



#QConNewYork

# Java 8 in Anger

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# Java 8 has many new features

- JDBC 4.2 introduces new features.
- Java DB
  - JDK 8 includes Java DB 10.10.
- [Networking](#)
  - The class `java.net.URLPermission` has been added.
  - In the class `java.net.HttpURLConnection`, if a security manager is installed, calls that request to open a connection require permission.
- [Concurrency](#)
  - Classes and interfaces have been added to the `java.util.concurrent` package.
  - Methods have been added to the `java.util.concurrent.ConcurrentHashMap` class to support aggregate operations based on the newly added streams facility and lambda expressions.
  - Classes have been added to the `java.util.concurrent.atomic` package to support scalable updatable variables.
  - Methods have been added to the `java.util.concurrent.ForkJoinPool` class to support a common pool.
  - The `java.util.concurrent.locks.StampedLock` class has been added to provide a capability-based lock with three modes for controlling read/write access.
- [Java XML - JAXP](#)
- [HotSpot](#)
  - Hardware intrinsics were added to use Advanced Encryption Standard (AES). The `UseAES` and `UseAESIntrinsics` flags are available to enable the hardware-based AES intrinsics for Intel hardware. The hardware must be 2010 or newer Westmere hardware. For example, to enable hardware AES, use the following flags:  
-XX:+UseAES -XX:+UseAESIntrinsics  
To disable hardware AES use the following flags:  
-XX:-UseAES -XX:-UseAESIntrinsics
    - Removal of PermGen.
    - Default Methods in the Java Programming Language are supported by the byte code instructions for method invocation.
- [Java Mission Control 5.3 Release Notes](#)
  - JDK 8 includes Java Mission Control 5.3.

# Lambda Expressions

(...and Streams)

# Real World Application



TWITTER  
FIREHOSE

CONNECT  
&  
EXTRACT

MOOD  
SERVICE

OVERALL  
MOOD  
MVC

HAPPINESS  
MVC

USER  
SERVICE

LEADERBOARD  
MVC



# Play Along

<https://github.com/trishagee/sense>

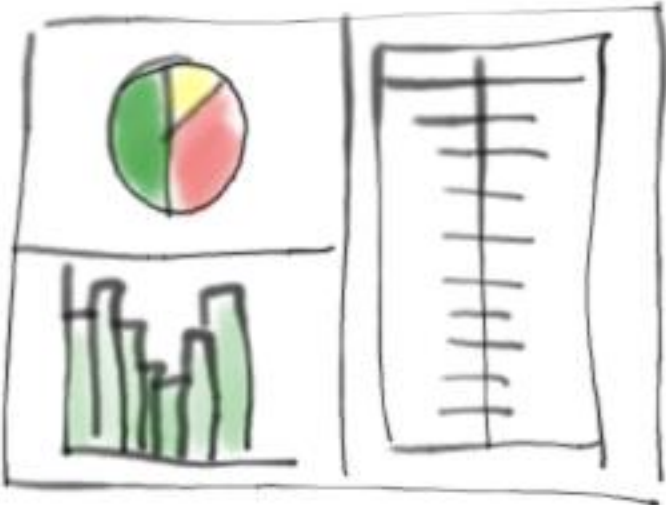


# Leader board: Top Tweeters



# Twitter Leaderboard

USER  
STUB  
SERVICE



# Twitter Leaderboard



**Mood: Happy, Sad or Both?**

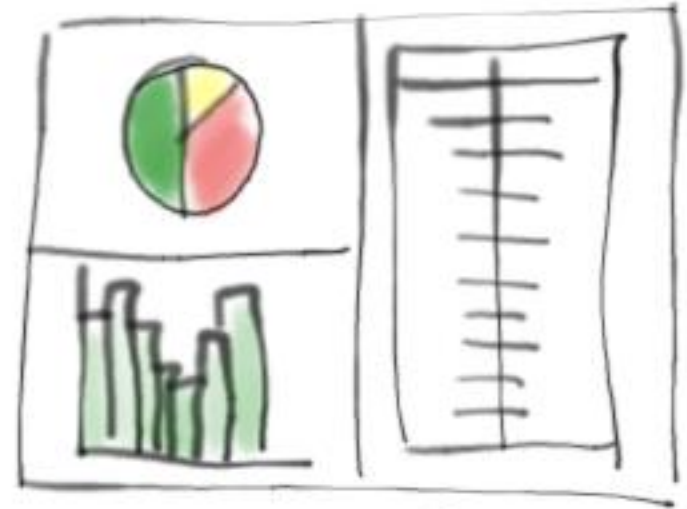


# Overall Mood

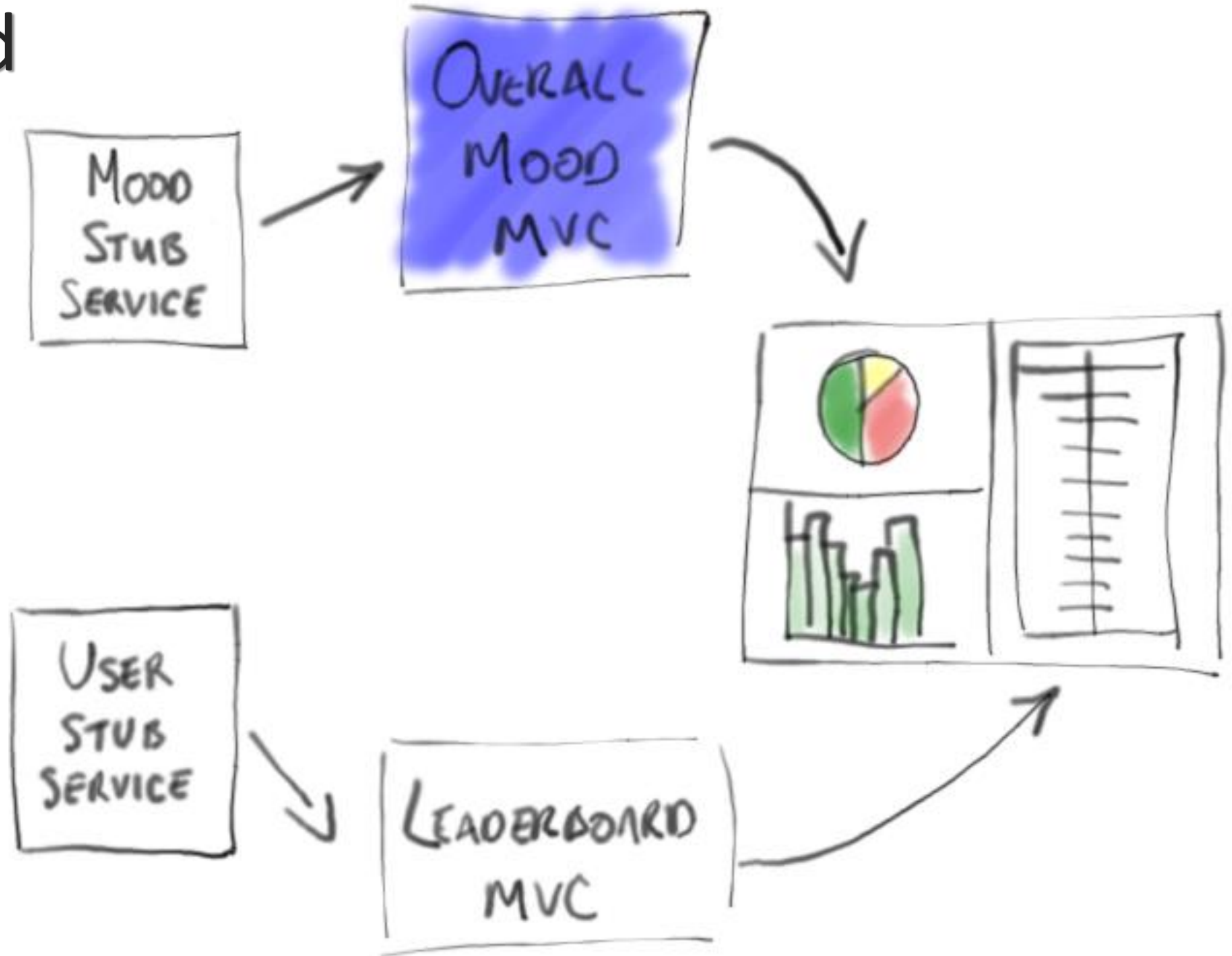
MOOD  
STUB  
SERVICE

USER  
STUB  
SERVICE

LEADERBOARD  
MVC



# Overall Mood

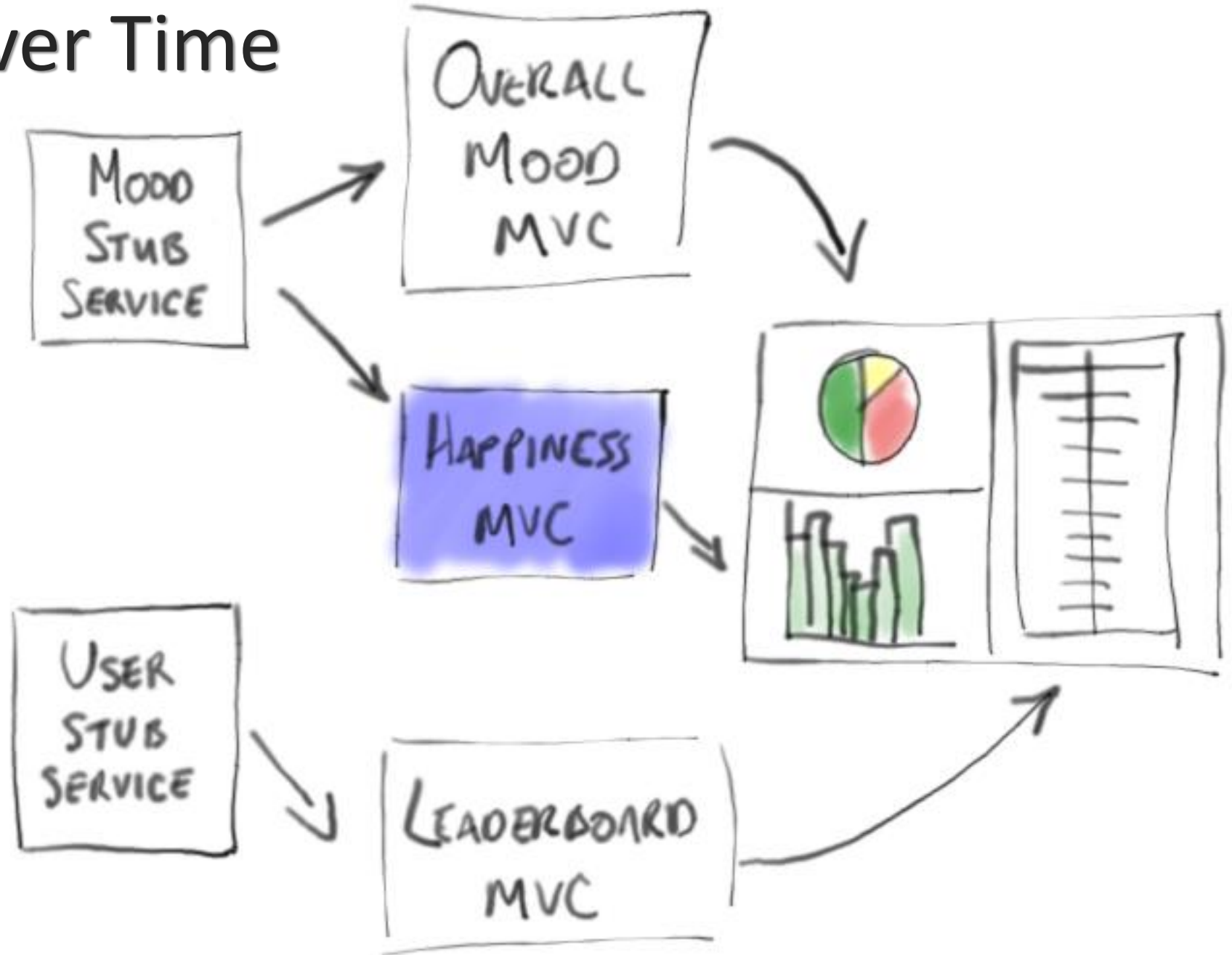




**Mood: Are We Getting Happier?**

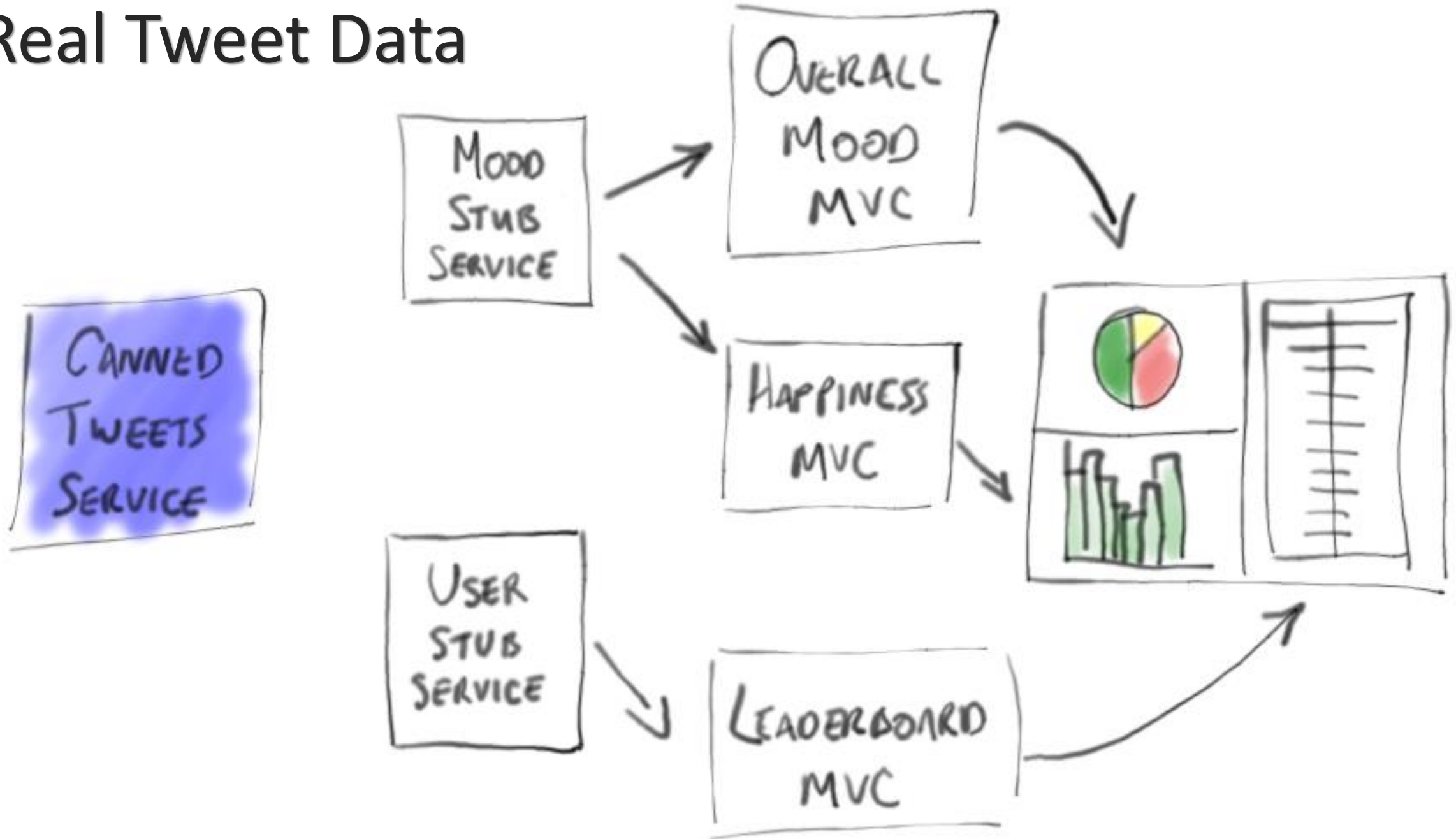


# Happiness Over Time



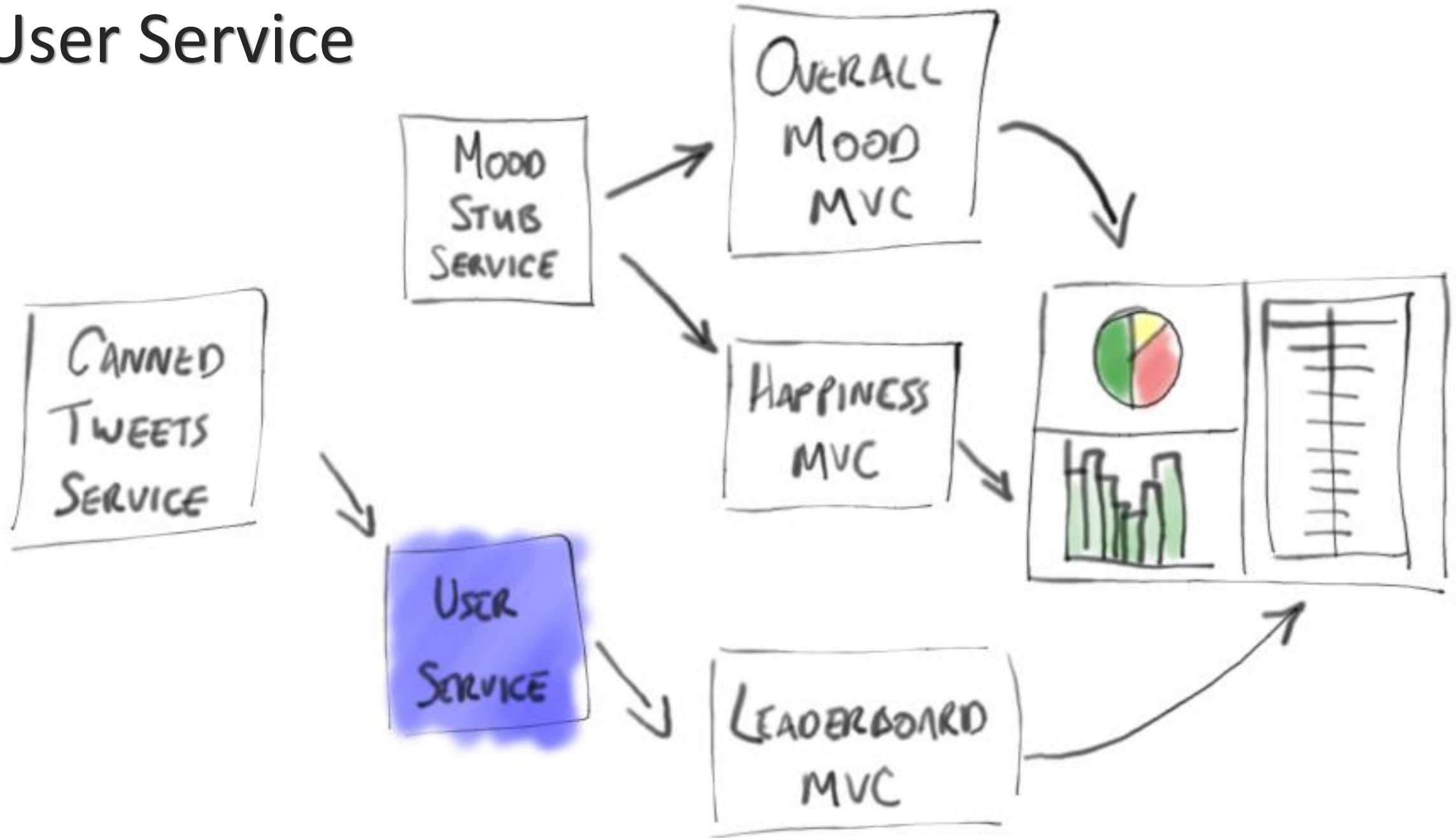
# Tweet Service: Publishing Real Twitter Data

# Real Tweet Data



# User Service: Extracting the Twitter Handle

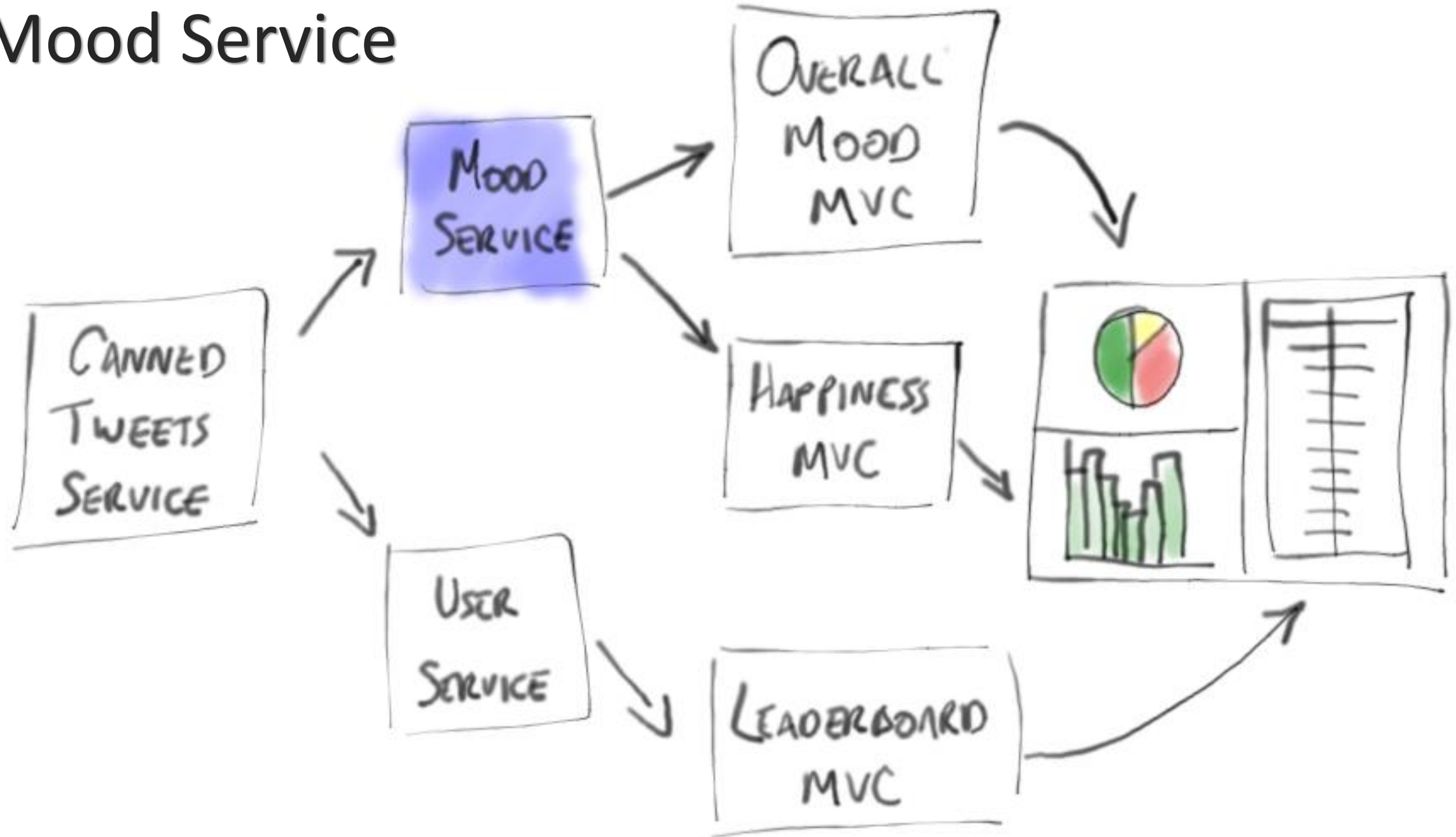
# User Service



# Mood Service: Figuring Out the Tweet Mood

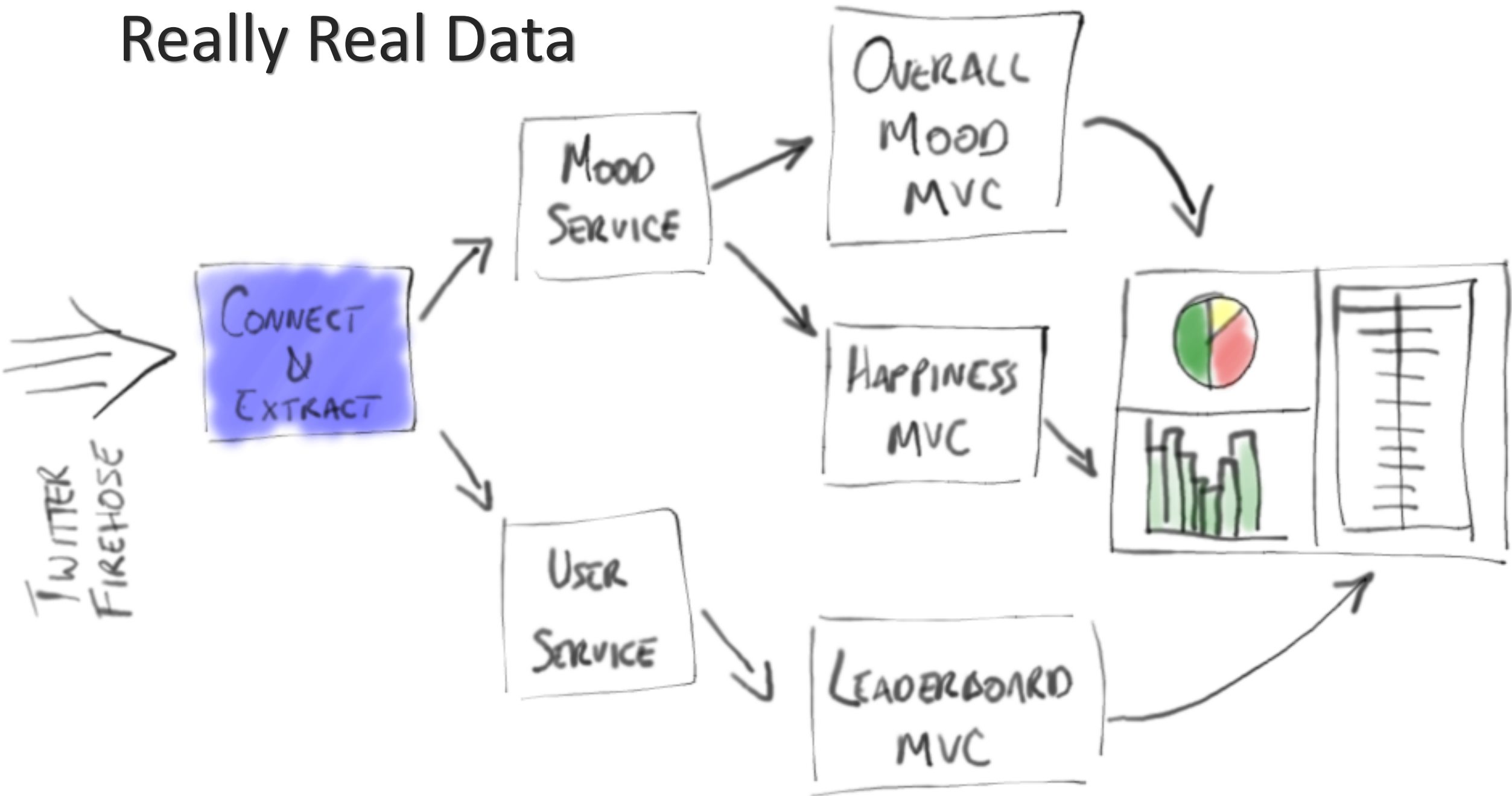


# Mood Service



Now, Fraught With Danger...

# Really Real Data



What have we learnt?

# What have we learnt?

- How to use Streams to manipulate data
- Where Lambdas might simplify your code
- Basics of building a JavaFX UI

# Resources

<http://bit.ly/Java8InAnger>

# Questions?

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