



ALCOR

academy

CODE RENOVATION

LEGACY CODE CAN SHINE AGAIN

The paradox of Legacy Code

*Before you change code,
you must have tests in place.*

*But to put tests in place,
you have to change code.*

So, what can we do about it?
Are we doomed?

Nope. But we should be extra careful
until we have tests in place.

We should perform minimal, safe
refactoring, changing as little code
as possible while retrofitting tests.

✧ Retrofitting tests? Find the seam...

Adding tests on the existing code can be challenging. That's because it was not written to be testable in the first place.

“ *A seam is a place where you can alter behaviour in your program without editing in that place.* ”

Michael Feathers



✈ ...then break the dependency !

Most of the time the problem is an hard coded dependency like a database connection or an external API.

To test your code, you need to break these dependencies in the tests. Therefore, you need to identify *Seams*.

“ *Every seam has an **enabling point**, a place where you can make the decision to use one behaviour or another.*

Michael Feathers

Characterization tests

When a system goes into production, it becomes its own specification.

The purpose of characterization testing is to document the system's actual behaviour, regardless of whether we think it's right or not.

So we can have automated feedback when we change existing behaviour.



A characterization test is a test that characterizes the actual behaviour of some code.

Michael Feathers

6 hands-on lessons

We begin with two *Refactoring Calisthenics* lessons, where we practice on advanced techniques for changing the code staying in green, breaking down dependencies and essentially making untestable code testable, using small tailored exercises.

Afterwards, in the *Characterization & Mutation Tests* lesson, we learn how to retrofit tests properly, identifying what the actual correct behaviour of the system should be.



CODE RENOVATION

As usual in our trainings, we end the course with a custom made exercise inspired by a real-life scenario. That's the content of the two *Refactoring Applied* lessons, where the group will learn how to put under tests a "big ball of mud" with external dependencies and obfuscated code.



CODE RENOVATION

COURSE SYLLABUS

LESSON 1

Refactoring
Calisthenics:
Introduction

LESSON 2

Refactoring
Calisthenics:
Dependencies

LESSON 3

Characterization
& Mutation
Tests

LESSON 4

Advanced
Refactoring
Applied I

LESSON 5

Advanced
Refactoring
Applied II

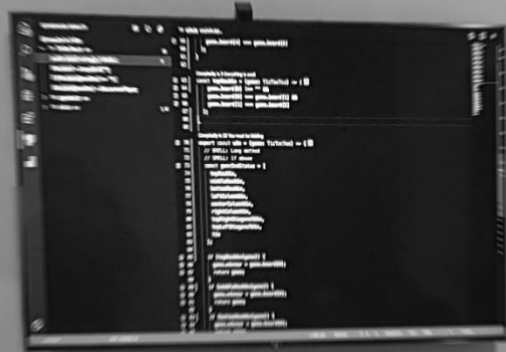
LESSON 6

Learn by doing:
Presentation
Day

Interactive mob programming

"A mob is a bus architecture for human brains. We all hear and see what we all speak and show. It's super-fast for learning."

Tim Ottinger



driver ●

navigator ●

mob ●

facilitator ●

ROLES

Navigator

The person listened by the driver about what to do next. He has to make the final decisions and coordinate the mob.

Driver

The person typing on the keyboard. He should trust the navigator and do what is asked. He is not required to think.

Mob

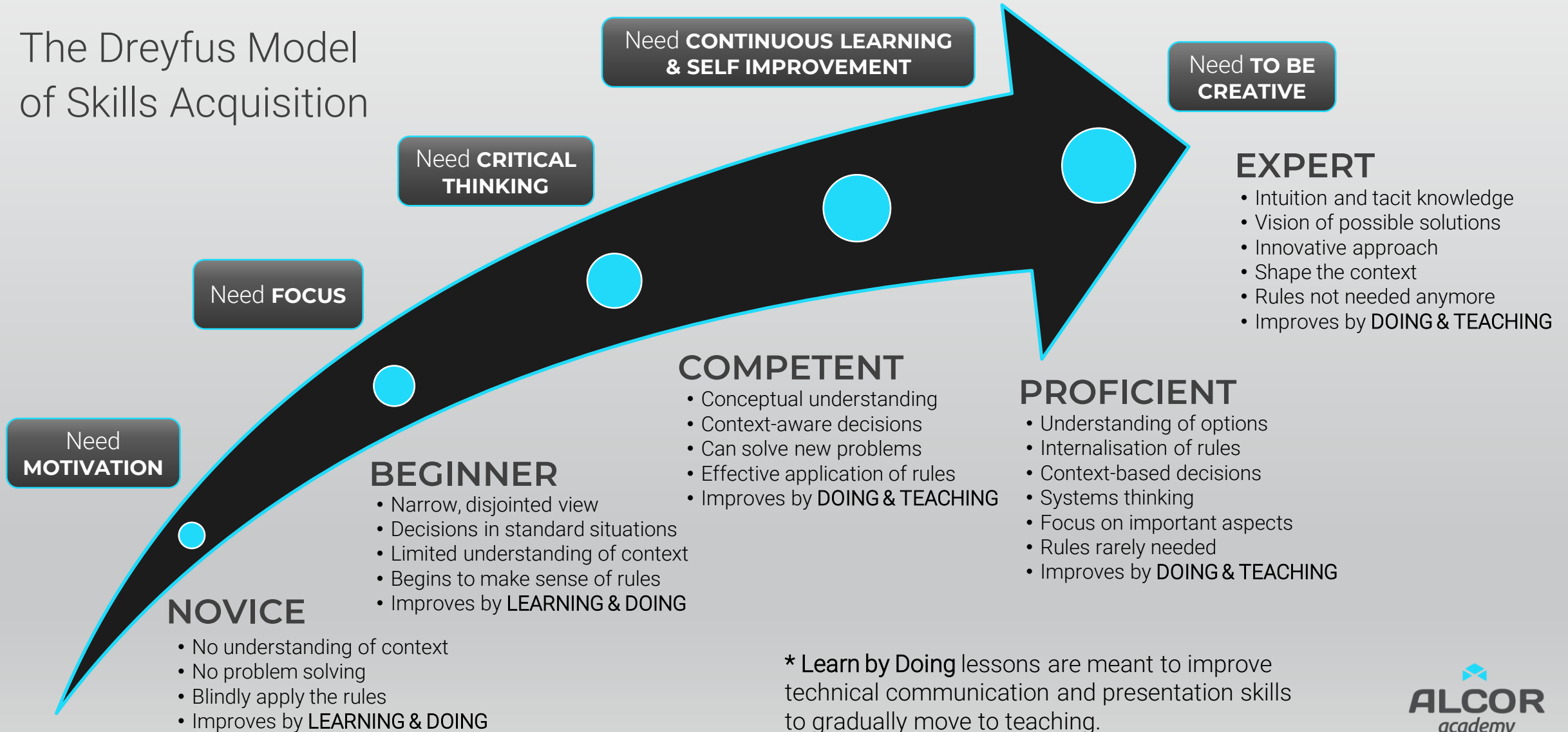
Everyone else in the room wishing to contribute actively to the task. They observe, interact and discuss with the navigator the way forward.

Facilitator (our coach)

Sits in the back, observe the flow and jumps in when necessary. This is the only role that does not rotate.

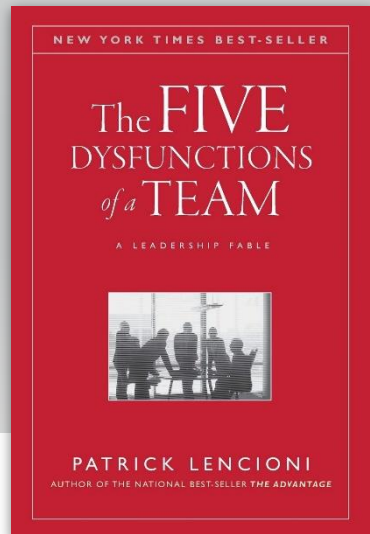
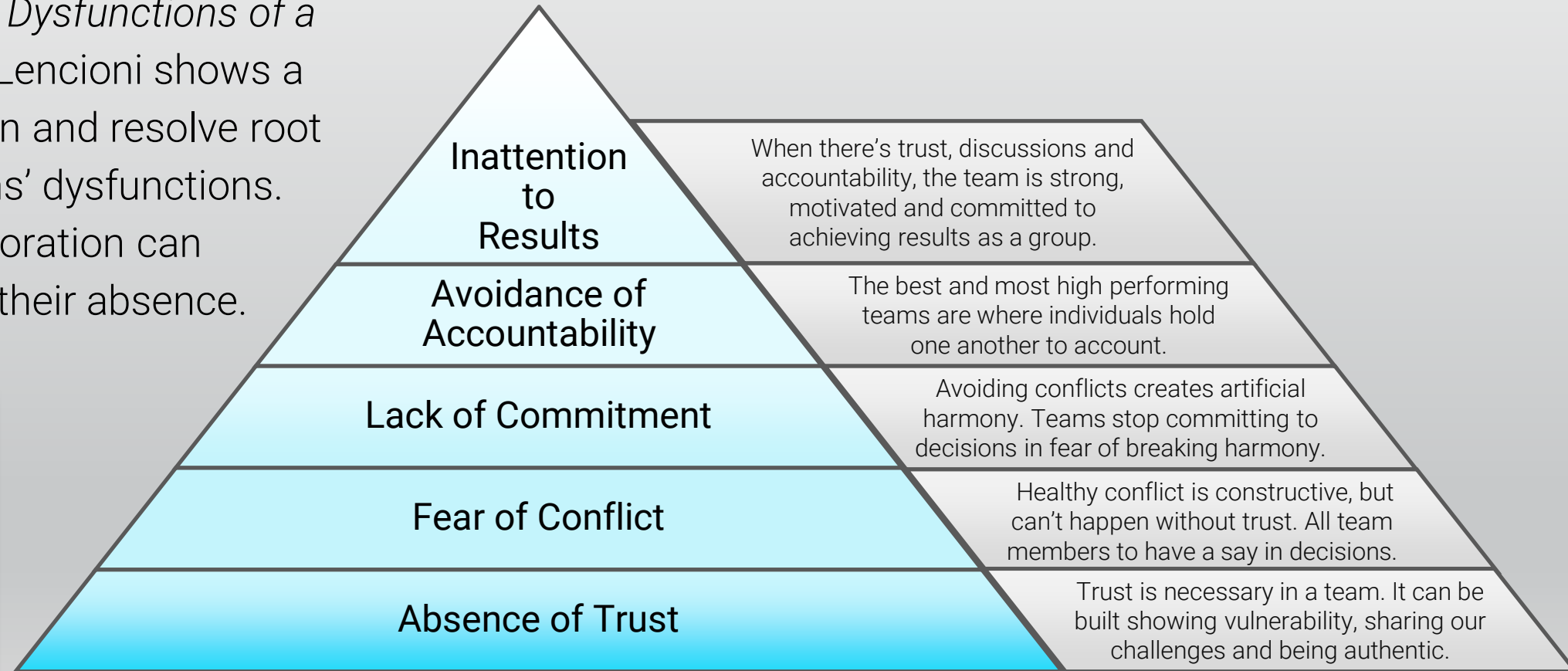
✧ Inspired by a proven learning model

The Dreyfus Model of Skills Acquisition

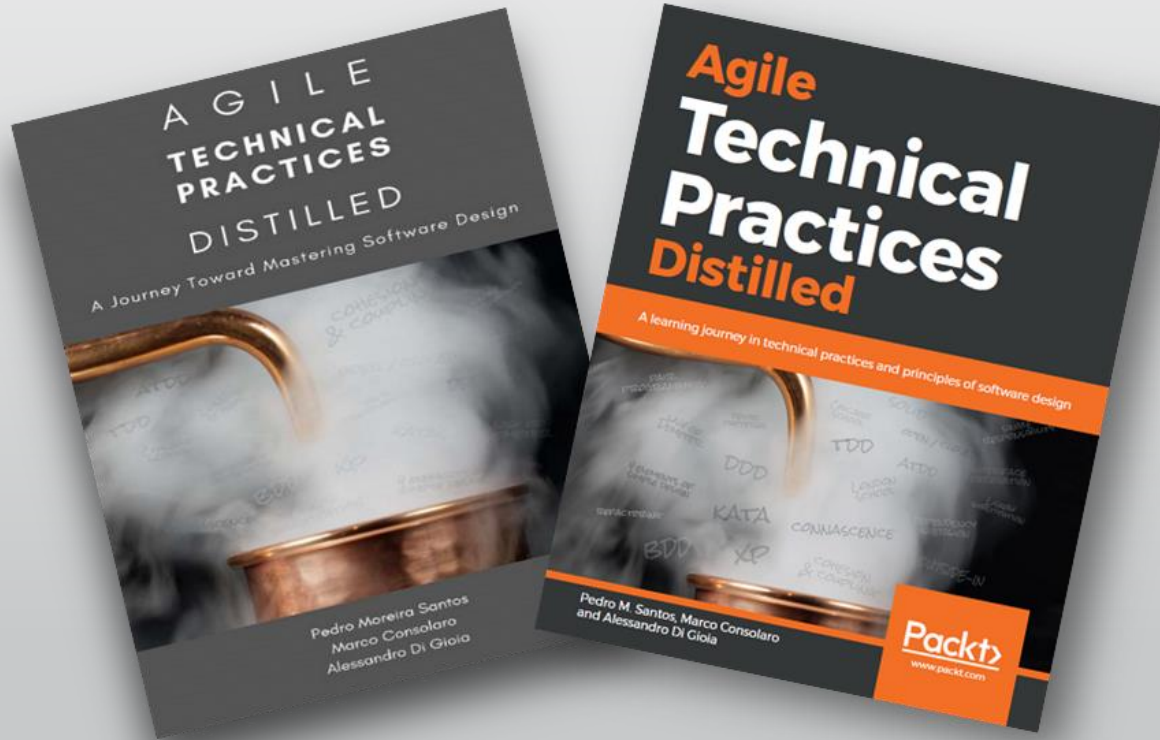


✧ Building a collaborative mindset

In the “*The Five Dysfunctions of a Team*”, Patrick Lencioni shows a model to explain and resolve root causes of teams’ dysfunctions. Effective collaboration can happen only in their absence.



✈ A digital copy of our book as manual



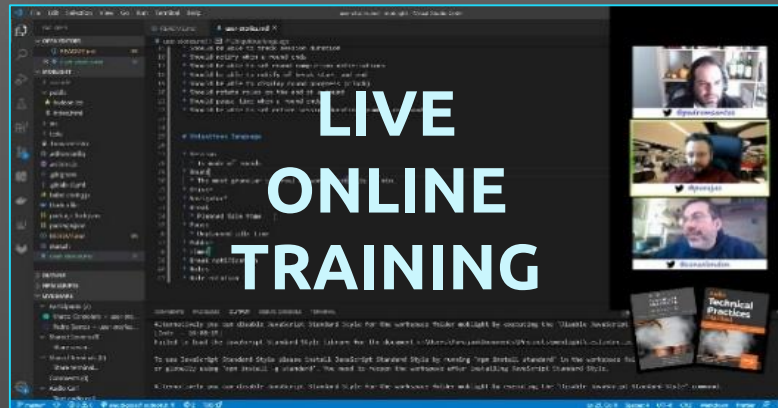
Contact us

We are based in London, UK. We serve customers worldwide. We help teams foster a collaborative learning mindset, so they keep improving everyday.



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