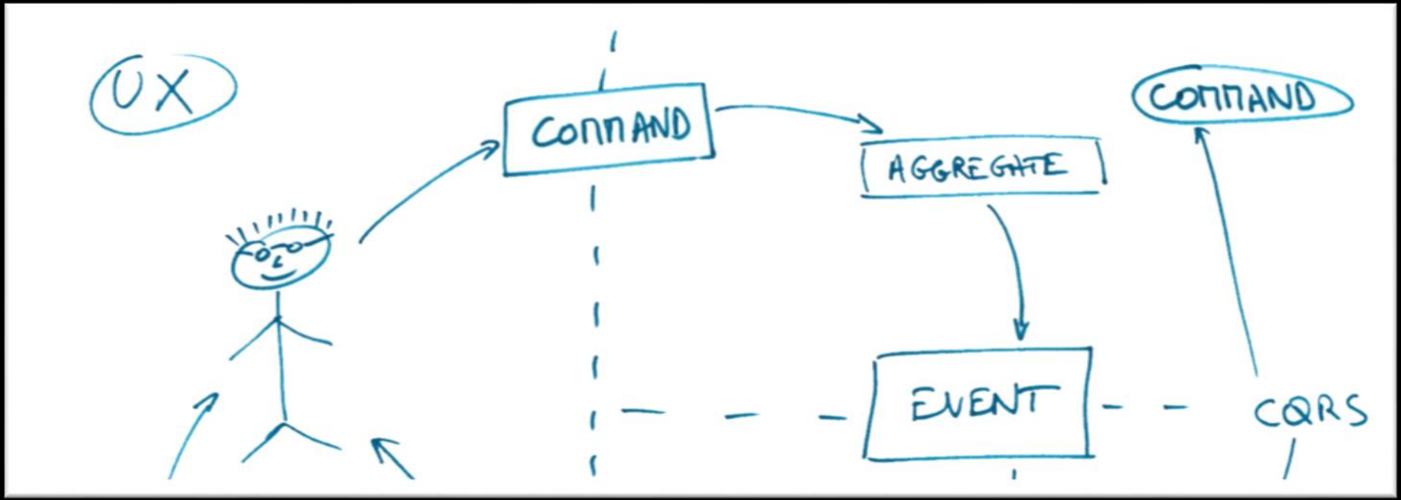
5. COMMAND HANDLER

WHAT WE WILL LEARN

- INTEGRATE PREVIOUS CODE FROM MESSAGE & IDENTITY CONTEXTS IN A COMMAND
- WRITE SOME WEB INFRASTRUCTURE CODE EXECUTING THE COMMAND

⇒REQUEST REST TO EXECUTE DELETE MESSAGE COMMAND, WITH SESSION VALIDITY VERIFICATION

NB : NO TESTS FOR THIS STEP FOR NOW…



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THANKS!

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