



# Navigating Tech Decisions

A Startup Survival Guide

2024-02-22

ConFoo.CA  
DEVELOPER CONFERENCE

# Hi, I'm Toby! You might know me from ...



2004



2014



FRONTASTIC.CLOUD  
Frontastic closes Pre-Series-A over 1.8 million euros -  
FRONTASTIC – agile Frontend as a Service

2019

- Web since 1996, PHP since 2000
- Principal Engineer at commercetools Frontend

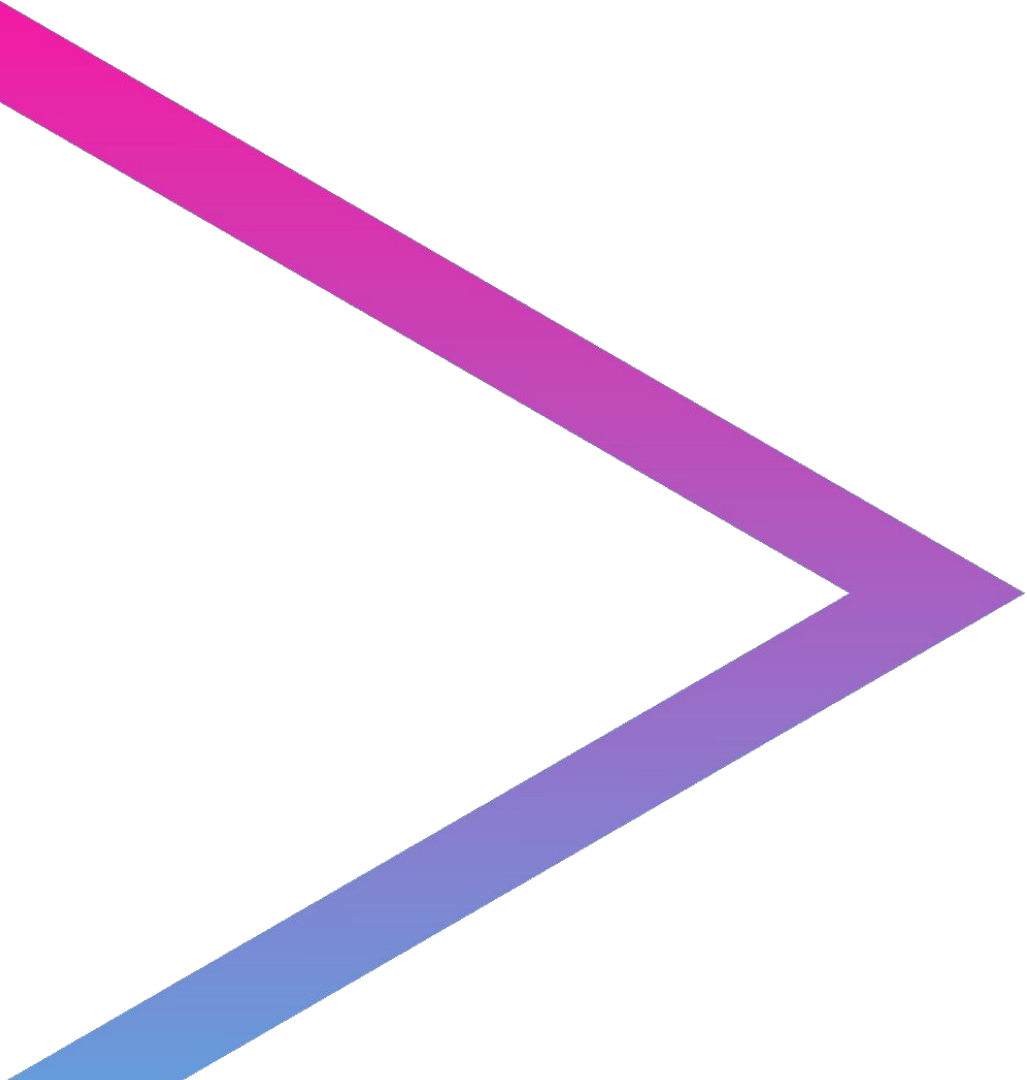
## Disclaimer

This talk contains anecdotal knowledge.  
Do not take it as scientific evidence!



# Agenda

1. Background
  2. Startup life
  3. Tech stack
  4. Micro-services
  5. Make or buy?
  6. Technical debt
- 




Background

# Background: Frontastic

- Founded 2017
- Sold to commercetools in 2022
- Continues as commercetools Frontend

<https://commercetools.com/products/frontend>

# My roles in Frontastic

- Co-Founder
  - Implementer
  - Co-CTO
  - Principal Engineer
  - Sales, Pre-Sales, Support, Marketing, Software Developer, Mentor, Mother, ...
- 



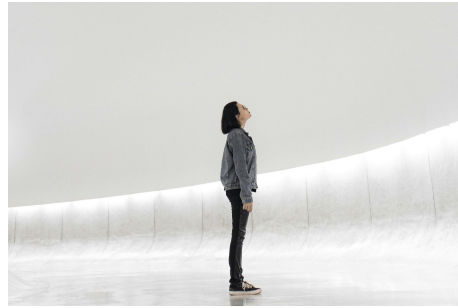
**Startup life**



# How a startup works ...



# ... how it actually works



# Product market fit

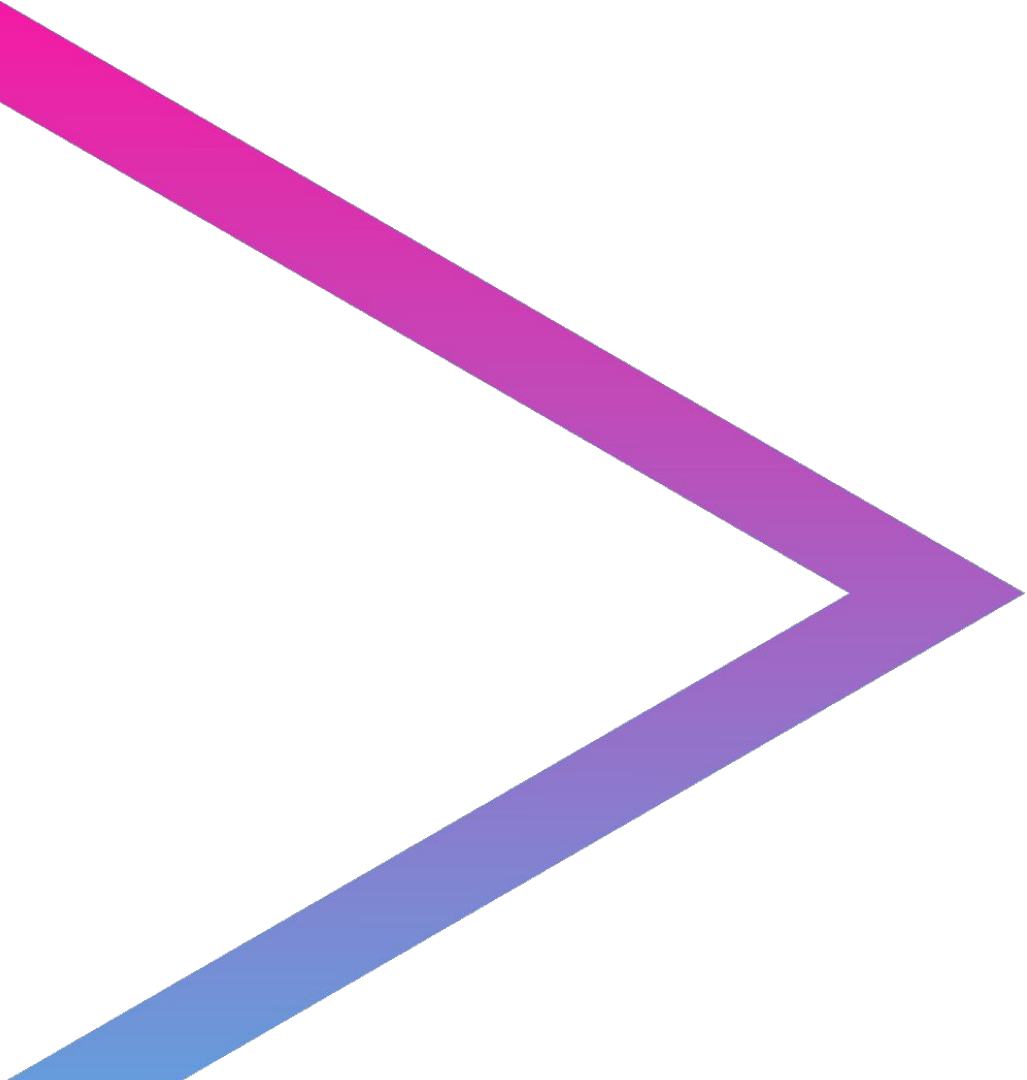
Existing customers

Adapt product



New customers

Investors



Tech stack

# The tech stack

HTMX

LLaMA 2

Rust



Vector  
DB

Zig

Astro

# The tech stack

HTMX

Rust

LLaMA 2

Vector  
DB

Zig

Astro



# Tech maintenance startup reality

- Imagine
  - You did 2 investor pitches today
  - You had an on-site workshop with a potential customer
  - You hunted a Heisenbug in between
  - You went for dinner with the team
  - At 3am you get called because a customer is down

→ this is when you need to maintain your tech stack.

The fancy technology that you use does not count.\*

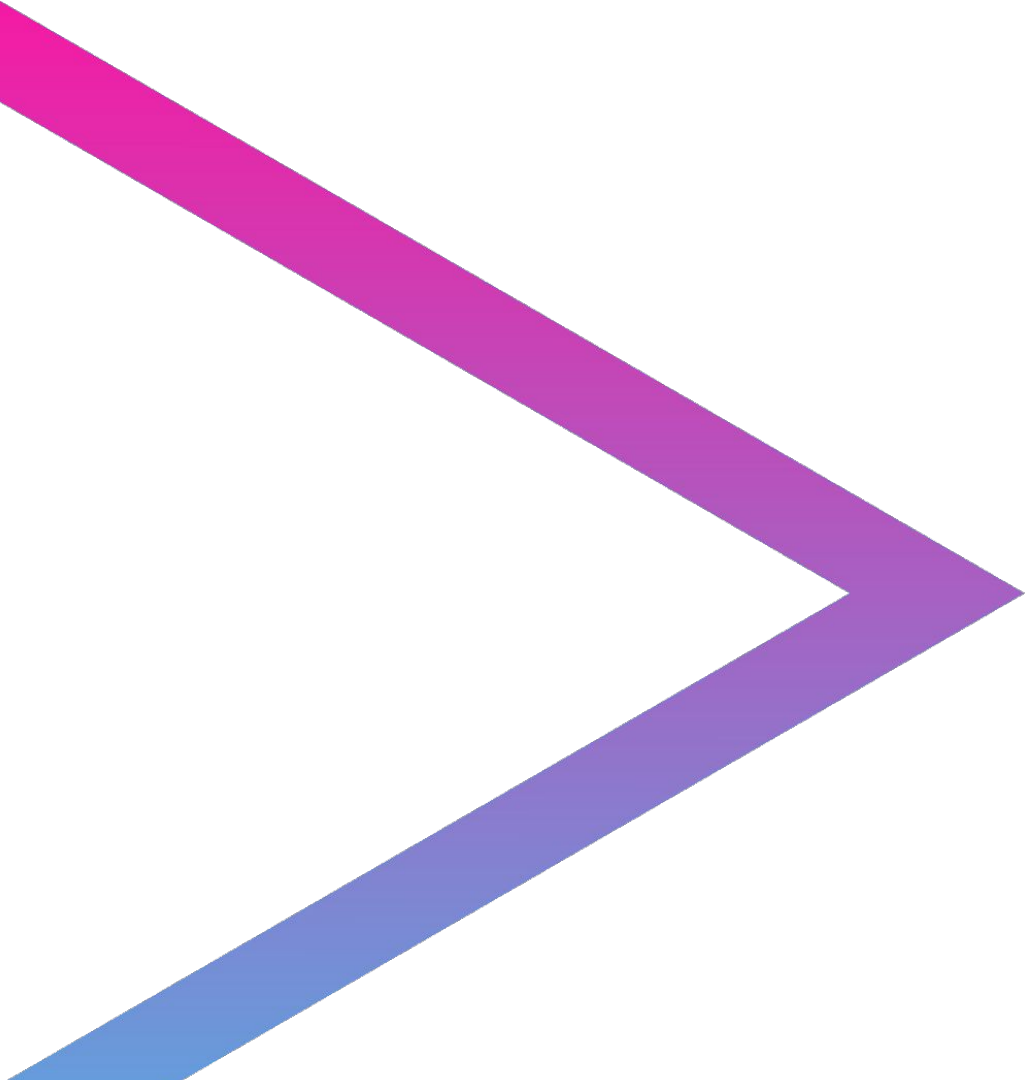
It's the fancy technology that you create that matters!





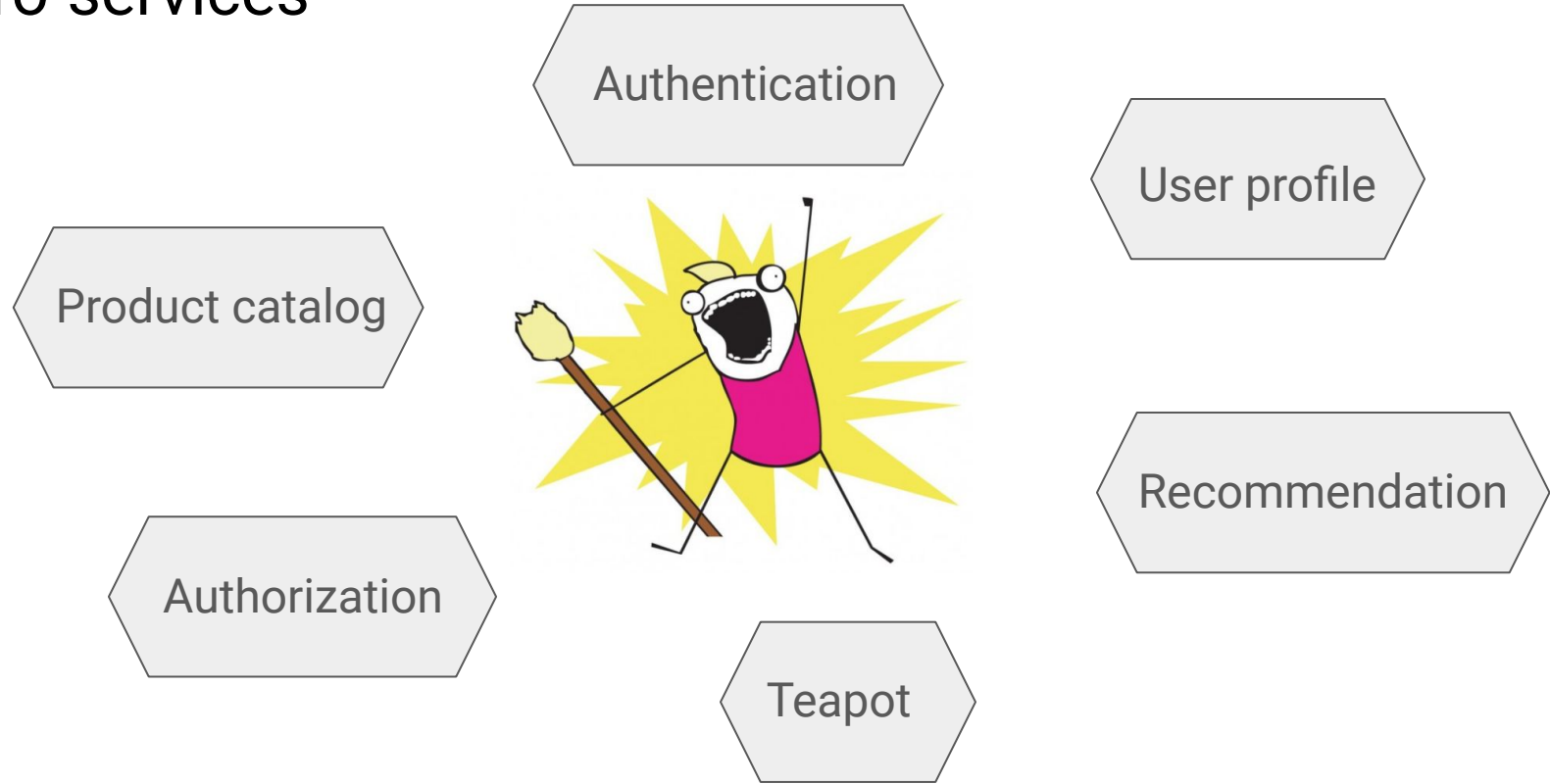
# Embrace boredom

- The most boring technology is where you excel
- Boring technology is where you can juggle fast
- The product you imagine is not the product you will have next week
- Consider: “Innovation tokens”  
<https://mcfunley.com/choose-boring-technology>



**Micro-services**

# Micro-services



# But wait ...


What are the actual reasons to have micro-services?

- Small, focussed teams
- Scale services independently
- Clear boundaries between teams
- Technology independence of teams

Which of these apply to your situation?



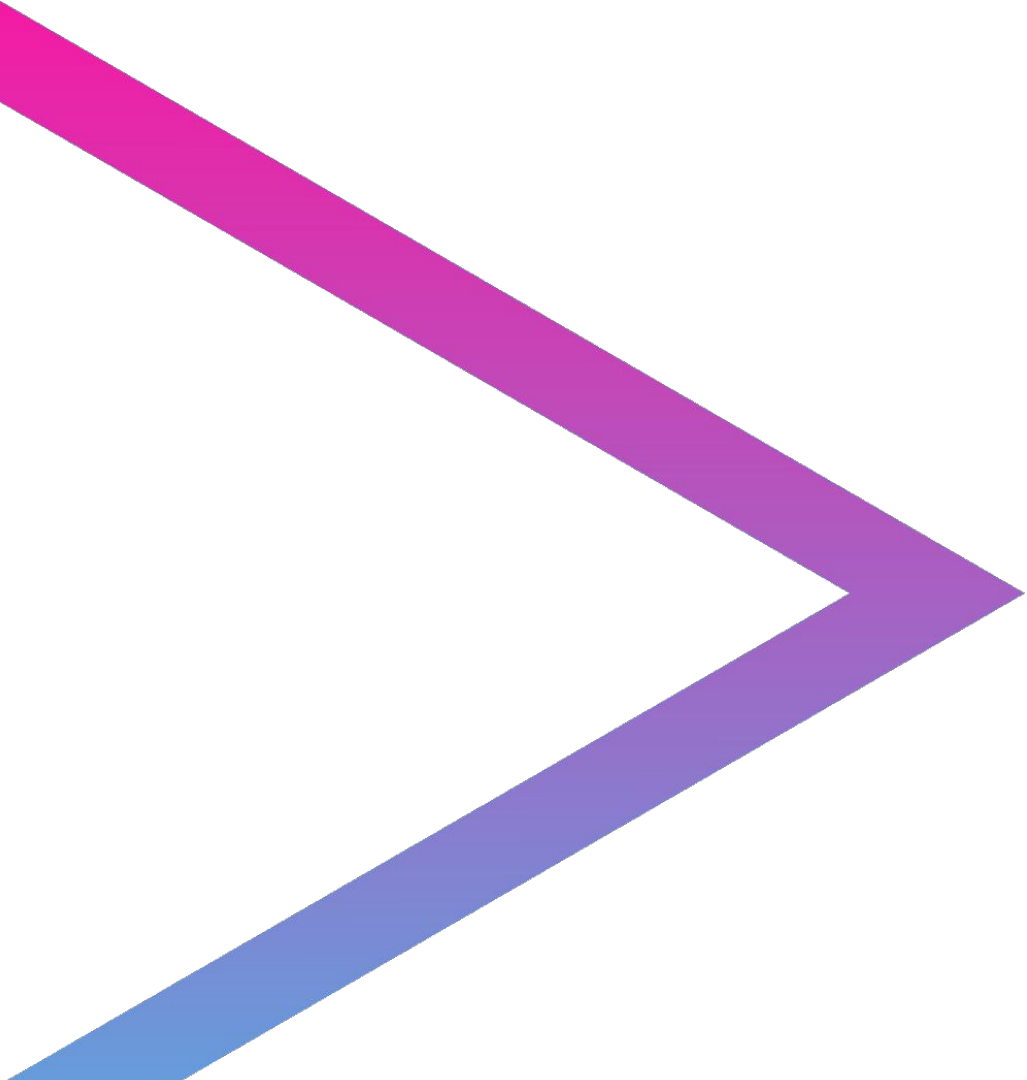
# Drawbacks of micro-services

- Increased complexity in
    - Inter-service communication
    - Orchestration & operation
    - Testing
  - Decreased flexibility
  - Debugging overhead
- 

# What does that mean?

~~Monolith!~~

- Define services for
  - Unique scaling requirements
  - A dedicated team
  - Inevitable unique tech stack
- Make it easy to extract services later



Make vs. buy

# Make or buy?





# Make or buy?

## Make

- Your core domain
- What distinguishes you



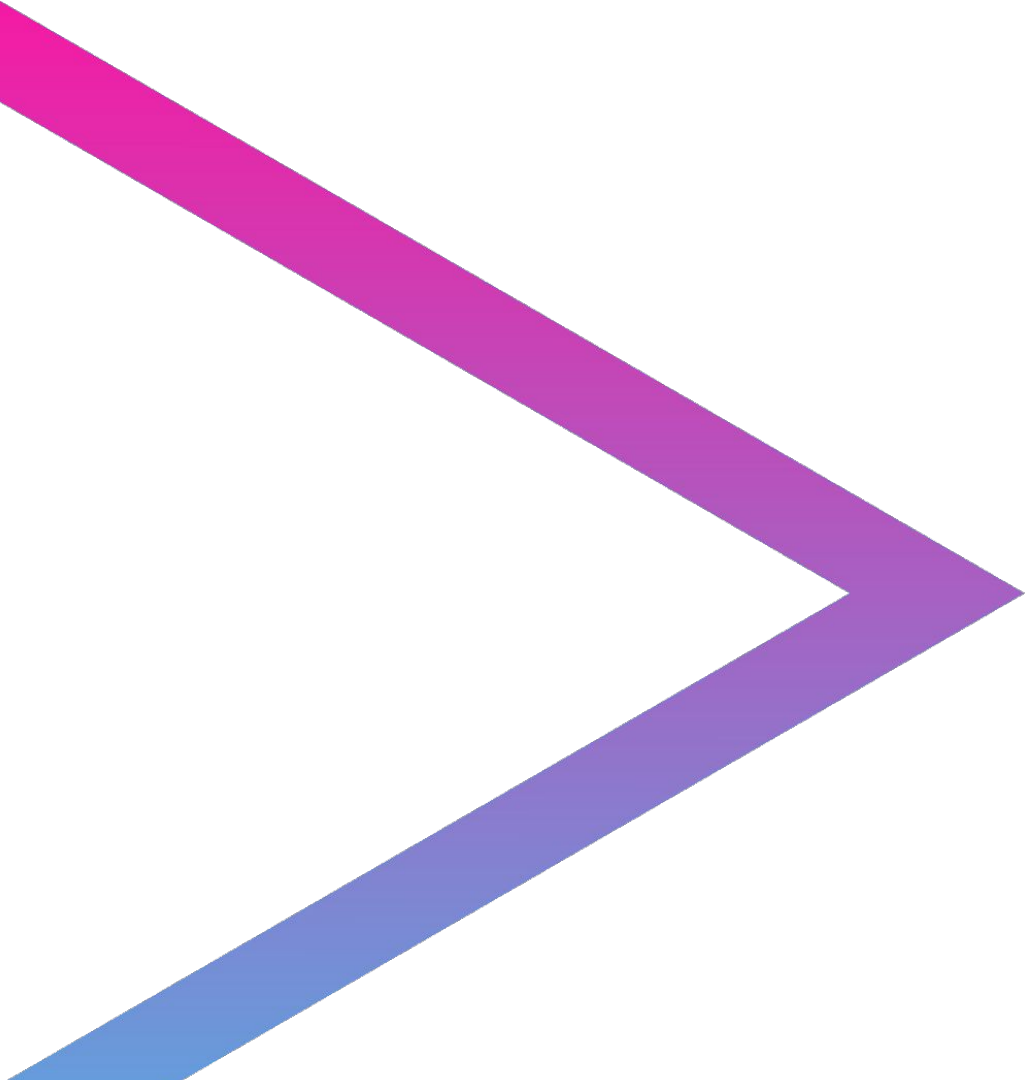
Focus!

## Buy

- Side-services
- What perfectly suits you
- What you can afford



Prepare to replace!




Technical debt

# Technical debt

What do you associate with technical debt?

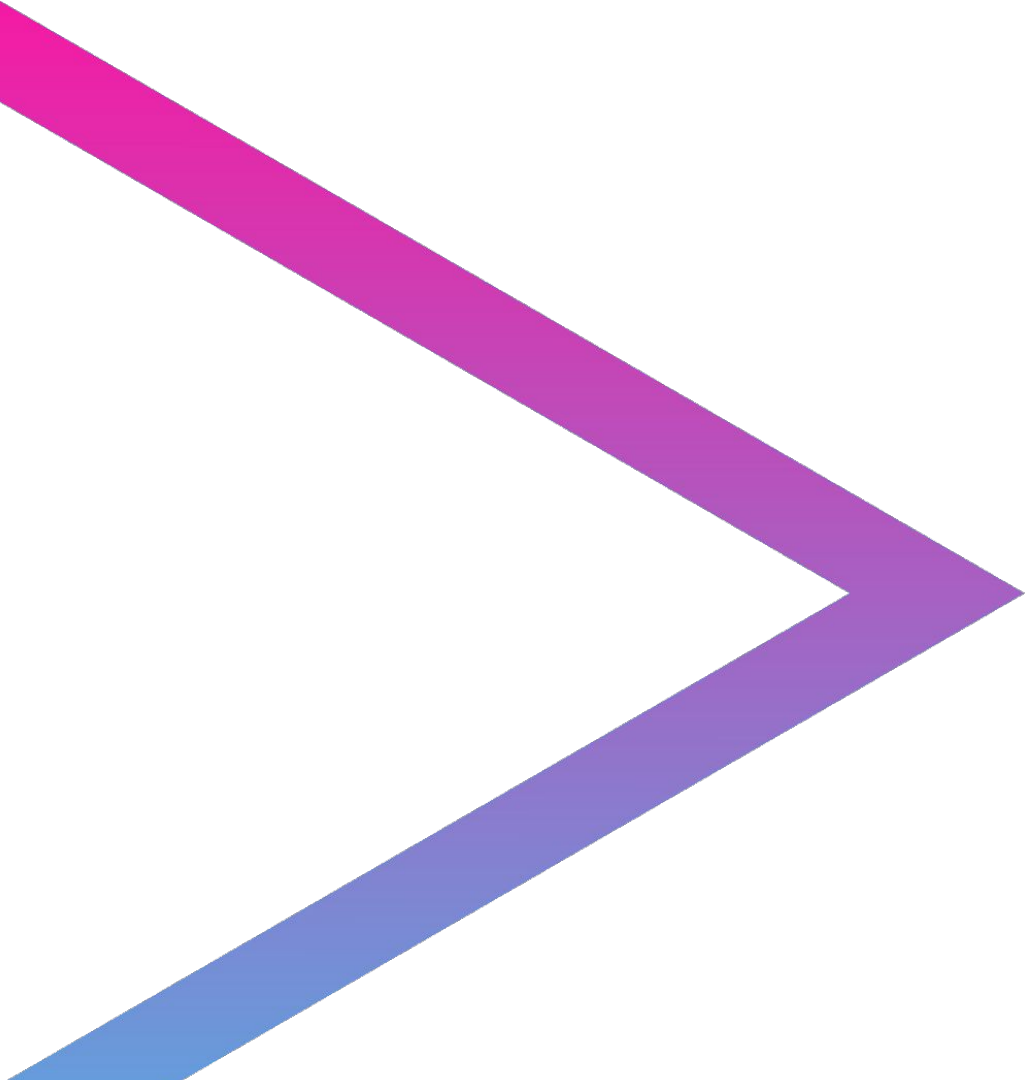


# Technical debt

- Any investment in your startup is “debt”
  - So your **technical** debt is an investment
  
  - Don't fear the technical debt
  - Be aware of it, make it conscious
  - Make yourself aware of paying the debt
  
  - Technical debt is a bet into the future (where you have more information)
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Technical debt is a bet on the future where you will have more information.





**Conclusion**

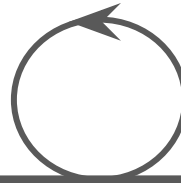
# What's the conclusion of all this?

~~Engineering in tech startup is pure horror.~~

Engineering in tech startup is a lot of fun!

- Excel in your comfort zone
- Focus on proper trade-offs
- Optimize your software for adaptability
- Business value in the focus


# ... how it actually works (revisited)

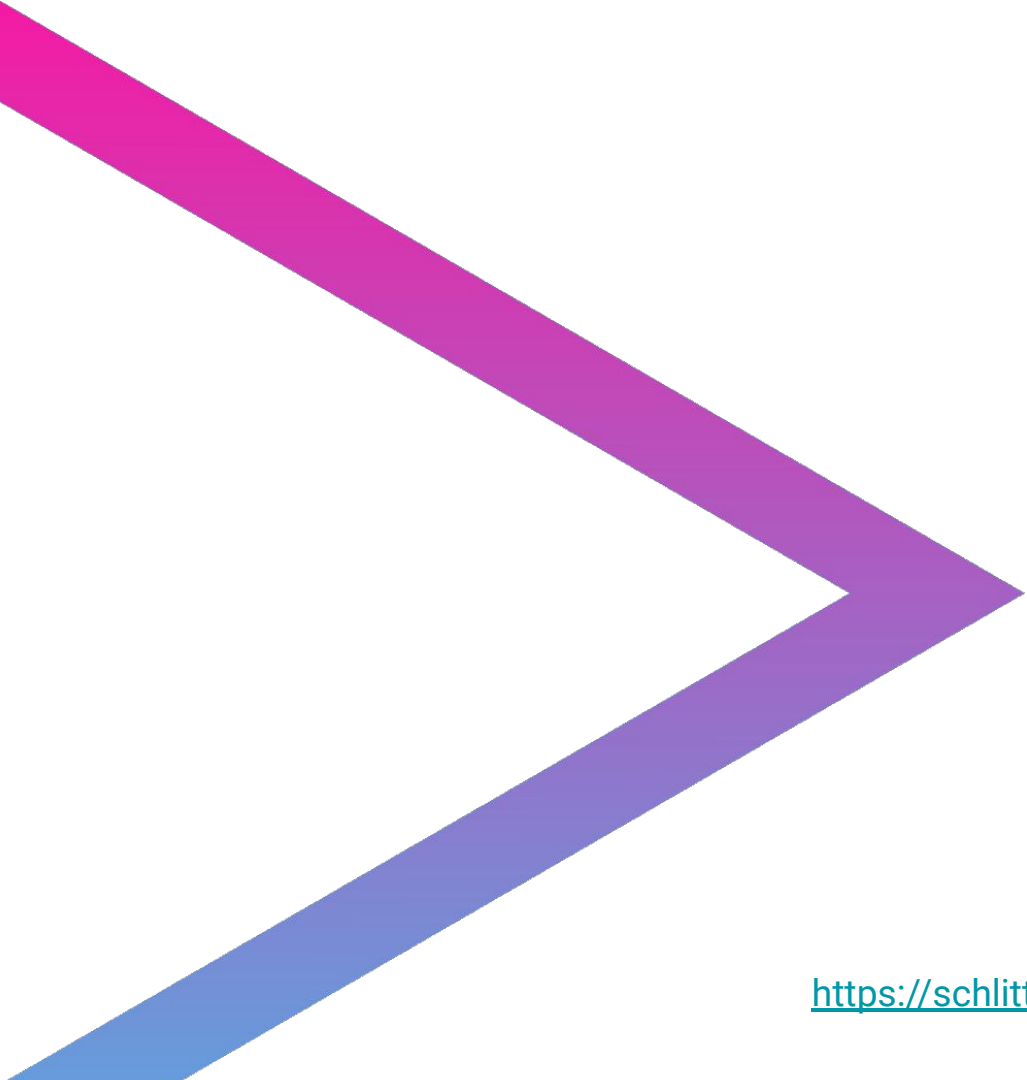


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# Summary

- Product-market-fit is the interesting phase
  - Embrace boredom
  - Prepare to change your software/product
    - Frequently
    - Fast
  - Accept technical debt, make it conscious
- 



Q/A

<https://schlitt.info>