

Low code & no code solutions:

agile or fragile?

Seb Rose

Twitter: @sebrose

Blog: <https://cucumber.io/blog/>

E-mail: seb@claysnow.com

Agenda

Is there a problem?

How did we get here?

What has abstraction got to do with it?

Where did the complexity go?

Can AI and ML help?

Will this affect agile?

Where does that leave us?

Agenda

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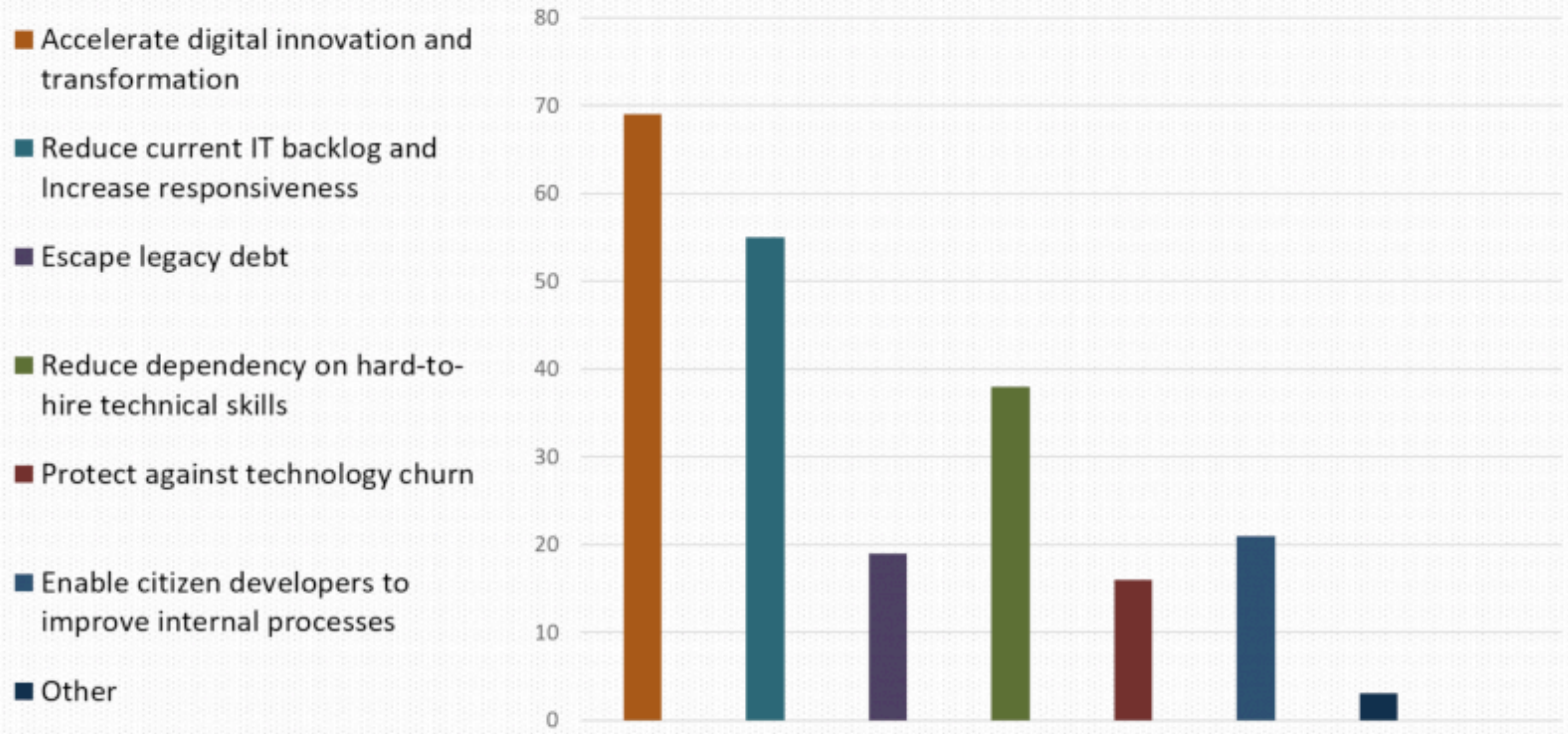
Will this affect agile?

Where does that leave us?

Over to you ...

- Can you think of THREE reasons why no code / low code is so attractive to businesses?

Reasons For Using Low-Code Platforms



Ref: OutSystem | *The State of Application Development | How IT is responding to Digital Disruption and Innovation – 2018*

Three common complaints

Three common complaints

Misalignment of business & IT -
put the business in control

Three common complaints

Misalignment of business & IT -
put the business in control

Time-to-market & speed -
automation & component reuse

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Shortage of skilled people -
no need for specialist developers

Three common complaints

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FASTER

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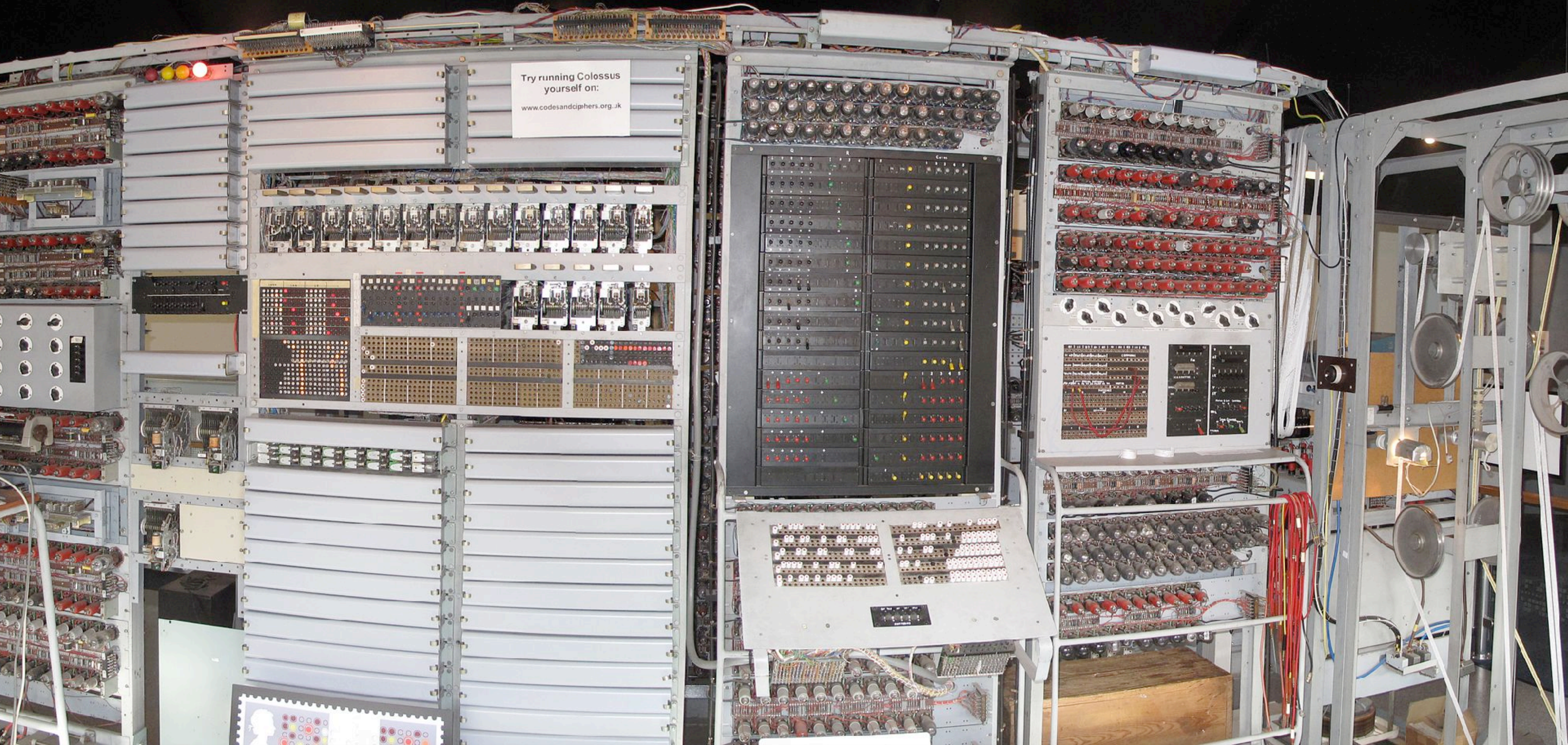
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Hardware



TedColes, CC BY-SA 4.0 <<https://creativecommons.org/licenses/by-sa/4.0/>>, via Wikimedia Commons

@sebrose

seb@claysnow.co.uk

Machine code to assembler

```
100
101
102
103
104
105
106
107 00000030 B9FFFFFFF
108
109
110 00000035 41
111 00000036 803C0800
112
113
114 0000003A 75F9
115
116
117
118
119
120
121
122 0000003C C3
```

```
-----
; zstr_count:
; Counts a zero-terminated ASCII string to determine its size
; in:  eax = start address of the zero terminated string
; out: ecx = count = the length of the string

zstr_count:                ; Entry point
    mov    ecx, -1          ; Init the loop counter, pre-decrement
                             ; to compensate for the increment

.loop:
    inc    ecx              ; Add 1 to the loop counter
    cmp    byte [eax + ecx], 0 ; Compare the value at the string's
                             ; [starting memory address Plus the
                             ; loop offset], to zero
    jne    .loop            ; If the memory value is not zero,
                             ; then jump to the label called '.loop',
                             ; otherwise continue to the next line

.done:

                             ; We don't do a final increment,
                             ; because even though the count is base 1,
                             ; we do not include the zero terminator in the
                             ; string's length
    ret                    ; Return to the calling program
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<https://www.differencebetween.com/difference-between-machine-language-and-vs-assembly-language/>

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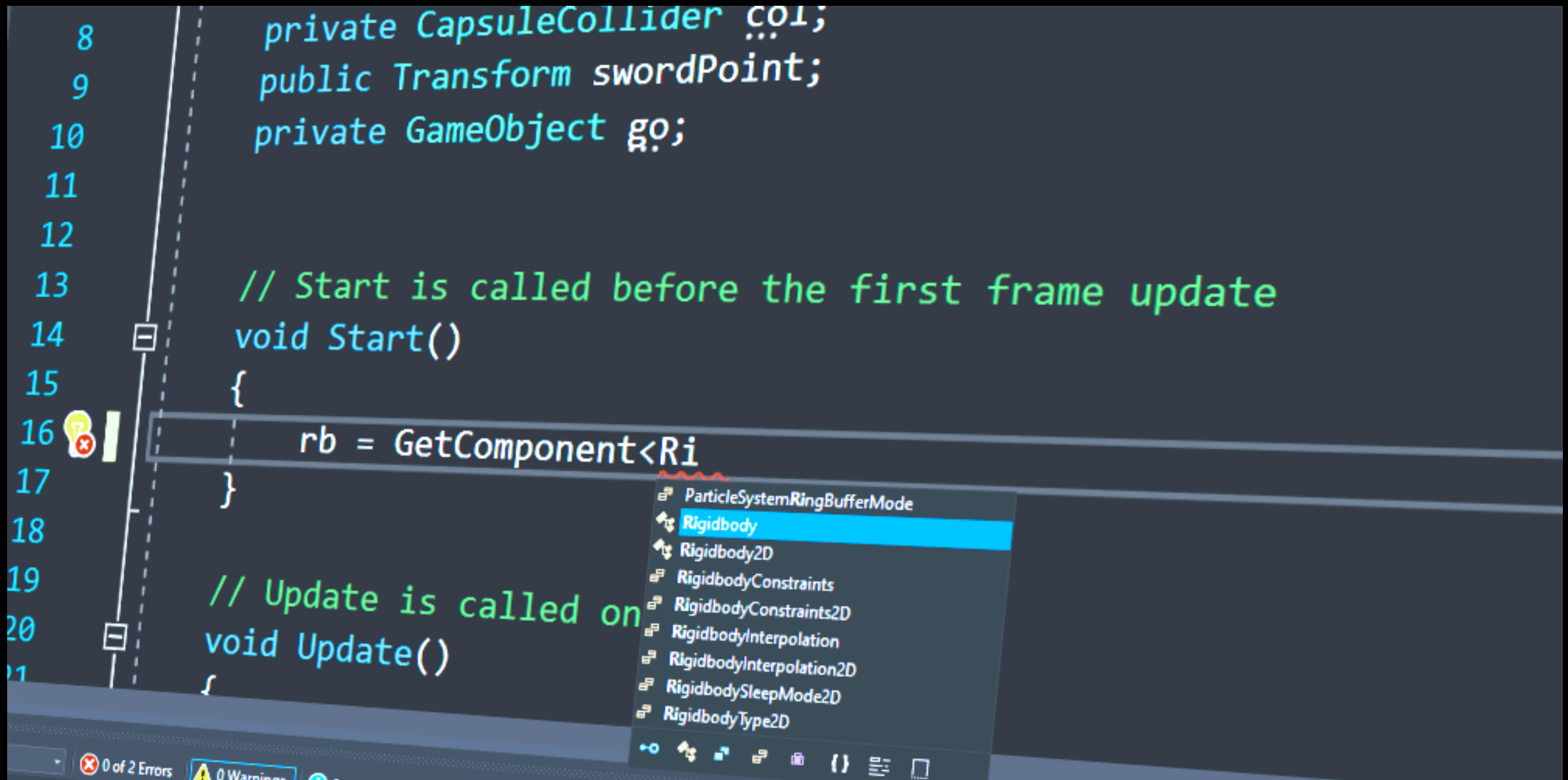
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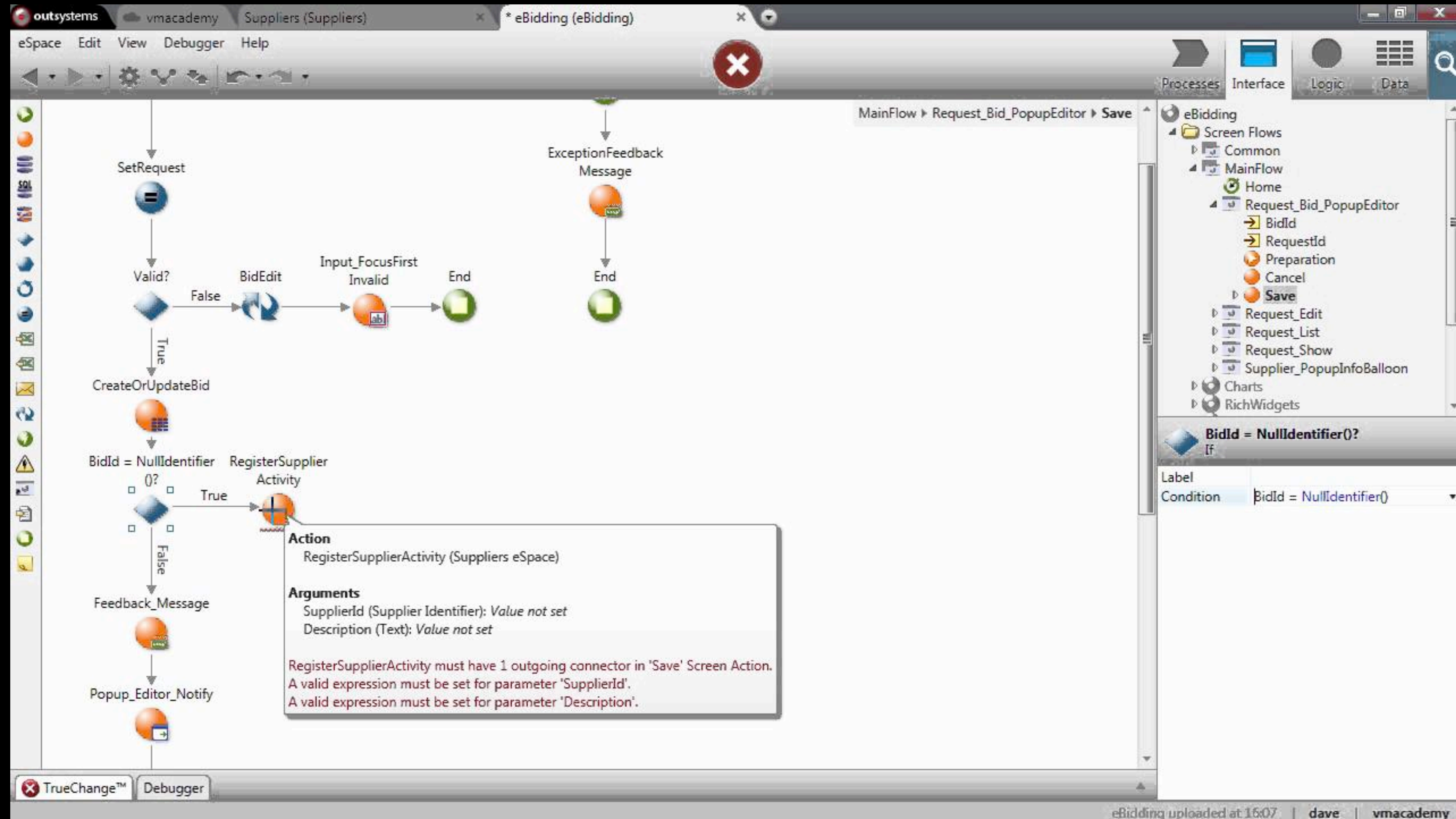
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IDE magic - VSCode



<https://blog.terresquall.com/2020/11/fixing-visual-studios-intellisense-autocomplete-in-unity/>

Low code - OutSystems



https://youtu.be/b_TK4YMSXIU

No code - WordPress



No code - WordPress

How to Resolve Recurring
WordPress Problems?



No code - WordPress

How to Resolve Recurring
WordPress Problems?



No code - WordPress

How to Resolve Recurring
WordPress Problems?



6 Most Common WordPress
Problems and their **Solutions**



No code - WordPress

How to Resolve Recurring
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6 Most Common WordPress
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 **TemplateToaster**
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WEBSITE
TUTORIAL**

 **WPCrafter**
WordPress Reviews & Tutorials For Non-Technics

2018



No code - WordPress

How to Resolve Recurring WordPress Problems?



Fix WordPress Issues



Order Now

By
UiXpider

Fix WP Errors
Fix WP Bugs

6 Most Common WordPress Problems and their Solutions



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WordPress **Errors/Bugs**



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Over to you ...

- What experiences have you had with no code / low code?

Agenda

Is there a problem?

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Can AI and ML help?

Will this affect agile?

Where does that leave us?

Abstraction

the process of removing physical, spatial, or temporal details or attributes in the study of objects or systems to focus attention on details of greater importance;

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it is similar in nature to the process of generalisation

Abstraction hides complexity

Abstraction hides complexity

Accidental complexity ...
can be simplified by a new idea, design,

Abstraction hides complexity

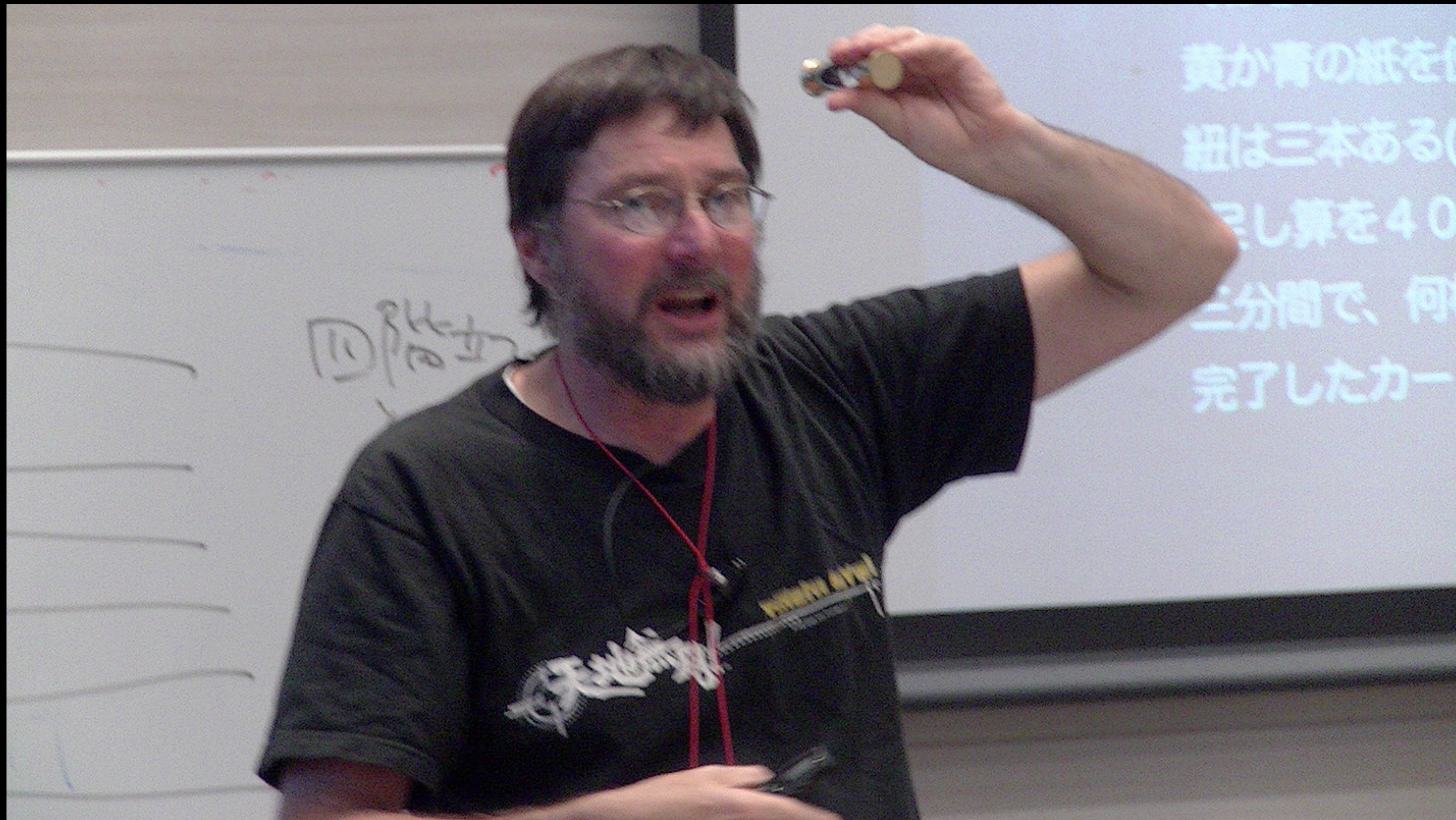
Accidental complexity ...

can be simplified by a new idea, design,

Essential complexity ...

can't be simplified OR loses value when it is

Abstraction



Abstraction

Abstraction
is
EVIL!

*Jim Coplien ("Cope")
ACCU 2000*



Abstraction

Abstraction
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In most object oriented design, most abstraction is evil. It is an excuse to ignore things we don't want to deal with even though we should.

<https://www.artima.com/forums/flat.jsp?forum=106&thread=6771>

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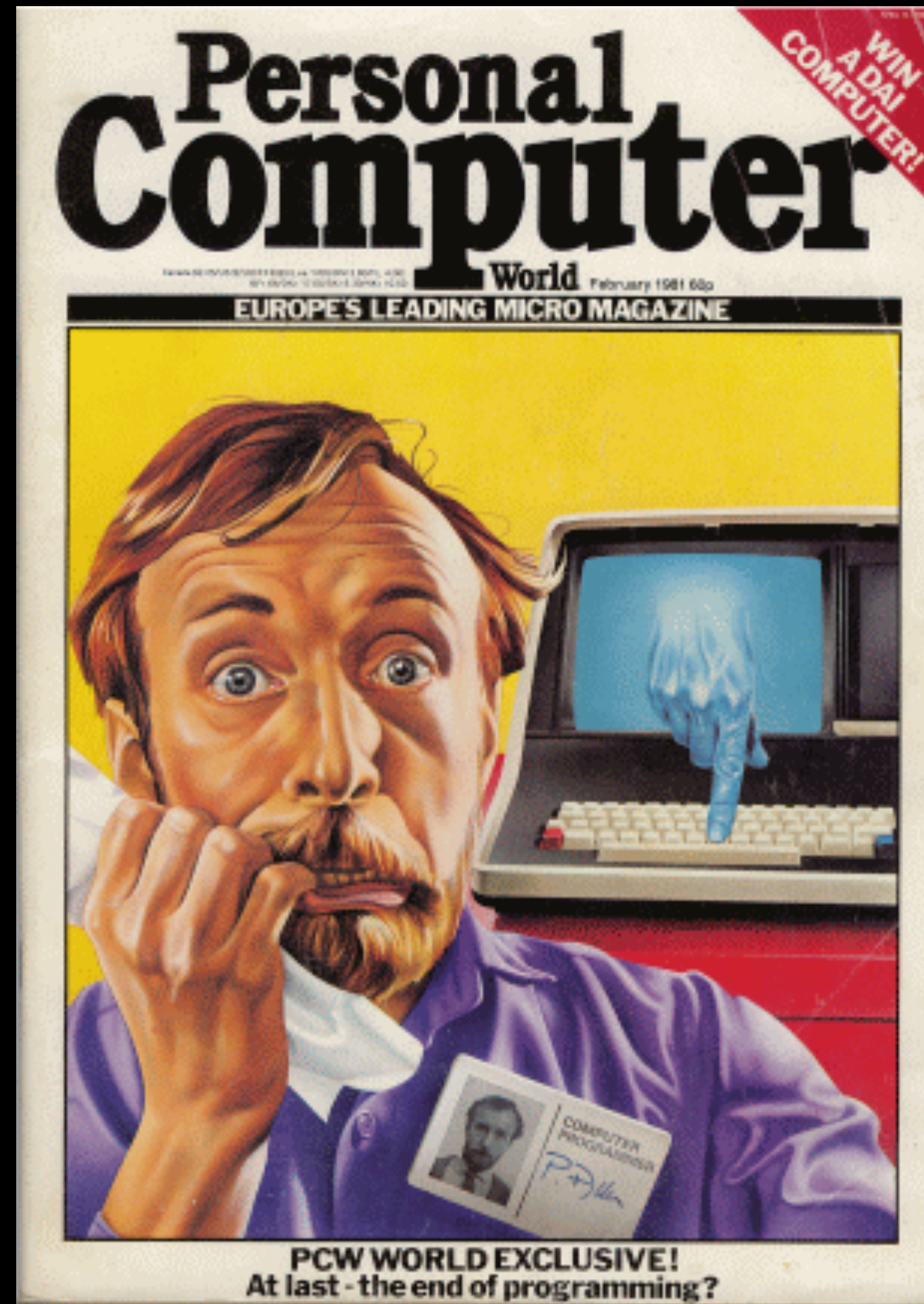
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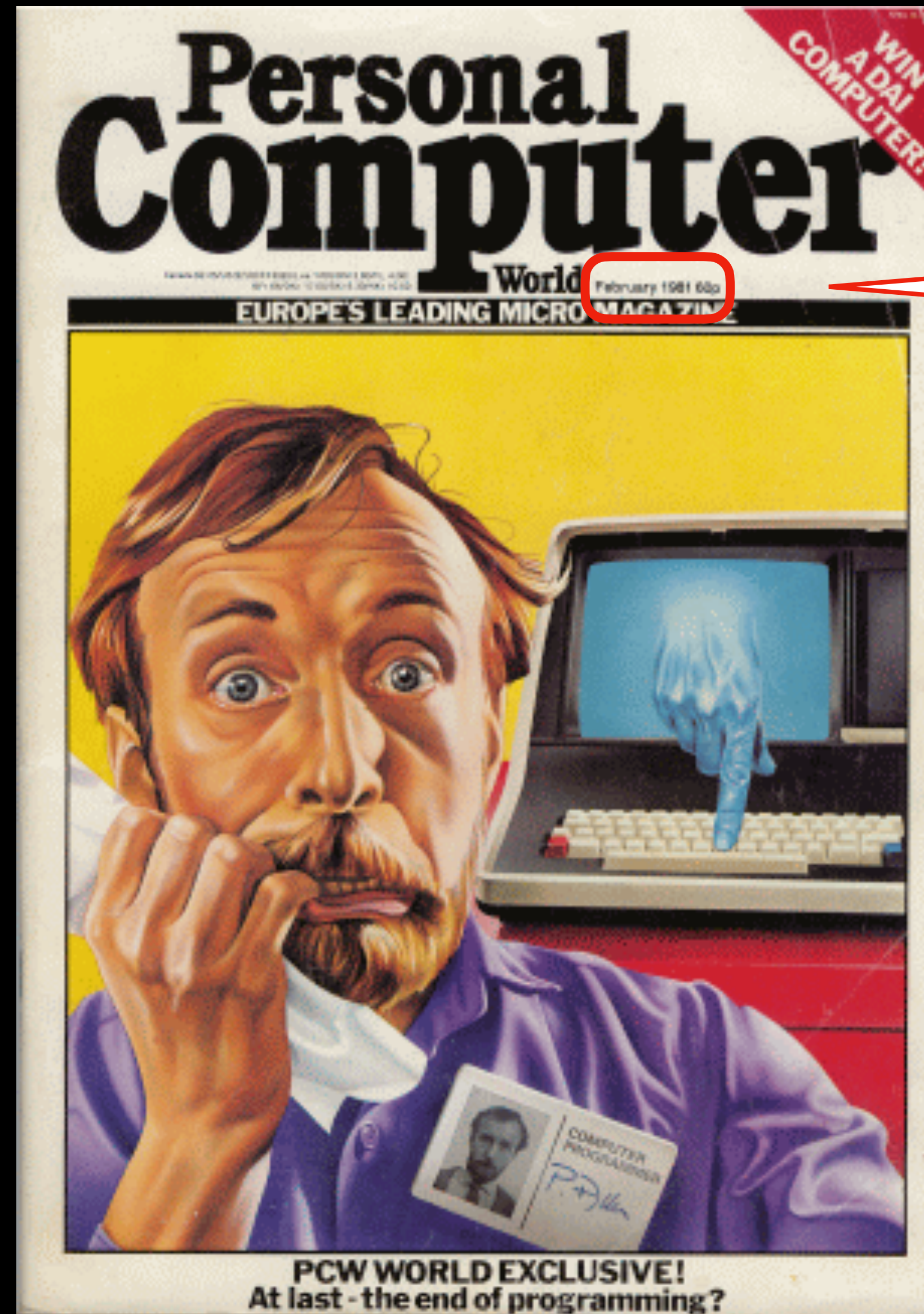
Where does that leave us?

The Last One (TLO)



The Last One (TLO)

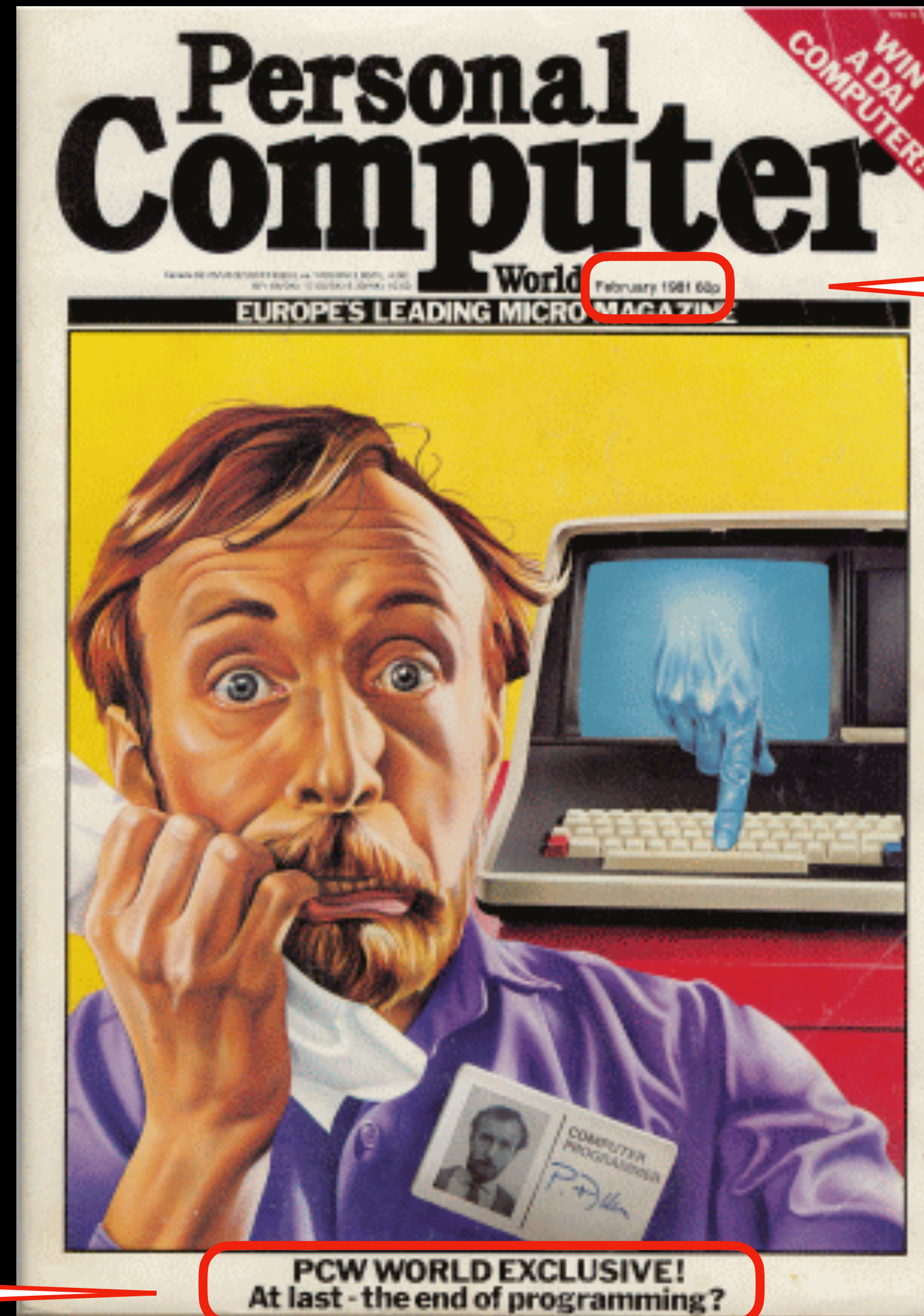
February
1981



The Last One (TLO)

February
1981

“At last - the
end of
programming?”



Configuration

Copy this shortcode and paste it into your post, page, or text widget content:
[contact-form-7 id="1630" title="support form"]

FormMailMessagesAdditional SettingsConditional fields

Conditional fields

Show	technical-support ▼	if	support-type ▼	equals ▼	Technical support	And	remove
Show	sales-support-selected ▼	if	support-type ▼	equals ▼	Sales	And	remove
Show	os-selected ▼	if	operating-system ▼	not equals ▼	-- Choose your operating system --	And	remove
Show	os-android ▼	if	operating-system ▼	equals ▼	Android	And	remove
Show	os-iOS ▼	if	operating-system ▼	equals ▼	iOS	And	remove
Show	os-linux ▼	if	operating-system ▼	equals ▼	Linux	And	remove
Show	os-windows ▼	if	operating-system ▼	equals ▼	Windows	And	remove
Show	os-other-selected ▼	if	operating-system ▼	equals ▼	Other	And	remove

click to add new conditional rule

import/export

```
show [technical-support-selected] if [support-type] equals "Technical support"
show [sales-support-selected] if [support-type] equals "Sales"
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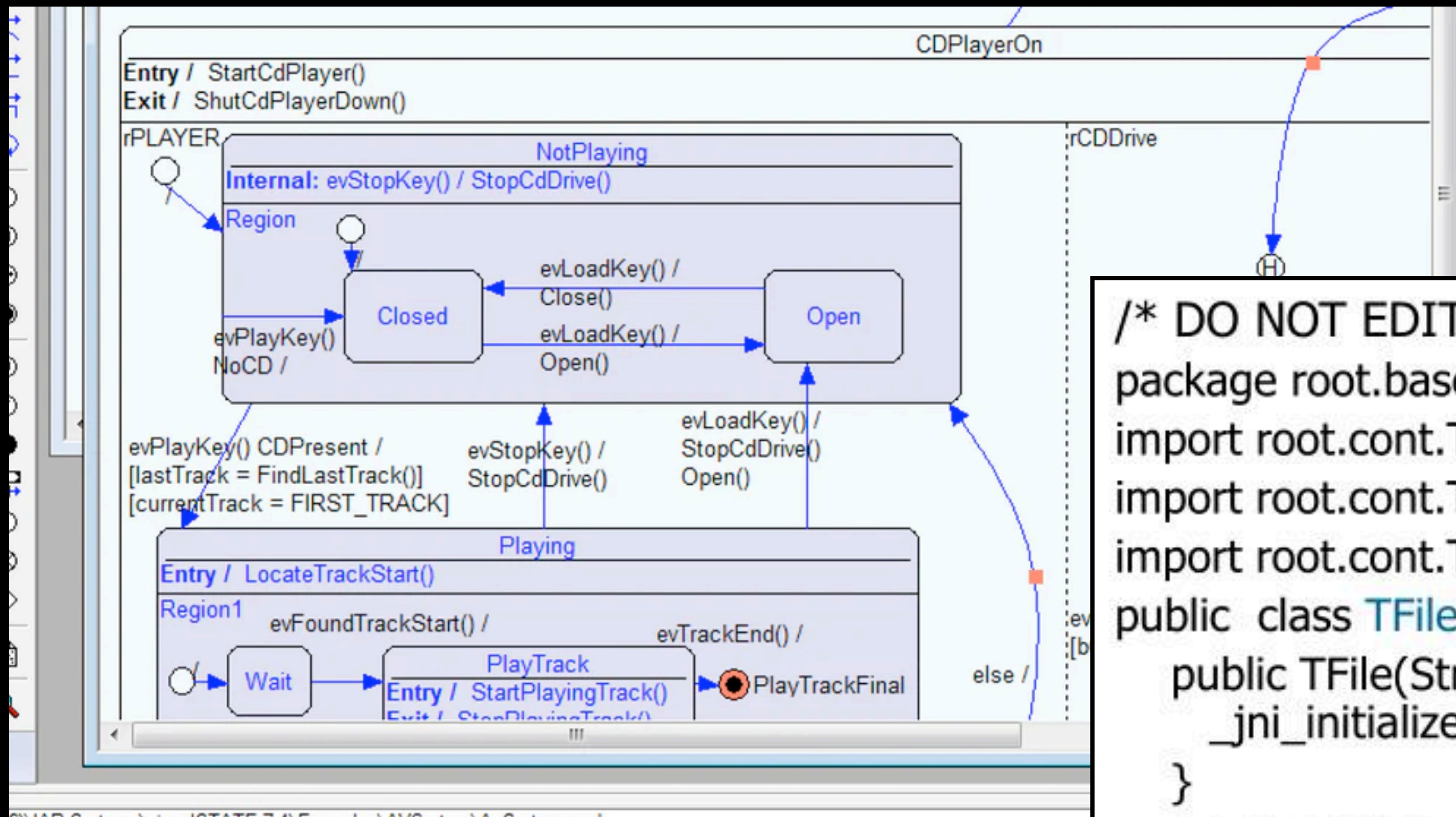
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Troubleshooting



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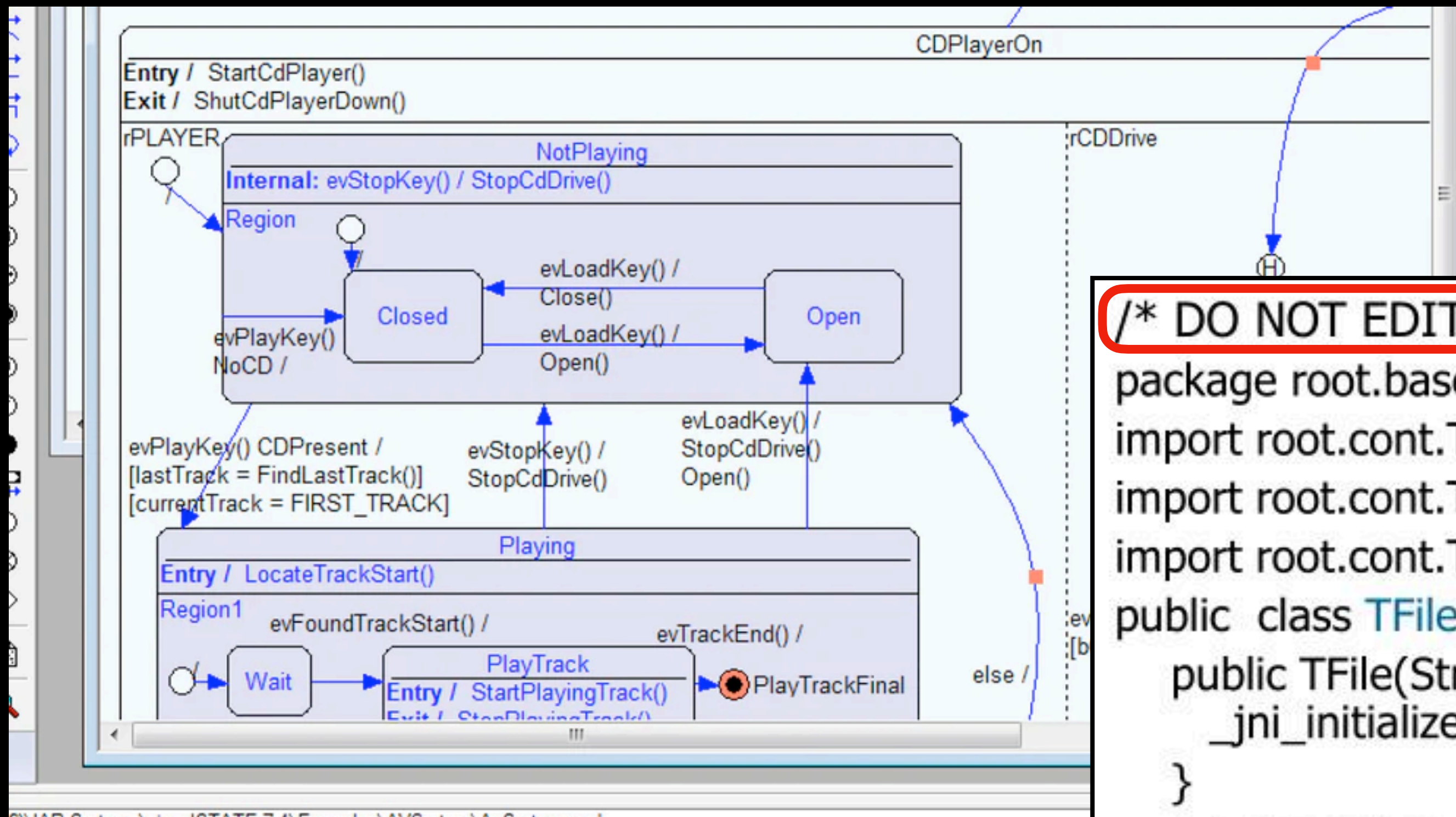
/* DO NOT EDIT THIS FILE - it is machine generated */
package root.base;
import root.cont.TArrayC;
import root.cont.TObjArray;
import root.cont.TList;
public class TFile extends TDirectory implements Cloneable {
    public TFile(String fname, String option, String ftitle, int compress) {
        _jni_initialize(fname, option, ftitle, compress);
    }
    private native void _jni_initialize(String fname, String option,
                                        String ftitle, int compress);

    ...
    public native void Draw(String option);
    public void Draw() { Draw(""); }

    ...
}

```

Troubleshooting



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```

Consultancy

[TLO] not only worked (eventually) but, for donkey's years, its publisher made money out of a consulting business wrapped around the software.

Three common complaints revisited

Misalignment of business & IT -

put the business in control

Time-to-market & speed -

automation & component reuse

Shortage of skilled people -

no need for specialist developers

Three common complaints revisited

Misalignment of business & IT -
still a need for IT domain expertise

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Misalignment of business & IT -
still a need for IT domain expertise

Time-to-market & speed -
delays for customisation & troubleshooting

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Misalignment of business & IT -
still a need for IT domain expertise

Time-to-market & speed -
delays for customisation & troubleshooting

Shortage of skilled people -
lack of even more specialist consultants

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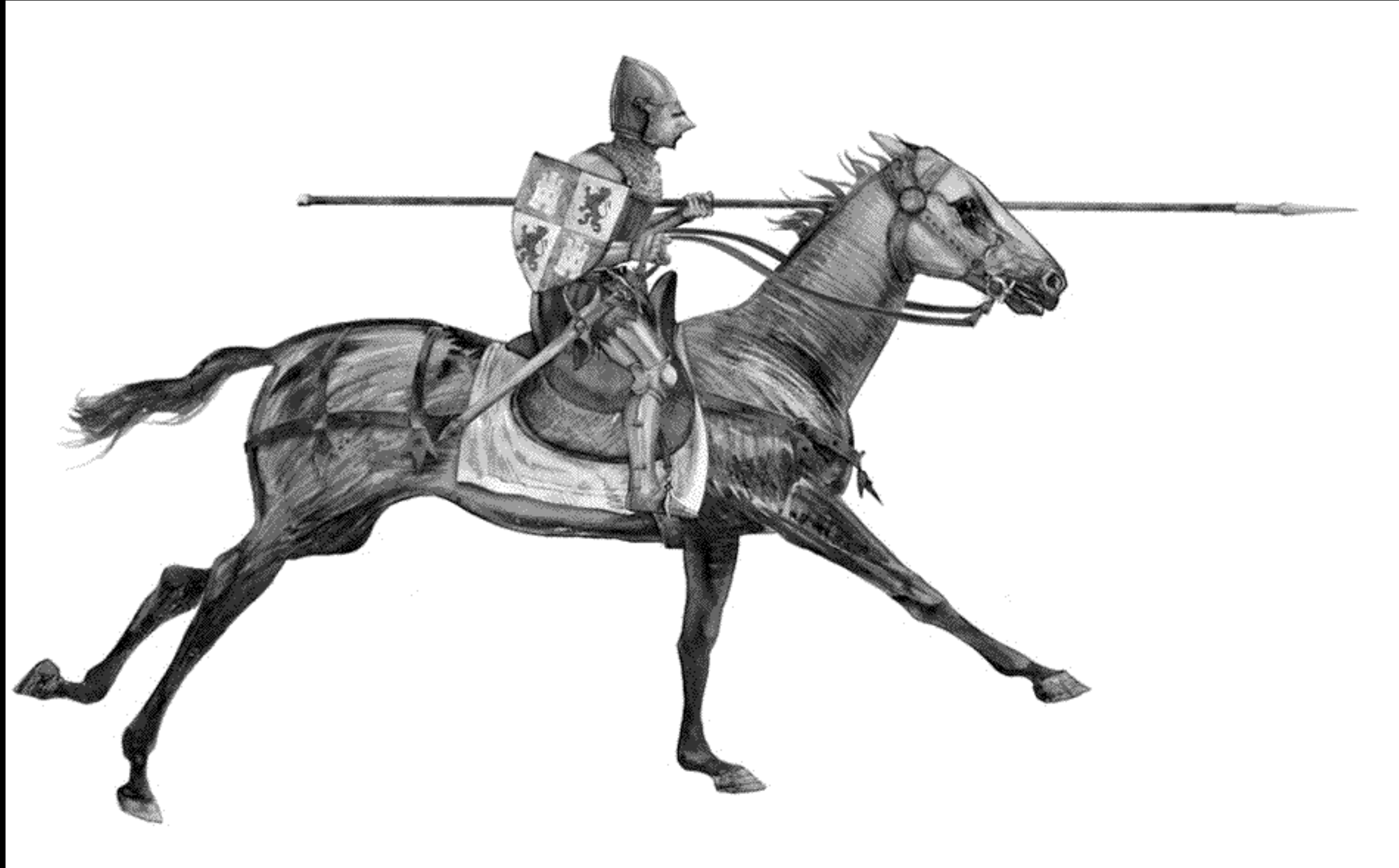
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Can AI and ML help?

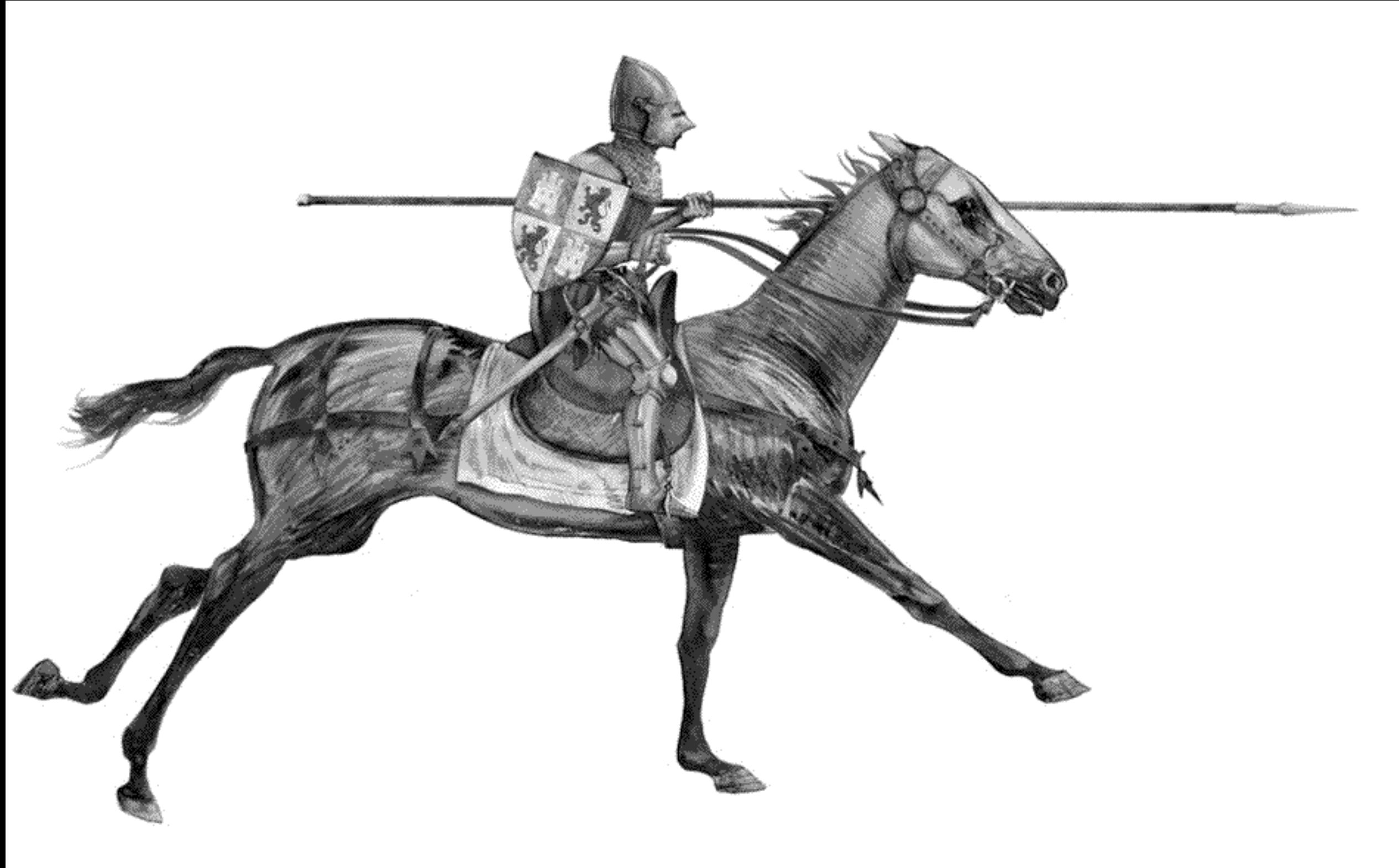
Will this affect agile?

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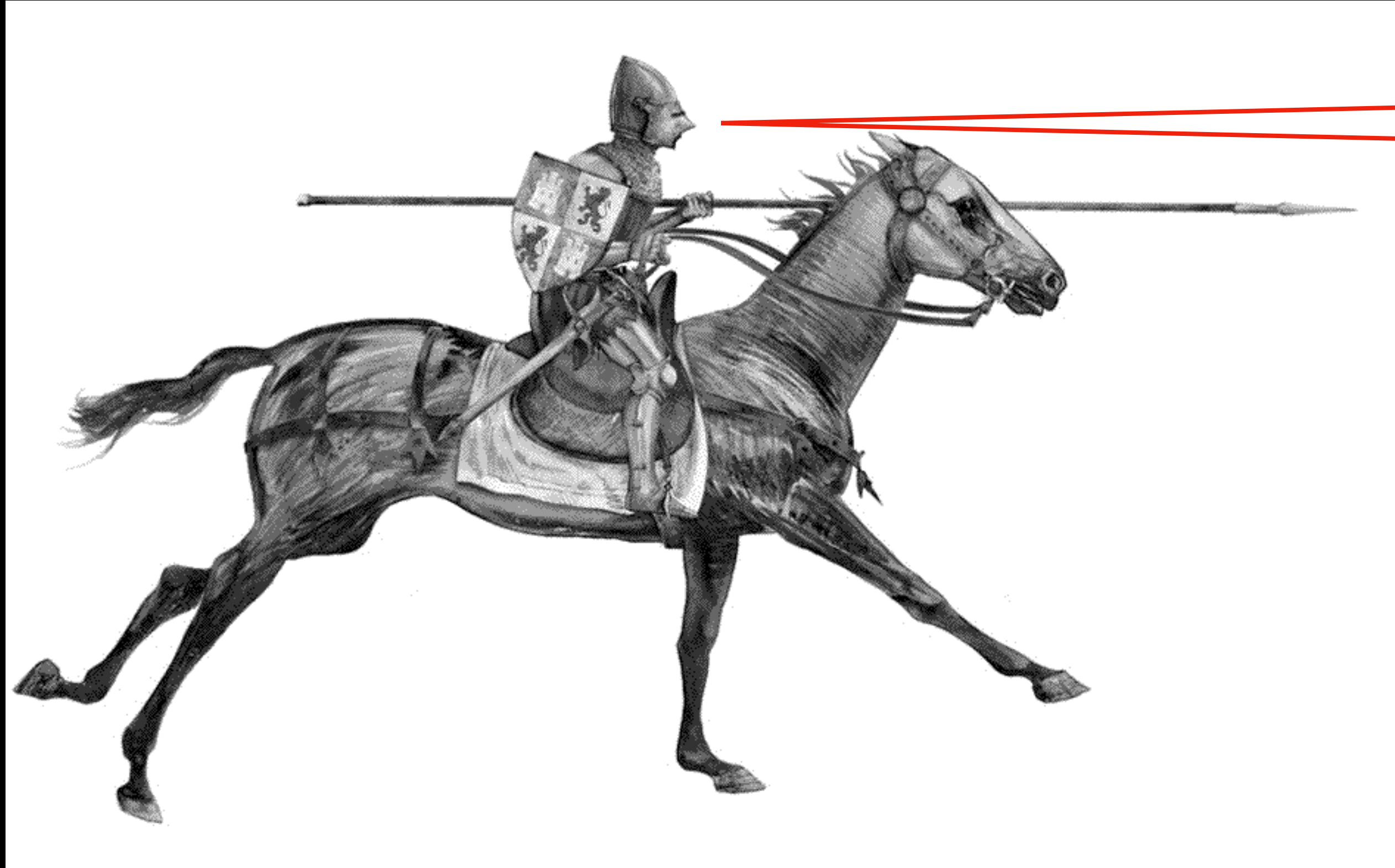


Can AI and ML help?



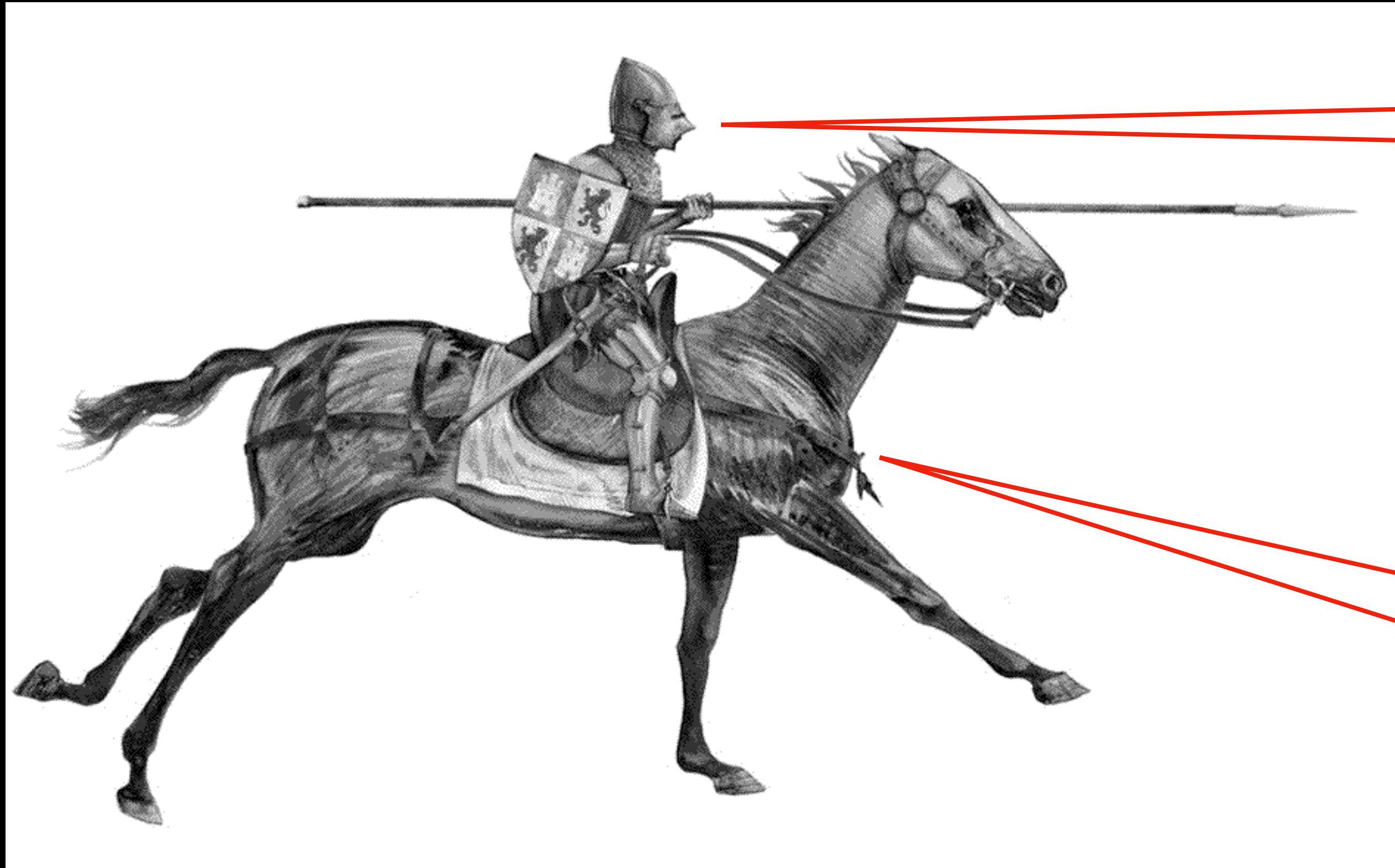
Can AI and ML help?

**Artificial
Intelligence**



Can AI and ML help?

**Artificial
Intelligence**



**Machine
Learning**

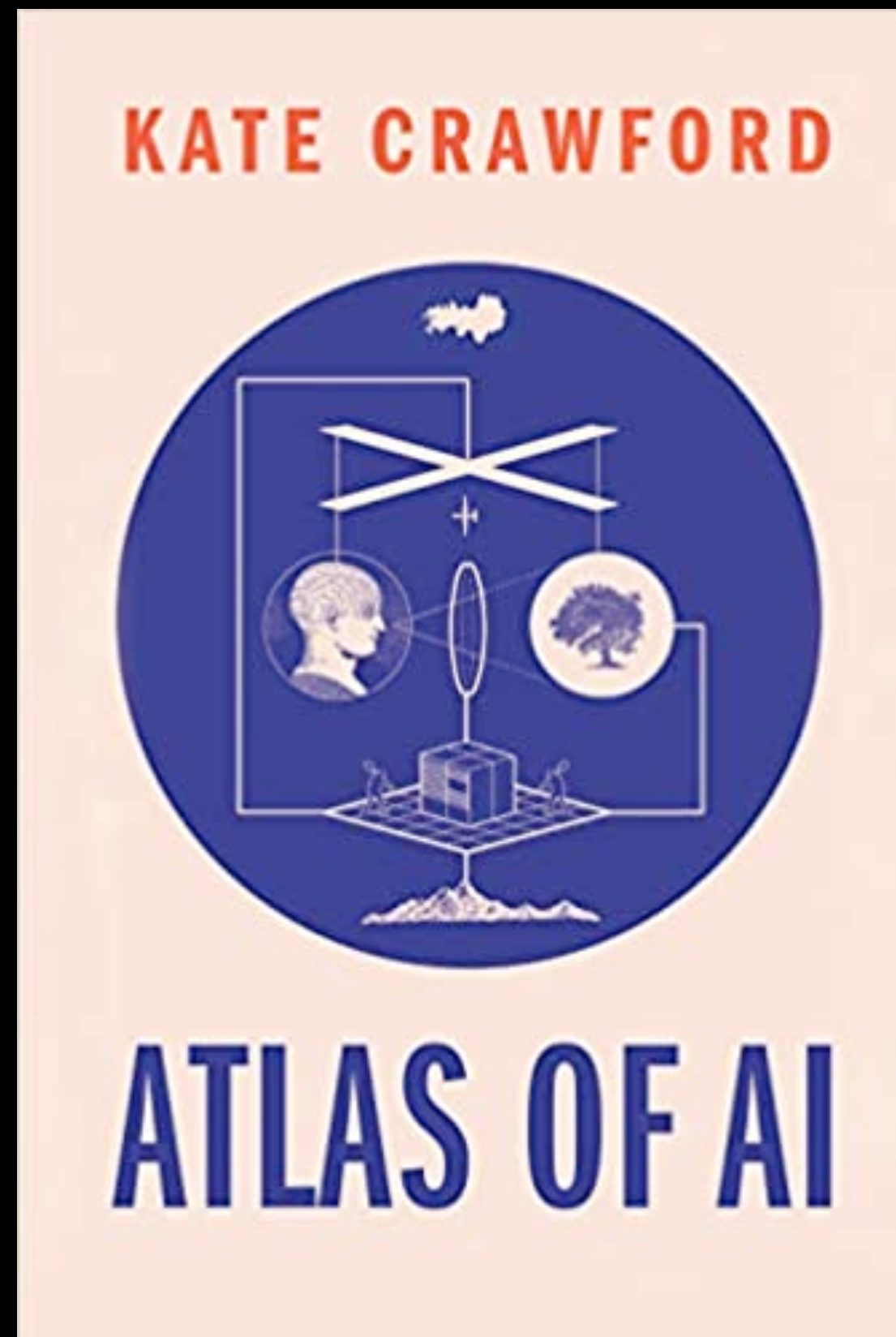
Artificial general intelligence (AGI) is the *hypothetical* ability of an intelligent agent to understand or learn any intellectual task that a human being can.

It is a primary goal of some artificial intelligence research and a common topic in science fiction and futures studies.

AGI can also be referred to as strong AI, full AI, or general intelligent action.

In contrast to strong AI, weak AI or "narrow AI" is not intended to have general cognitive abilities; rather, weak AI is any program that is designed to solve exactly one problem.

AI and ML - tools not solutions



Microsoft's Kate Crawford: 'AI is neither artificial nor intelligent'



<https://www.theguardian.com/technology/2021/jun/06/microsofts-kate-crawford-ai-is-neither-artificial-nor-intelligent>

AI and ML - tools not solutions



<https://www.pngall.com/robot-png>

<https://webstockreview.net/explore/gingerbread-clipart-cookie-cutter/>

@sebrose

@claysnow.co.uk

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The first agile value

Individuals and interactions
over
tools & processes

Principle 1

Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.

Principle 2

Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.

Principle 3

Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.

Principle 7

Working software is the primary
measure of progress.

Principle 9

Continuous attention to
technical excellence and good
design enhances agility.

Principle 11

The best architectures,
requirements, and designs
emerge from self-organizing
teams.

Over to you ...

Over to you ...

- Can low/no code solutions “be agile”?

Over to you ...

- Can low/no code solutions “be agile”?
- Are they any less agile than other approaches?

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Three appropriate solutions

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Misalignment of business & IT -

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Time-to-market & speed -

continuous delivery

Three appropriate solutions

Misalignment of business & IT -

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Shortage of skilled people -

address hiring policies

Takeaways

Takeaways

**Essential
complexity
should not be
simplified**

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**AI and ML are tools not
solutions**

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Takeaways

**Challenges
incorporating
into agile**

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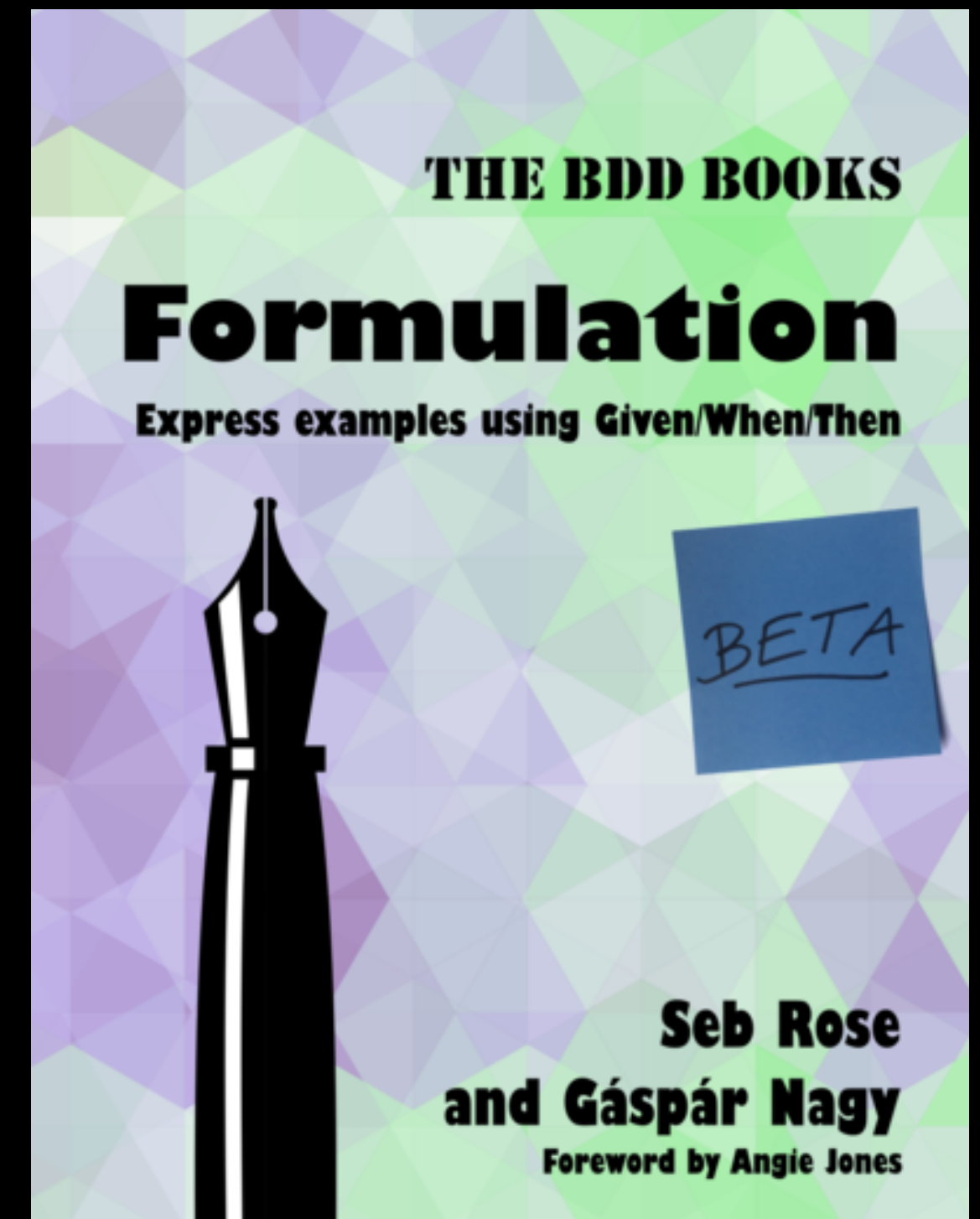
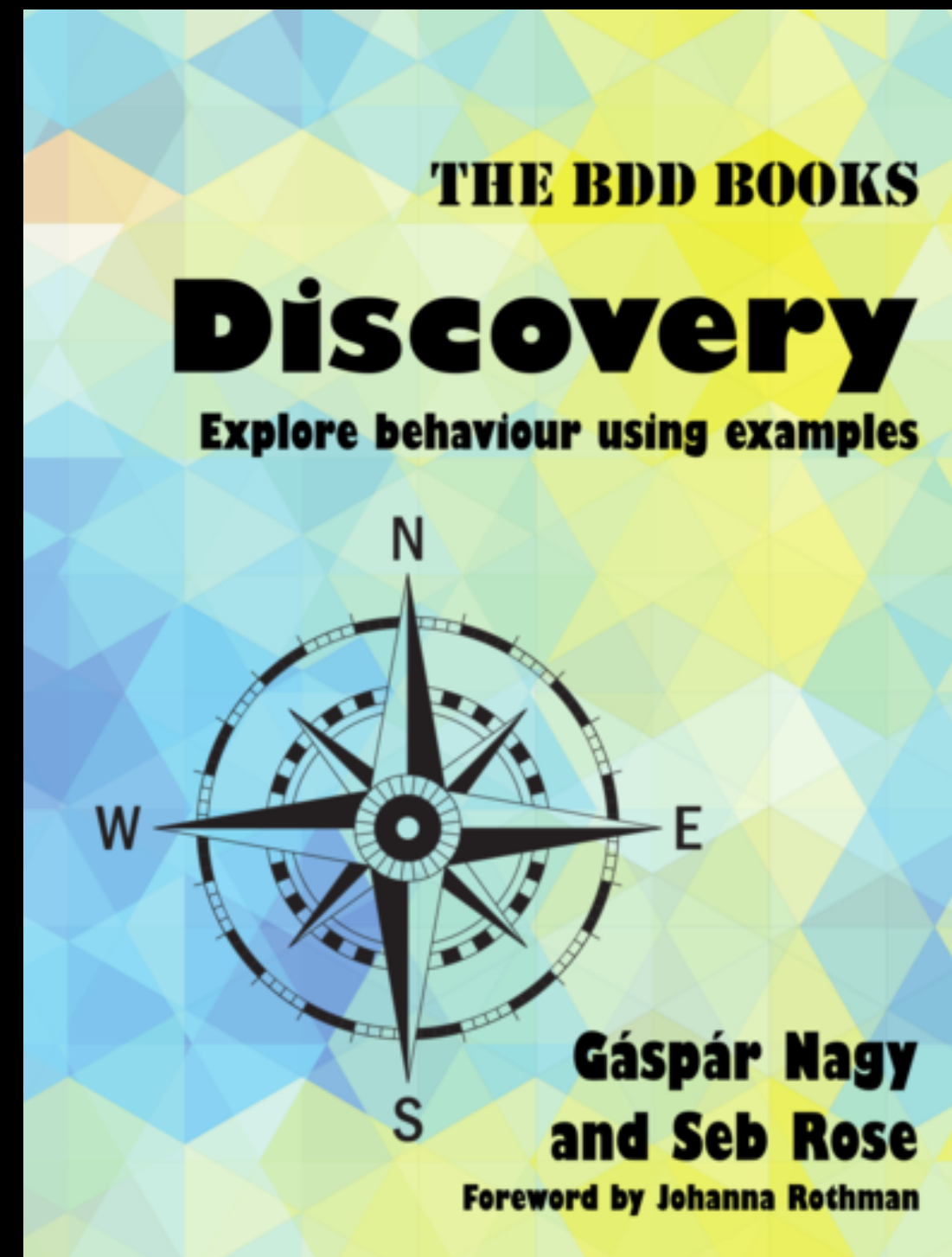
Takeaways

**Better, faster,
cheaper for limited
domains only**

**AI and ML are tools not
solutions**

**Challenges
incorporating
into agile**

**Essential
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