



Gregorio Kusowski – Berlin Buzzwords 2019

50 SHADES OF LEGACY

hey car



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AGENDA

- ▶ Introduction
- ▶ Definitions
- ▶ History
- ▶ Comparison
- ▶ Post-Legacy
- ▶ Pre-Legacy
- ▶ Wrap up

Sag
hey
zu car.

hey car

Gebraucht. Geprüft. Gekauft

www.hey.car





- Engineering Manager at hey.car
- From Novo Hamburgo - Brazil
- Cycling/MechKeyboards/etc

Gregorio Kusowski

Definitions

**ARE WE BEING
GOOD
ANCESTORS?**

Jonas Salk

LEGACY SYSTEM

1. Outdated
2. Not so modern architecture, language, libraries or frameworks
3. "it works"TM *

*usually

LEGACY SYSTEM - EXAMPLES

- 1. Your bank that still uses COBOL**
- 2. That cron that runs daily and nobody wants to touch**
- 3. That old website you did, that uses jQuery**

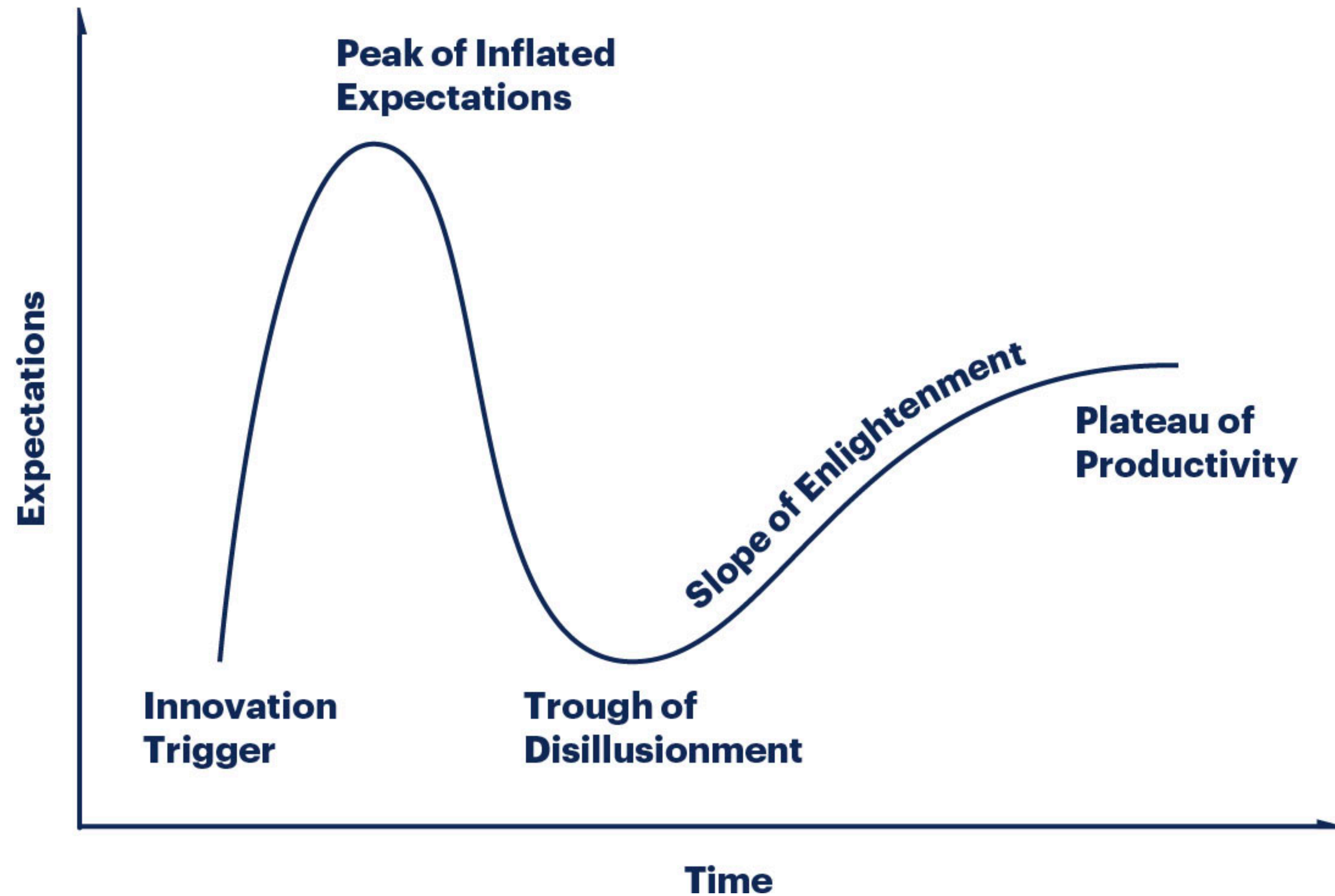
LEGACY SYSTEM - EXAMPLES

1. This new microservice, written in Swift, relies on Kafka, and is working so well you will not touch it in a couple years?
2. The SQL script I wrote two weeks ago to fix a problem because I don't know how to fix the issue, and I need to run every day?
3. My new microfrontend architecture?

BUZZWORD /'bʌzwɜːd/

a word or phrase,
often an item of jargon,
that is fashionable at
a particular time
or in a particular context

BUZZWORD



HYPES AND KEYWORDS

1. **React: virtual DOM, functional, components**
2. **TDD is Dead**
3. **Microservices: scalability, coupling, monolith**
4. **NoSQL: scalability, bigdata, high performance**
5. **Elixir: distributed, high performance, fault tolerant**

History

AI WINTER

- ▶ Turing Test
- ▶ LISP Machines
- ▶ High Expectation
- ▶ Low/No return
- ▶ First AI Winter - 1974 - 1980
- ▶ Second AI Winter - 1987 - 1993

Comparison

LEGACIES OUT THERE

1. Art: Van Gogh, Michelangelo, ...
2. Music: Bethoven, Bach, ...
3. Architecture: Niemeyer, ...
4. Computer Science: Ada Lovelace, Turing, ...
5. Software Engineering: Kent Beck, Martin Fowler, ...

COMPARISON



Jeremy Ashkenas ✓

@jashkenas

Follow



“Write open source software”, they said.

“It will be fun”, they said.



COMPARISON



27 likes

OCTOBER 7



artyom.miskaryan I dived into your god damn "language" just like that. The only difference, it was a pure shit. Wish you and my project owner hot days in hell.



2h Reply

HOW PEOPLE ARE ON THE INTERNET



LEGACY SYSTEM - EXAMPLES

1. This new microservice, written in Swift, relies on Kafka, and is working so well you will not touch it in a couple years?
2. The SQL script I wrote two weeks ago to fix a problem because I don't know how to fix the issue, and I need to run every day?
3. My new microfrontend architecture?

**WHAT HAPPENS WHEN REQUIREMENTS
ARE ADDED OR CHANGED?**

**TAKE EACH ITEM IN
ONE'S HAND AND ASK:
"DOES THIS SPARK JOY?"**

Marie Kondo

OTHER INDUSTRIES

1. Are you replacing your car when you get a flat tire?
2. What do we do if there is a crack in basement?
3. What your dentist says if you have a dental issue?
4. Your cholesterol is too high. Let's replace everything!

OTHER INDUSTRIES

1. Are you replacing your car when you get a flat tire?
2. What do we do if there is a crack in basement?
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4. Your cholesterol is too high. Let's replace everything!

**WE ARE JUST TOO YOUNG
AS INDUSTRY**

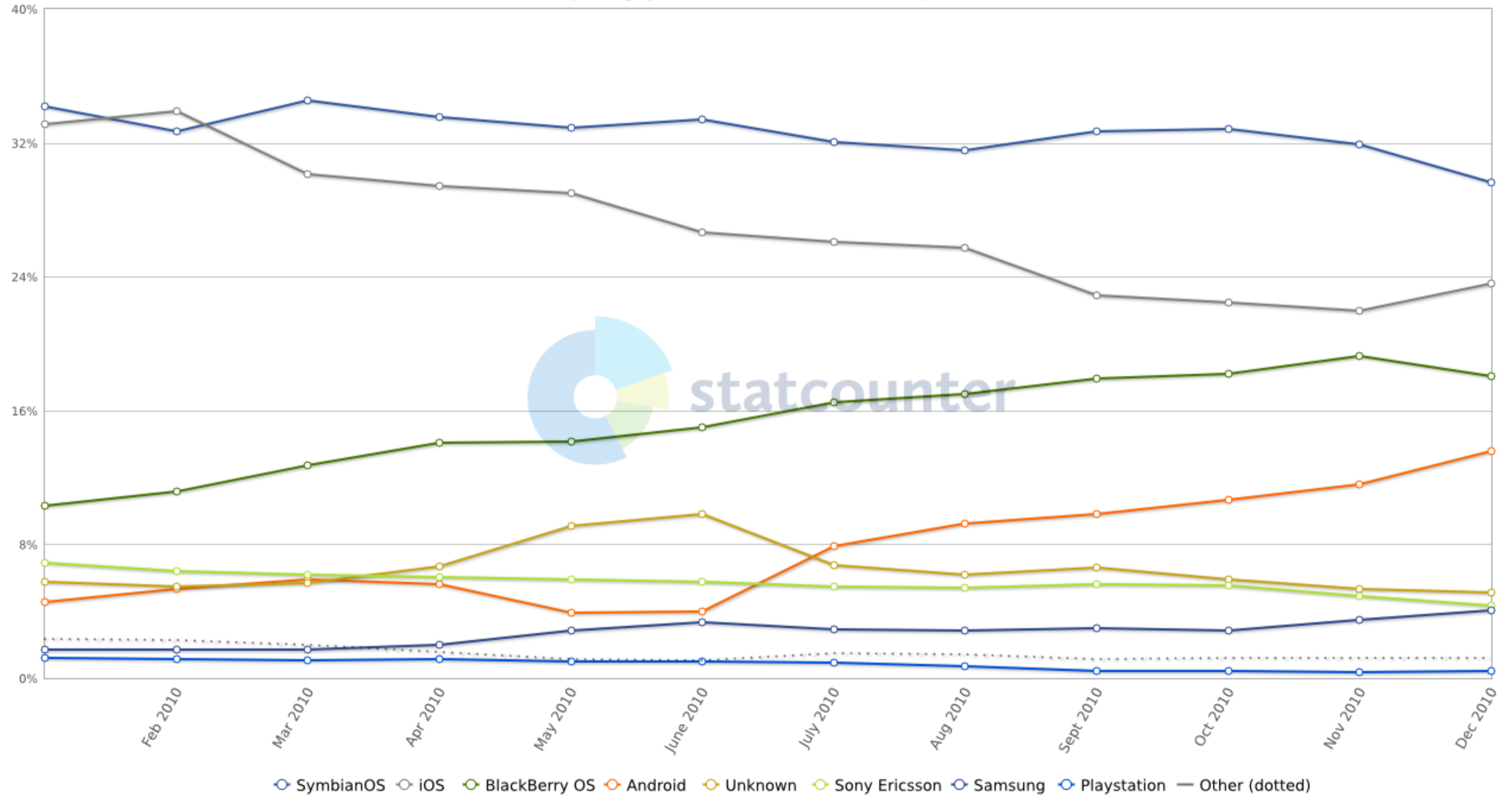
Post-Legacy

MOBILE APPLICATION CASE

1. Java 1.2
2. Proprietary Framework
3. No Application Marketplace support
4. Compiles to iOS, Android and other platforms
5. Provides a new UI kit
6. Targeting B2B

MOBILE APPLICATION CASE

StatCounter Global Stats
Mobile Operating System Market Share Worldwide from Jan - Dec 2010



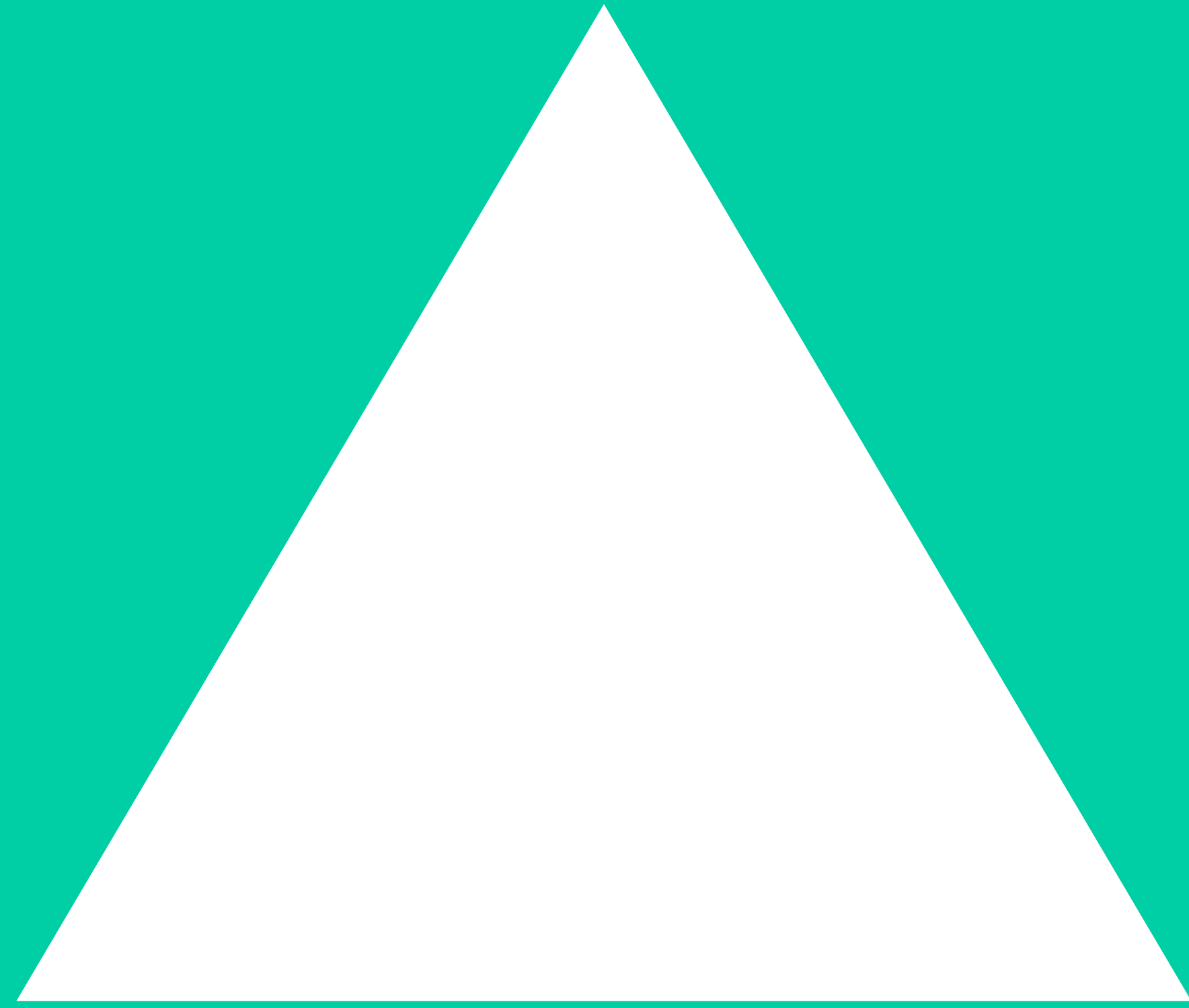
CONTEXT - 5W2H

1. What?
2. Why?
3. Who?
4. When?
5. Where?
6. How?
7. How much?

EMPATHY

1. How do you react to pressure?
2. How do you deliver against deadlines?
3. How do you feel when the unexpected kicks in?
4. What is your background?

Time



Quality

Cost

Social

Life

Family

Bills

Vacation

Time

Hobbies

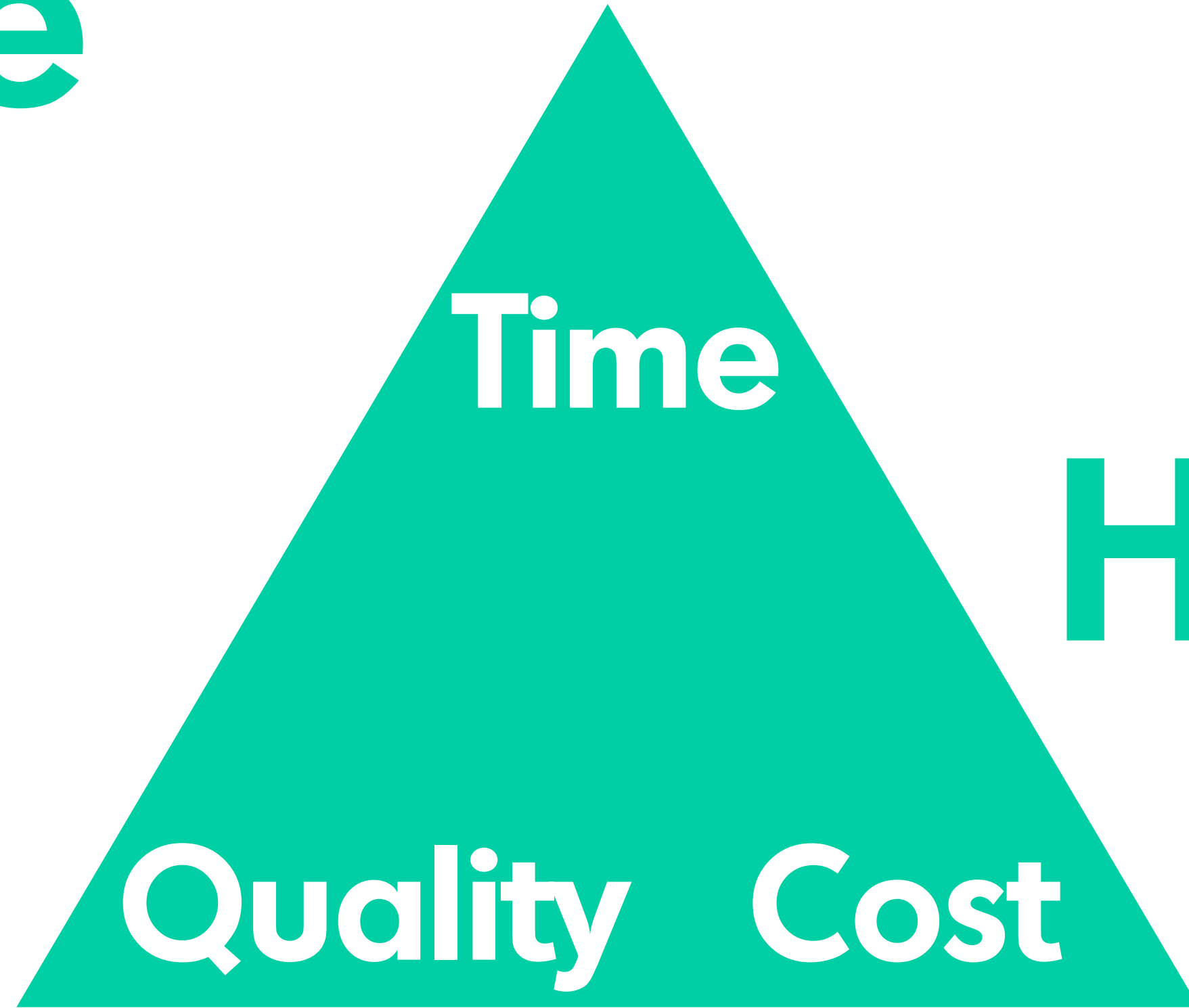
Quality

Cost

Friends

Problems

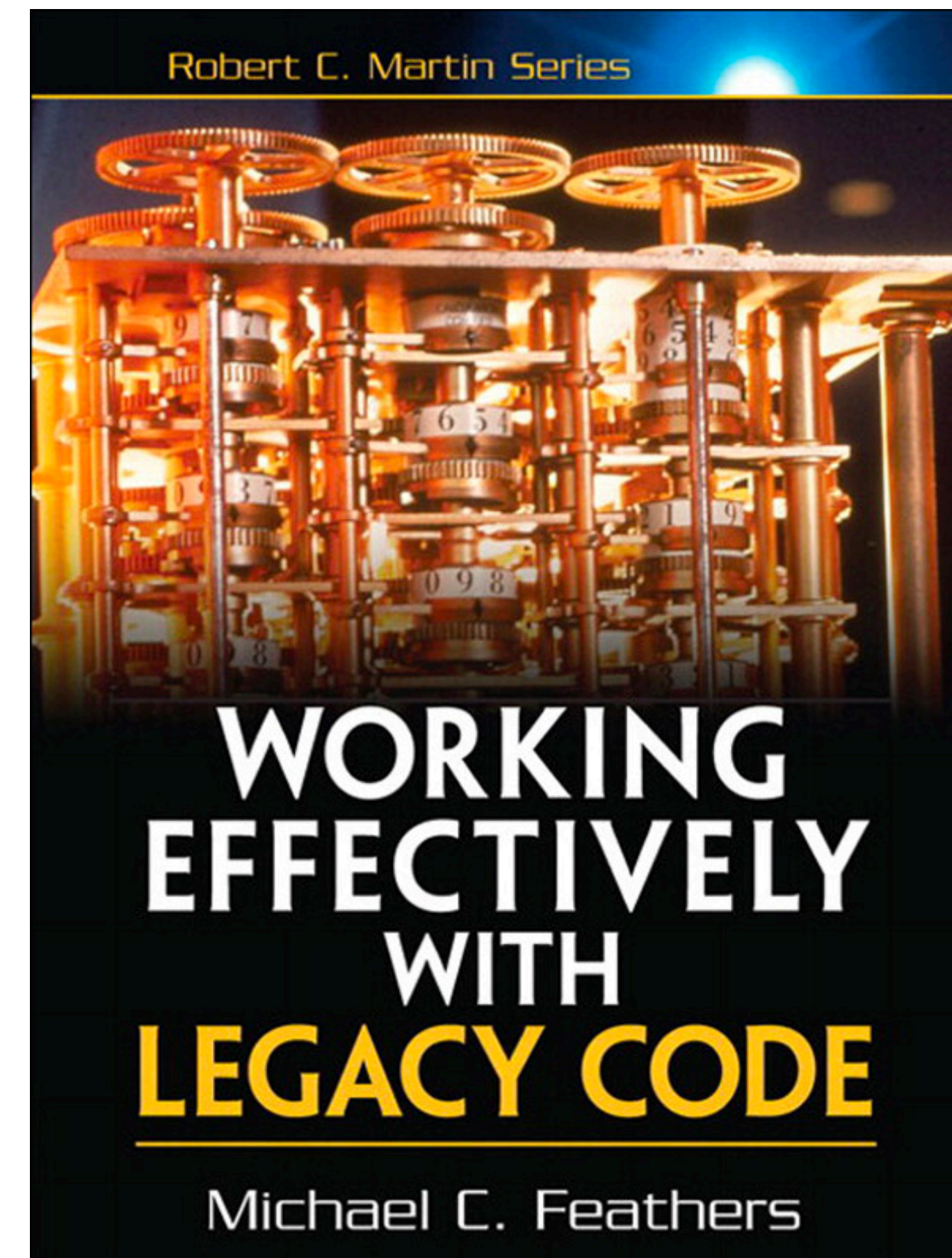
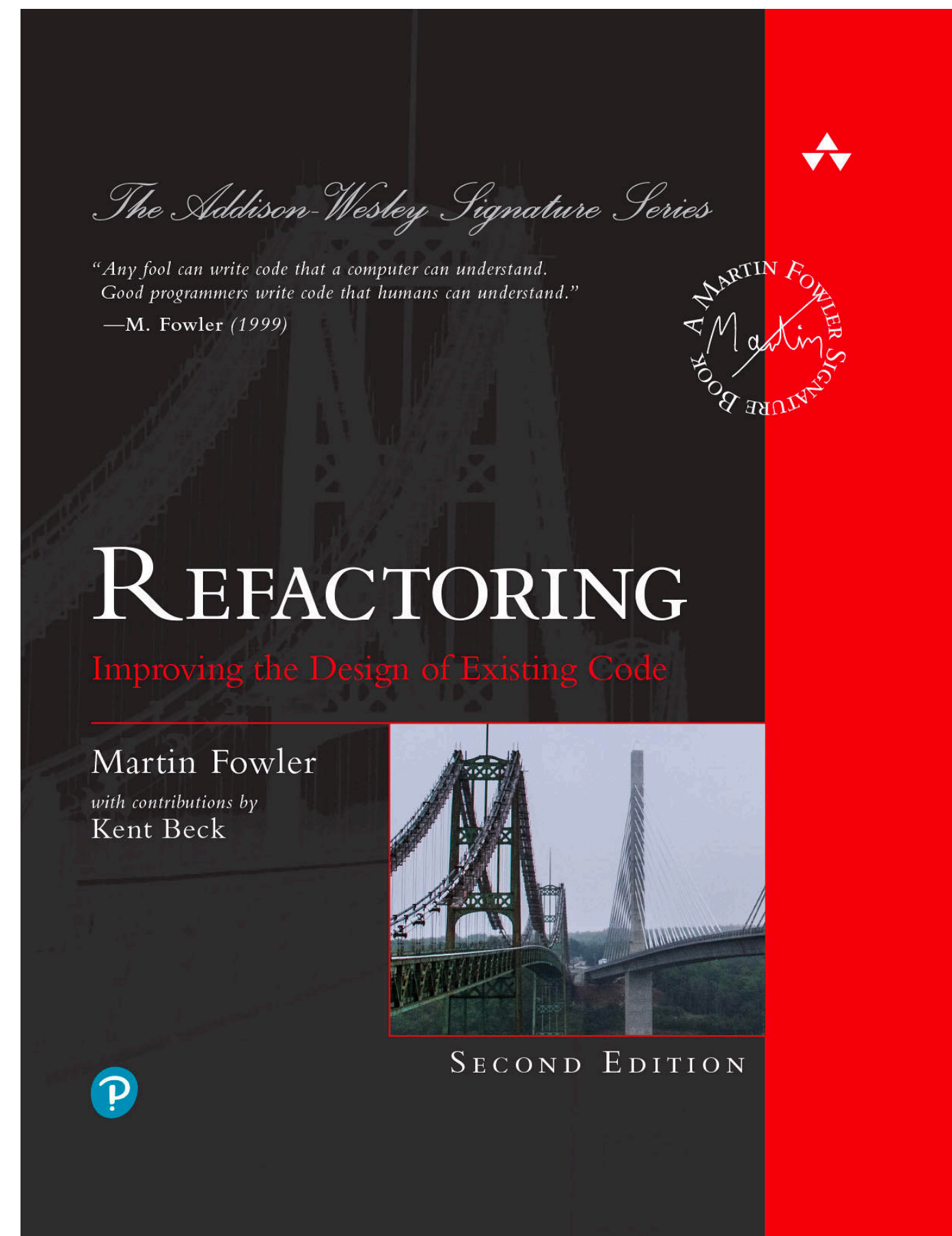
Goals



EMPATHY

1. How do **people** react to pressure?
2. How do **people** deliver against deadlines?
3. How do **people** feel when the unexpected kicks in?
4. What is **their** background?

RESOURCES



Context



Empathy



Tech Resources



Pre-Legacy

**PROGRAMMERS KNOW
THE BENEFITS OF
EVERYTHING AND THE
TRADEOFFS OF NOTHING**

(on top of Alan Perlis' famous quote) Rich Hickey

ALIGN EXPECTATIONS

- 1. Value (Feature)**
- 2. Cost (Maintenance)**
- 3. Learning/Hiring (both)**

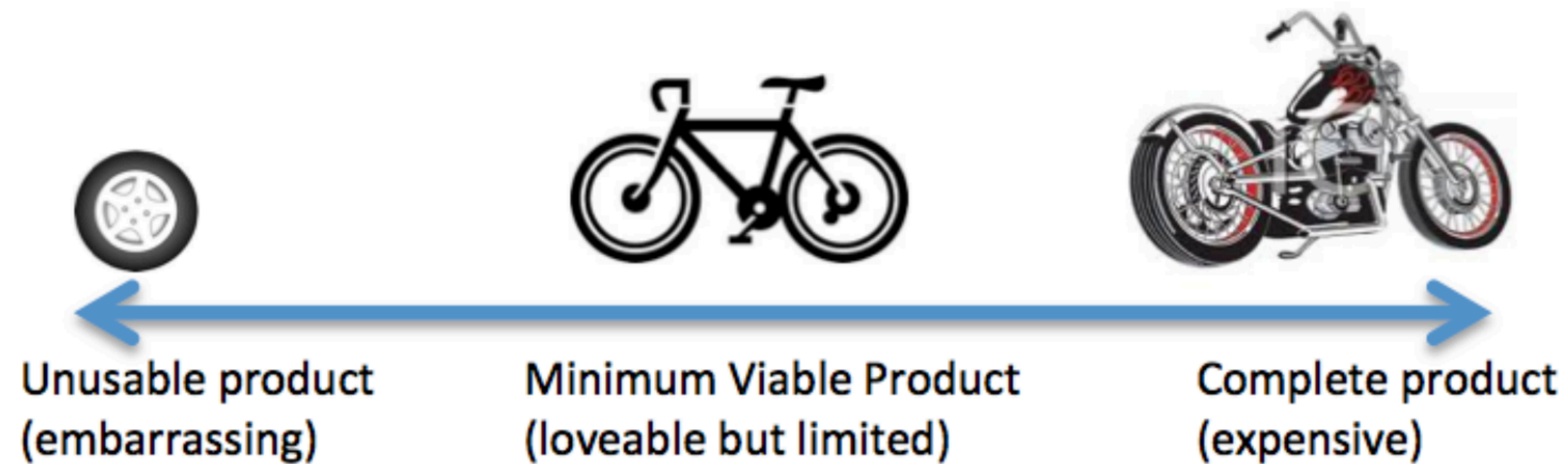
EVALUATION

1. Evaluation Frameworks
 - A. Are there other options available?
 - B. Pros vs. Cons
2. Avoid the Multi-Armed Bandit Problem

EXPERIMENTATION

1. Hackatons
2. Side-projects
3. Proof of Concepts
4. MVP or RAT (Riskiest Assumption Tests)

EXPERIMENTATION



The JET Bicycle - The most dangerous unsafe bike EVER



Subscribe

▶ ⏪ 🔊 1:37 / 2:30

Scroll for details



<https://www.youtube.com/watch?v=bKHz7wOjb9w>

EXPERIMENTATION

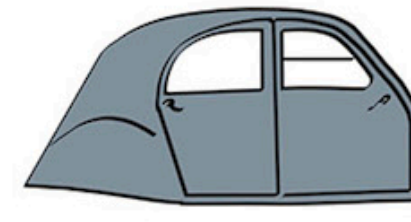
HOW **NOT TO BUILD** A MINIMUM VIABLE PRODUCT



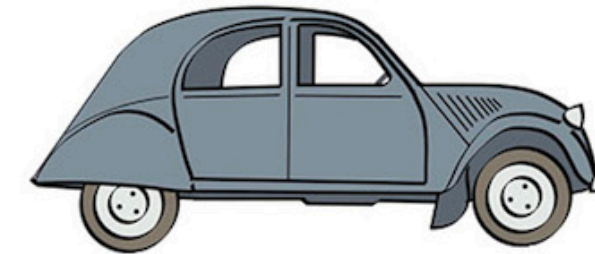
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ALSO HOW **NOT TO BUILD** A MINIMUM VIABLE PRODUCT



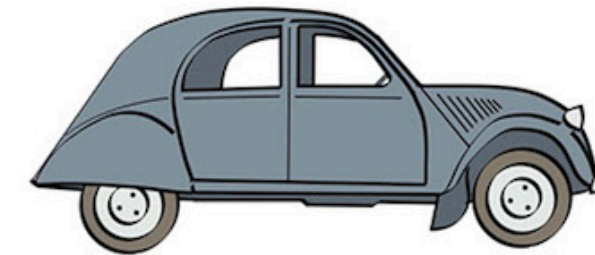
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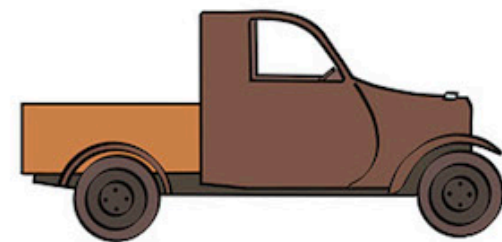


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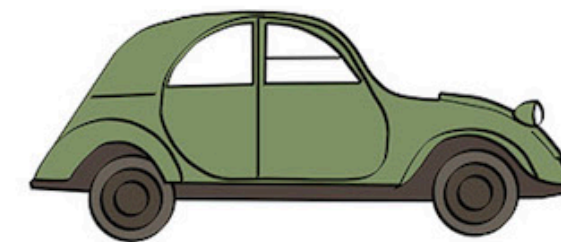
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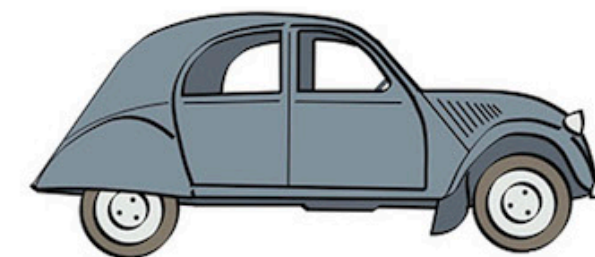
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4

IMPLEMENTATION

1. Isolate dependencies when possible
2. DDD - Keep the buzzwords away from your domain
3. Choose the right abstraction for you, avoiding tight coupling
4. Be more skeptical with Frameworks - and a bit more relaxed with Libraries

DOCUMENTATION

1. Don't be afraid of TODO's - express yourself
2. Architecture Decision Records
3. Document Incidents

Wrap up

**Legacies are usually
time-sensitive.**

Some Buzzwords too.

**Software Engineering
is still young as Industry.**

Context



Empathy



Tech Resources



Align



Evaluate



Experiment



Implement



Document



Make it.

Break it.

Fix it.

Understand why others did it.

Help others understand why you did it.

Be a good ancestor.

Thanks

Gregorio Kusowski

Engineering Manager

gregorio.kusowski@hey.car

hey car