

# A Lazy Developer's Approach to Building Real-Time Web Applications

**FOSDEM**'24

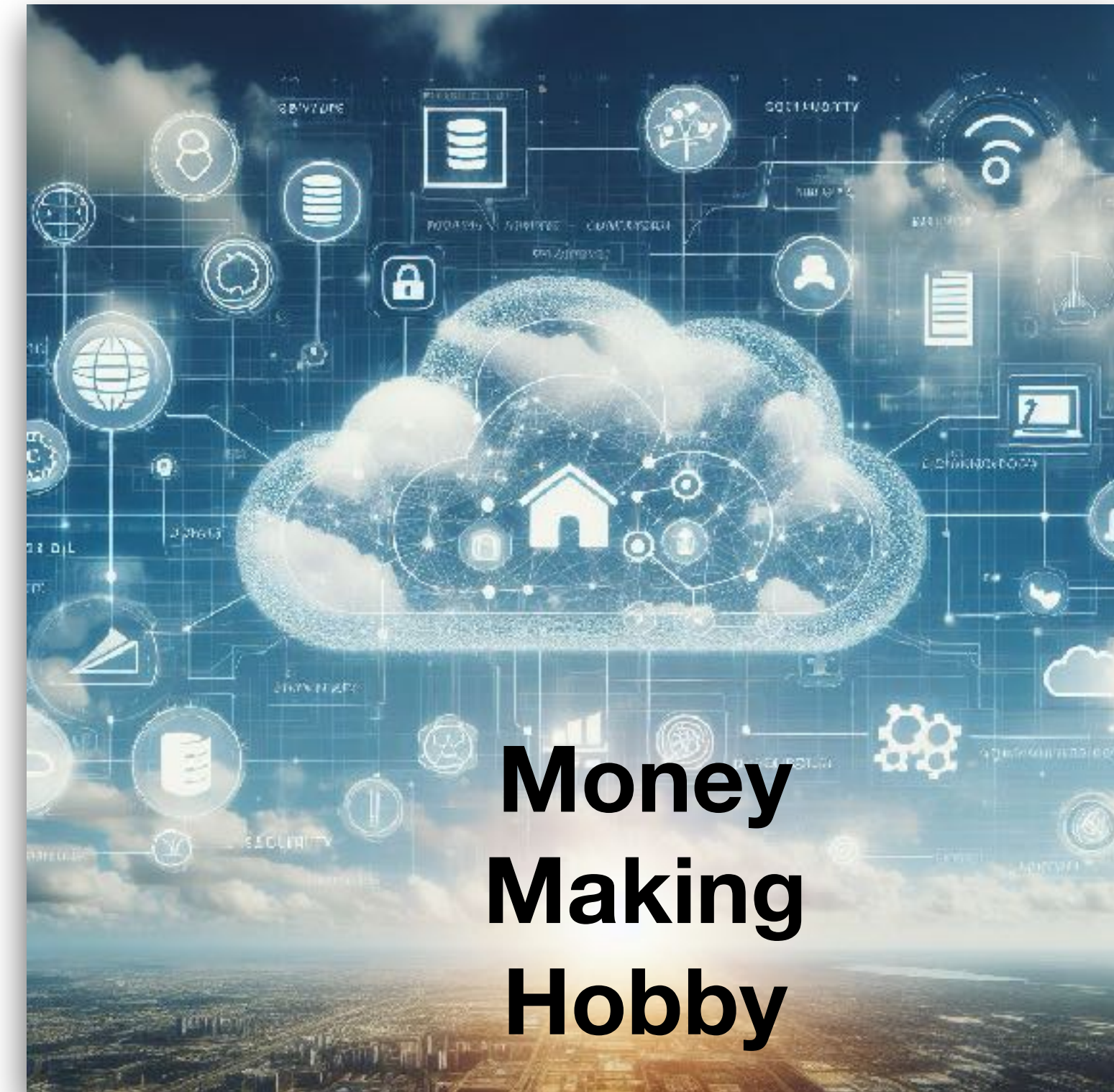


**MARKUS RENSCHLER**

# Markus Renschler



**Musician**



**Cloud Solution Architect**

# The Challenge

- Play songs
- Have people sing along
- Song books „do not scale“
- Music stand software
- ... with API

**How to get lyrics to the people  
with minimum effort?**



# Demo

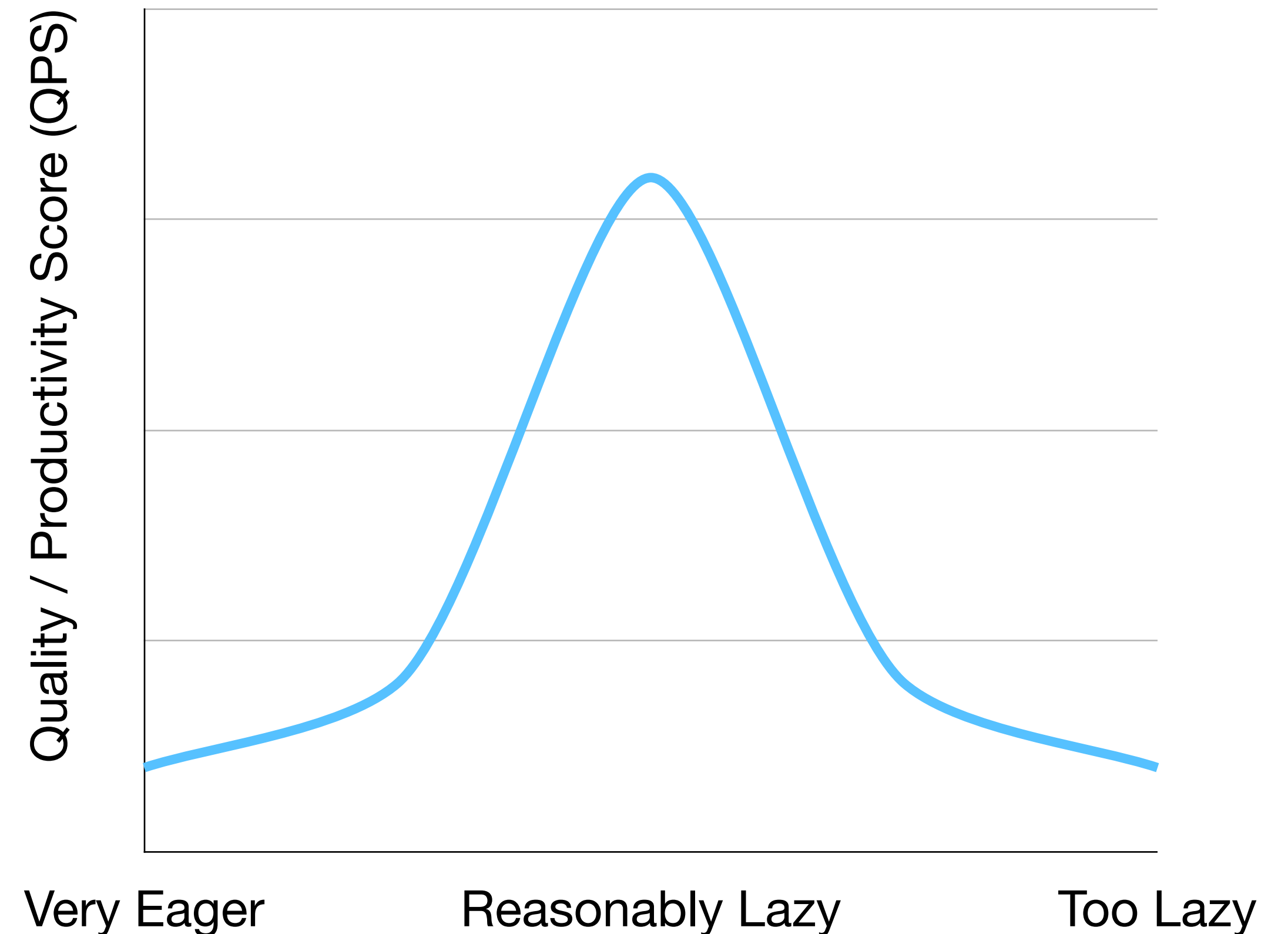


**Visit**

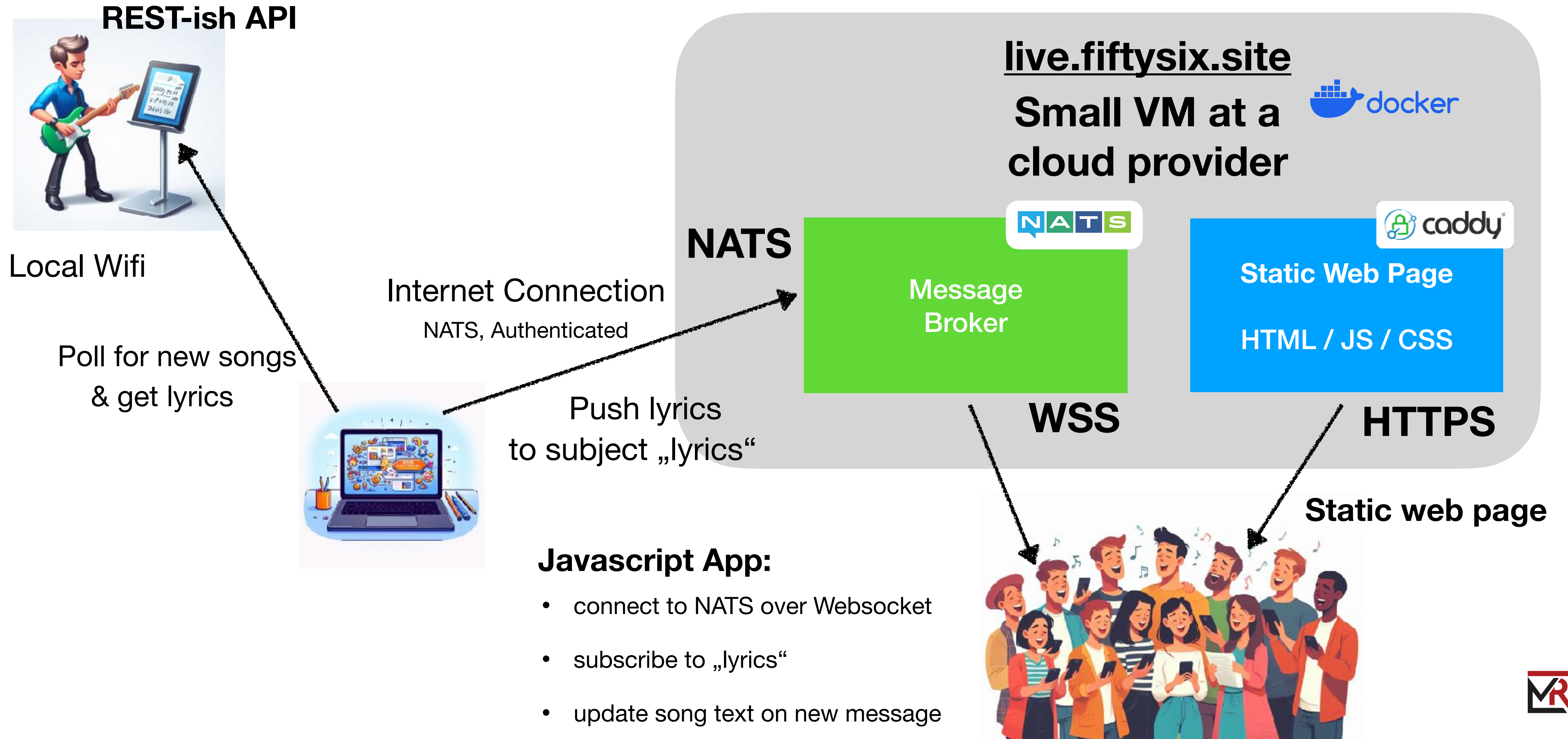
**<https://live.fiftysix.site>**

# Why being lazy matters

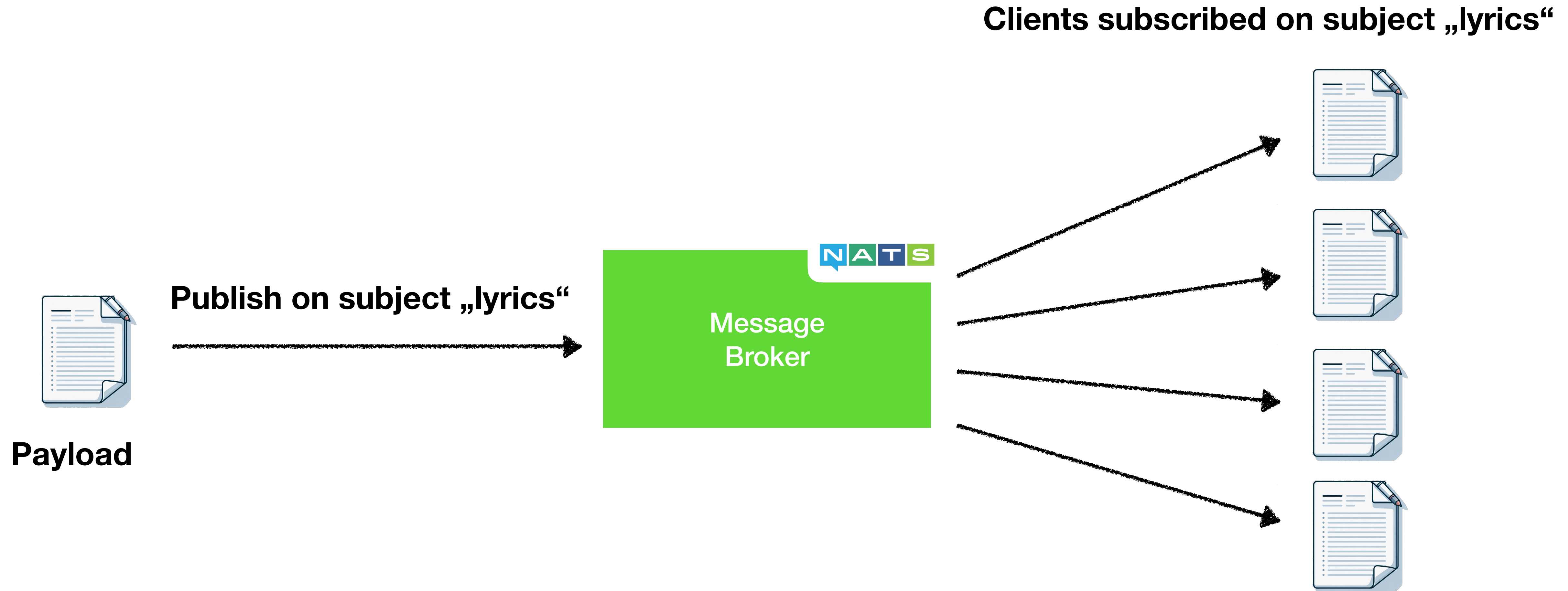
- **Too eager**  
complicated structures, boring to implement, hard to maintain, create code duplicates
- **Too lazy**  
getting nothing done
- **The sweet spot**  
lazy enough to search for easy solutions, eager enough to get things done



# Technical Approach



# Fan-Out Pattern



EXPLORER

- OPEN EDITORS
- NATS-CADDY [SSH: LIVE.FIFTYSIX.SITE]
  - demo-publisher
  - server
    - .private
    - caddy-conf
    - caddy-data
    - caddy-wwwroot
    - nats-conf
    - nats-data
    - .env
    - .gitignore
    - docker-compose.yaml**
    - README.md
    - README.md

# Demo ...

- Show All Commands ⌘ P
- Go to File ⌘ P
- Find in Files ⌘ F
- Toggle Full Screen ⌘ F
- Show Settings ⌘ ,



# NATS Configuration

```
authorization {
  default_permissions = {
    | subscribe = [ "lyrics", "lyrics.>" ]
  }

  LYRICS_PUB = {
    | publish = [ "lyrics", "lyrics.>" ]
  }

  users = [
    | { user: anon-user },
    | { user: publisher, password: $2a$...0nrVS, permissions: $LYRICS_PUB }
  ]
}

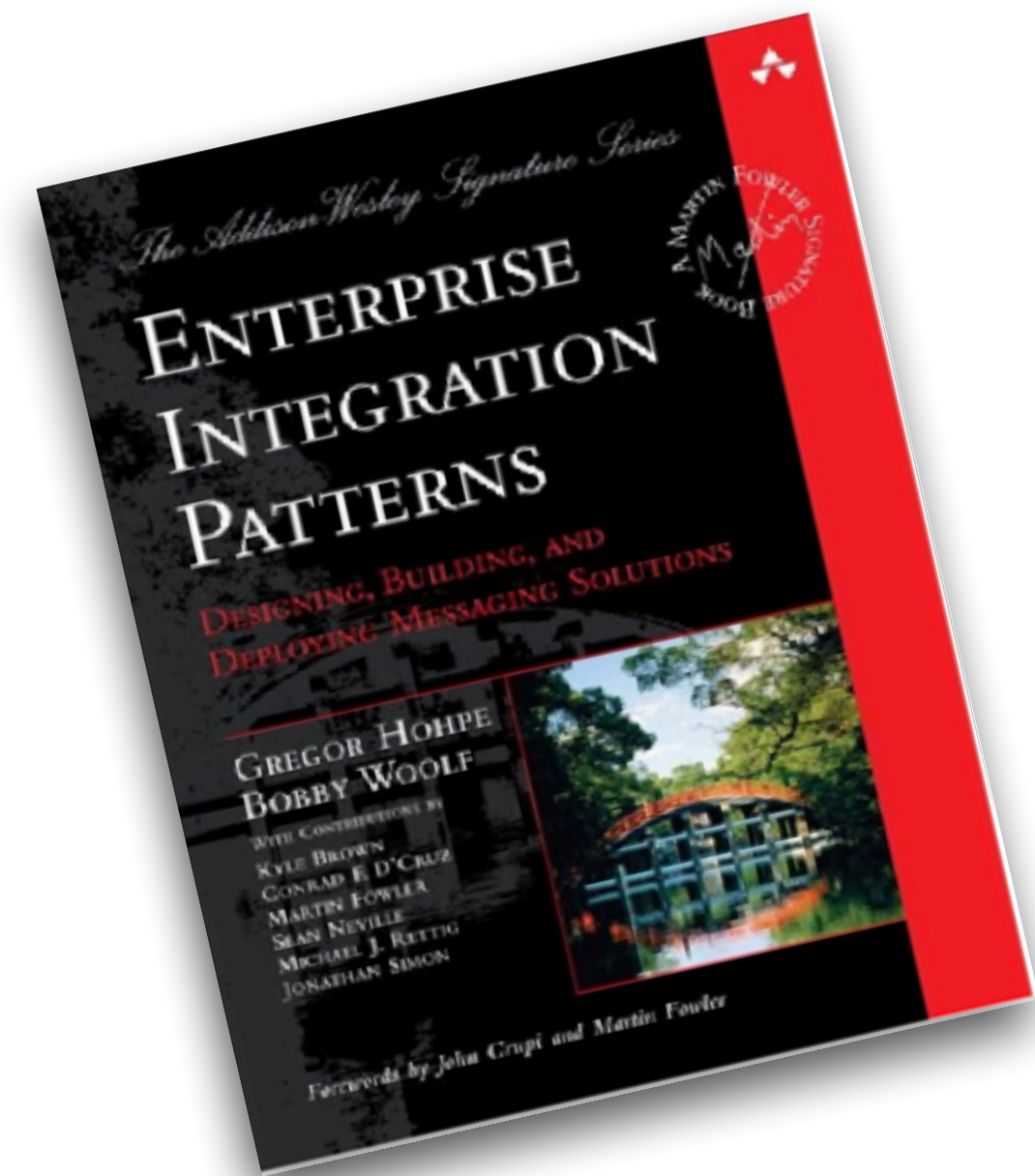
websocket {
  port: 8443
  compression: true
  handshake_timeout: "5s"
  tls {
    | cert_file: "/data/tls/live.fiftysix.site.crt"
    | key_file:  "/data/tls/live.fiftysix.site.key"
    | timeout:   "5s"
  }
  no_auth_user: anon-user
}
```

# Read on, here ...

- [github.com/au-ee/fosdem-lyrics/](https://github.com/au-ee/fosdem-lyrics/)
- [nats.io](https://nats.io) 
- [caddyserver.com](https://caddyserver.com) 

## Alternative message broker

- [emqx.io](https://emqx.io) (MQTT / Websockets)



Gregor Hohpe, Bobby Woolf  
**Enterprise Integration Patterns:  
Designing, Building, and Deploying  
Messaging Solutions**  
Addison-Wesley Professional, 2003 (!)

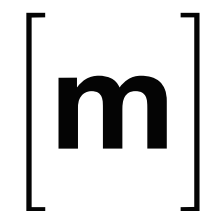
[www.enterpriseintegrationpatterns.com](http://www.enterpriseintegrationpatterns.com)



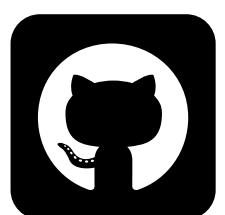
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**#LazyDevApproach**

