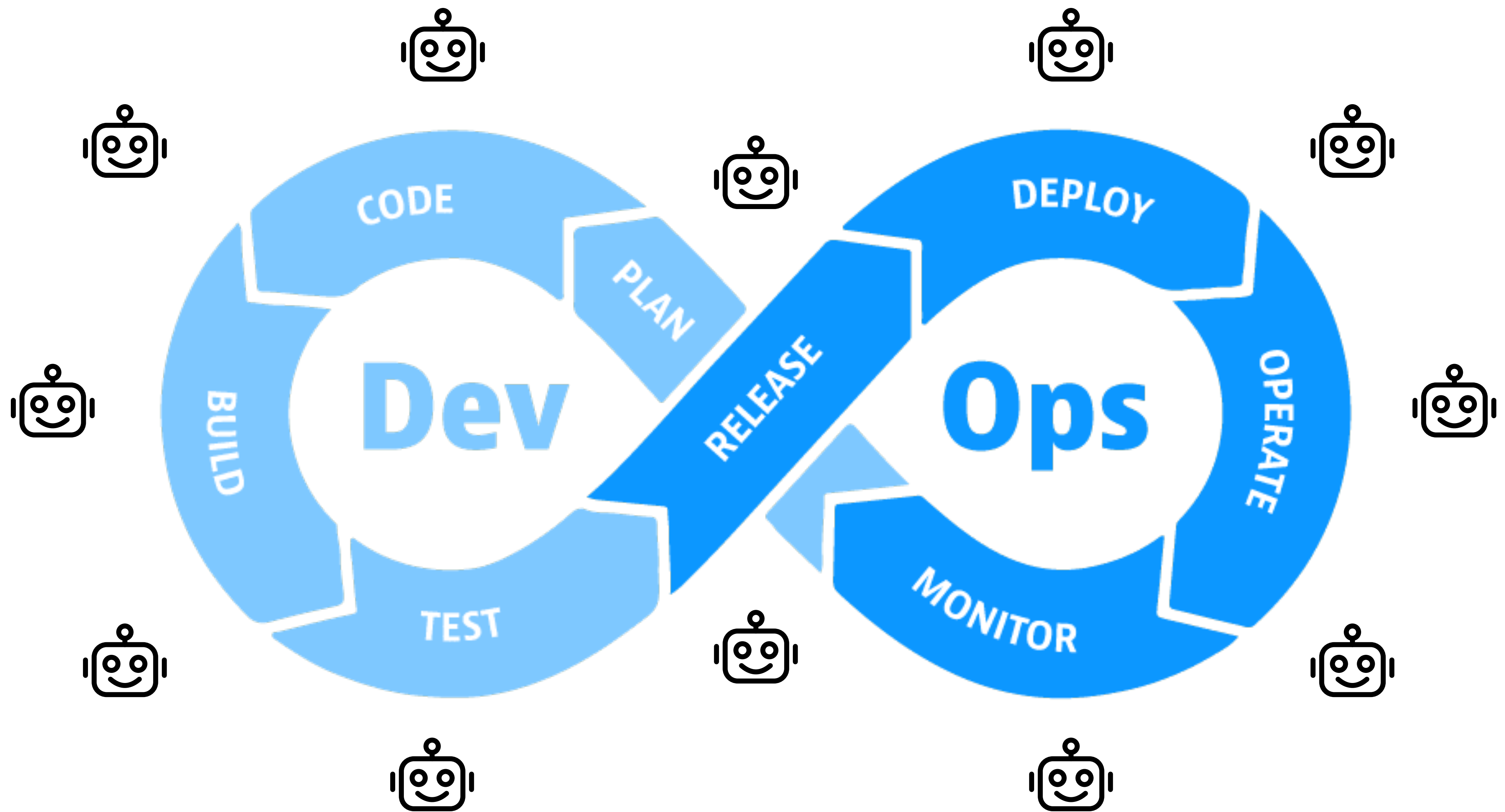


The Accidental Rise of the Supervisory Engineer

Annie Vella

Agentic Engineering Day · 22 October 2026

“We need to *reimagine*
the SDLC.”



What My Research Showed

82%

Participants perceived spending
less time writing code

Reviewing

The only task participants leaned
towards spending more time on

“Creation to verification shift”



You're Still Accountable

```
1,847 you 2 minutes ago | Accept all changes
1,848 you 2 minutes ago | Accept all changes
1,849 you 2 minutes ago | Accept all changes
1,841 you 2 minutes ago | Accept all changes
1,842 you 2 minutes ago | Accept all changes
1,843 you 2 minutes ago | Accept all changes
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1,868 you 2 minutes ago | Accept all changes
1,870 you 2 minutes ago | Accept all changes
1,871 you 2 minutes ago | Accept all changes
1,872 you 2 minutes ago | Accept all changes

import { PaymentService, PaymentResult } from './paymentService'
import { db } from './databaseClient';

export async function processCustomerPayment(customerId: string,
amount: number, paymentMethodId: string): Promise<PaymentResu
const payment = new PaymentService(db);
if (!customerId || amount <= 0) {
  throw new Error('Invalid payment parameters');
}
const paymentRecord = {
  customerId, amount, paymentMethodId, status: 'PENDING'
};
const savedRecord = await payment.createRecord(paymentRecord)

if (paymentMethodId === 'TEST_SUCCESS') {
  await payment.updateStatus(savedRecord.id, 'SUCCESS');
  return { success: true, transactionId: savedRecord.id };
} else {
  await payment.updateStatus(savedRecord.id, 'FAILED');
  return { success: false, error: 'Payment declined' };
}
}
```

“Fall Guy”

Our Roles Are Changing

Supervisory Engineering Work

Directing

Evaluating

Correcting

We haven't
deliberately redesigned
the software engineer role.

Researchers Studied This Already

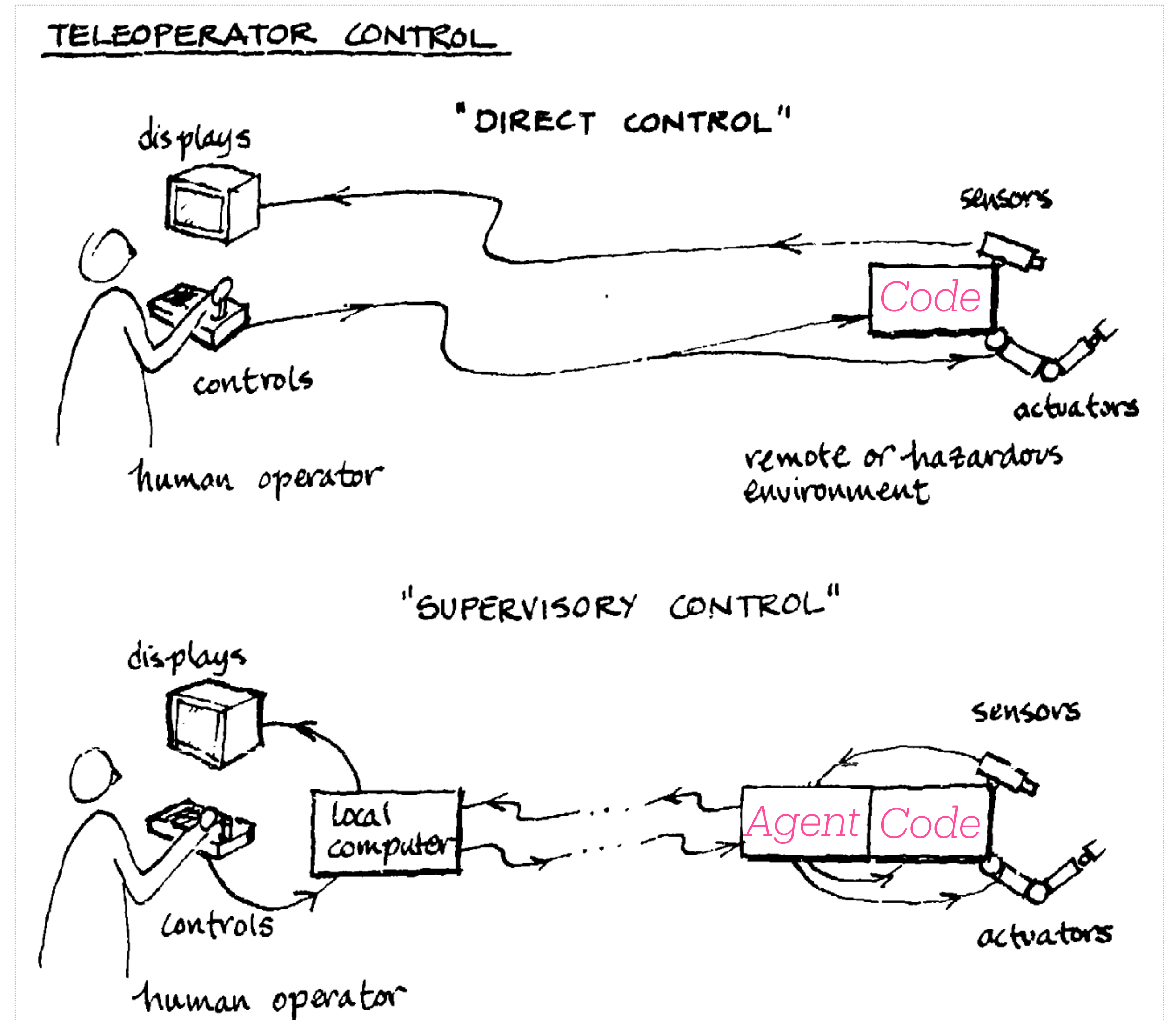


Human Factors

How people and systems work together, designed for human wellbeing *and* system performance

Supervisory Control

Means one or more human operators are intermittently programming and continually receiving information from a *computer that itself closes an autonomous control loop* through artificial effectors to the controlled process or task environment.



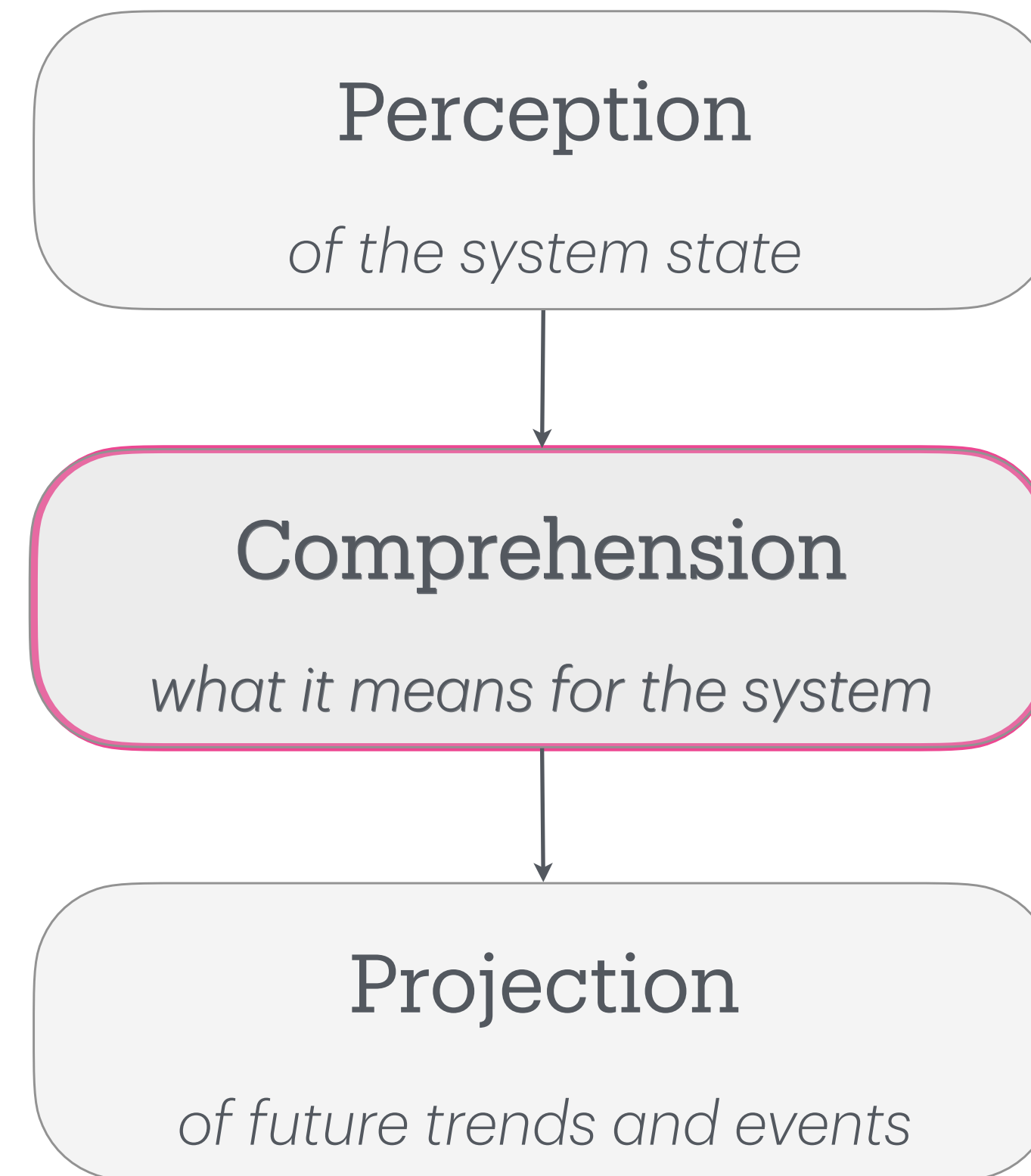
Levels of Control in Automation

<u>Level of Automation</u>		<u>Roles</u>	
		<u>Human</u>	<u>System</u>
None	1	Decide, Act	—
Decision Support	2	Decide, Act	Suggest
Consensual AI	3	Concur	Decide, Act
Monitored AI	4	Veto	Decide, Act
Full Automation	5	—	Decide, Act

Figure 1. *Levels of control in automation.*

The Out-of-the-Loop Performance Problem

Situation
Awareness

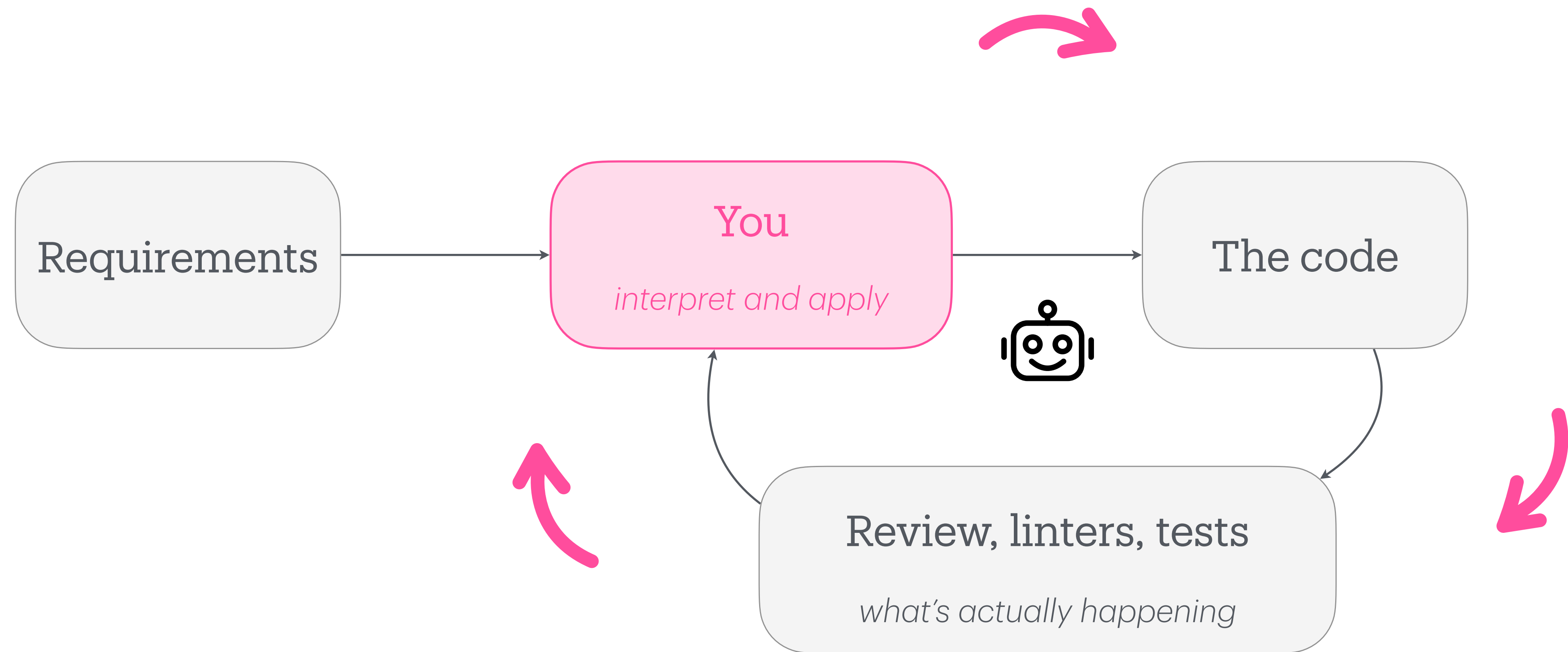


We're losing *control*.

“The human monitor has been
given an *impossible task*”

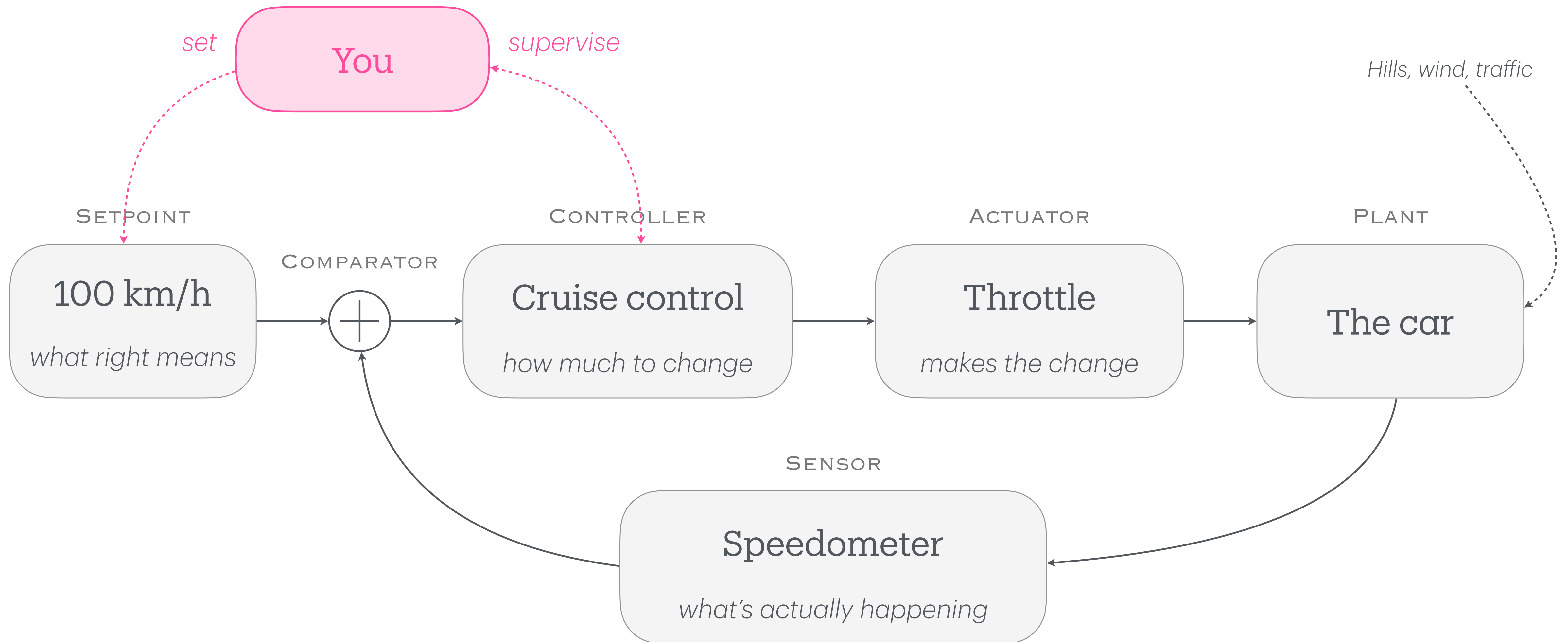
Lisanne Bainbridge · Ironies of Automation · 1983

The Inner Loop of Software Development

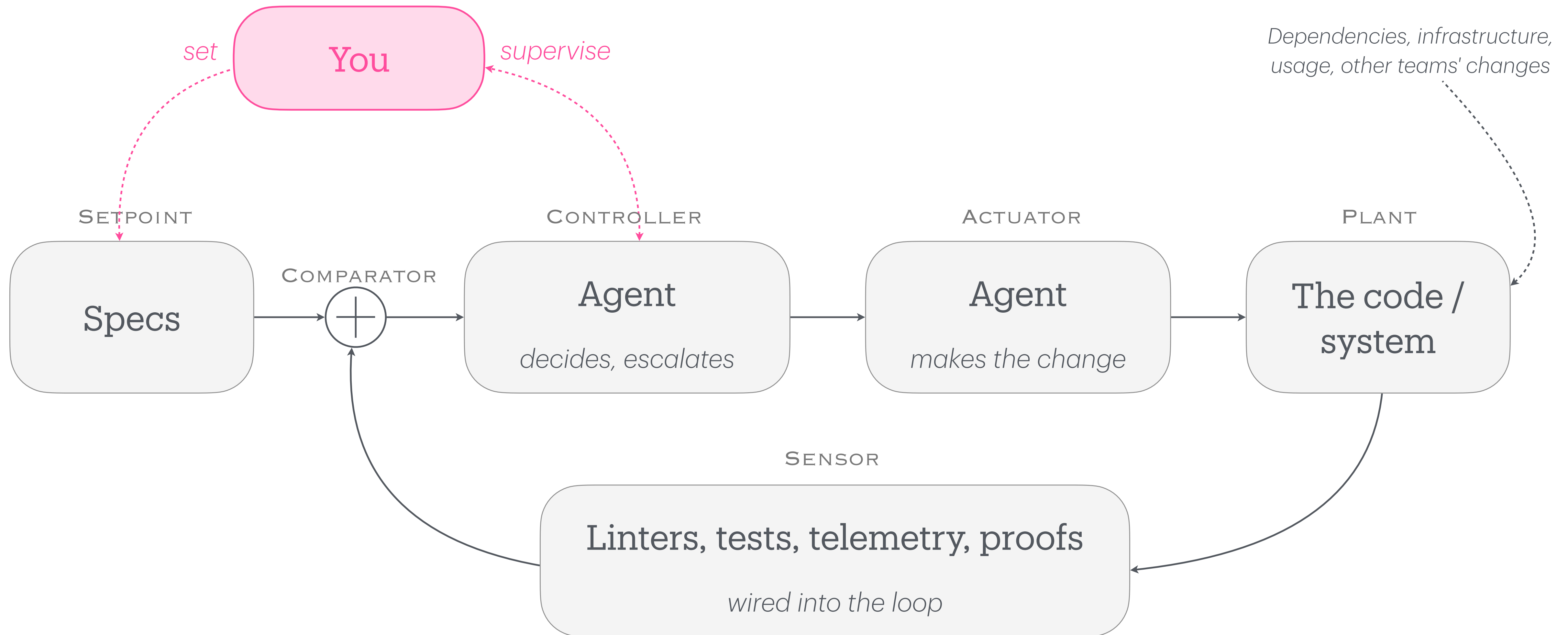


We used to be the
control mechanism
in the SDLC.

Control Systems: Cruise Control



The SDLC As A Control System



Stop Following The SDLC. Start Building It.

A process we follow



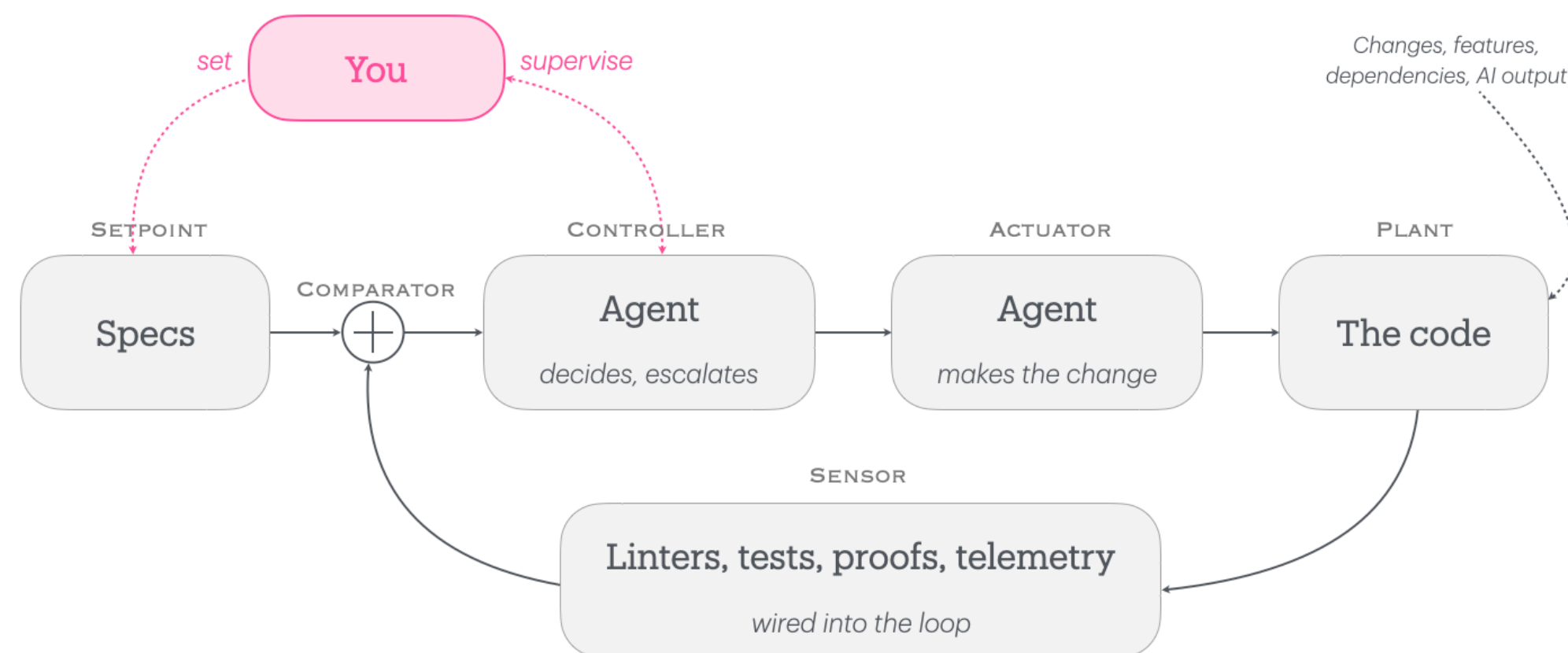
A system we build
and supervise

“... will require even greater
technological ingenuity
than does classic automation.”

Lisanne Bainbridge · Ironies of Automation · 1983

Two Calls to Action

*Boldly reimagine
the SDLC*



*Deliberately redesign
the software engineer role*

Directing

Evaluating

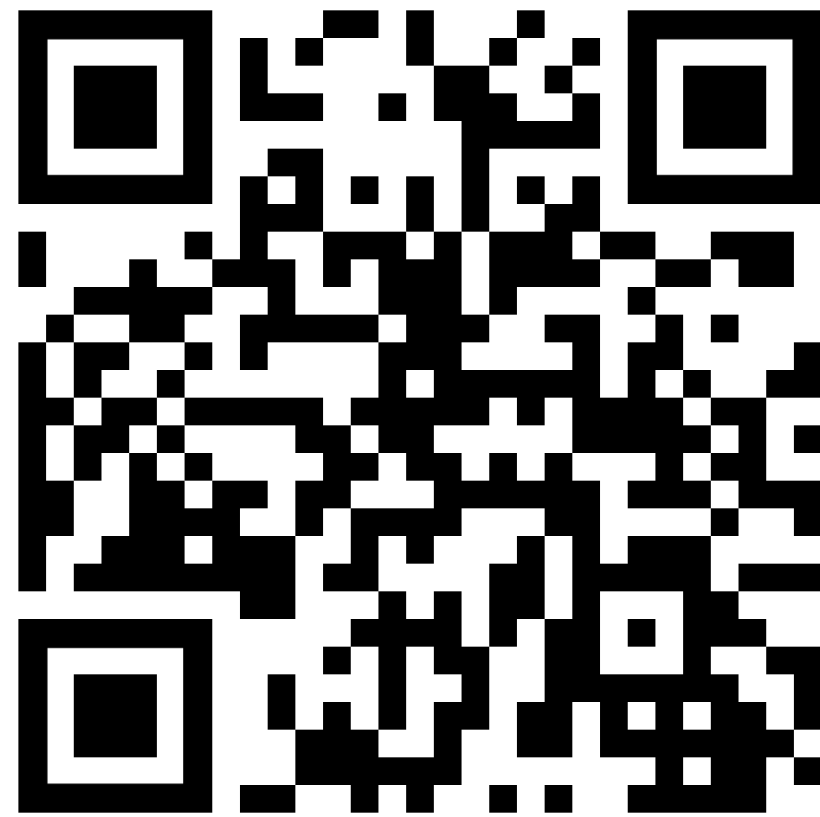
Correcting

Supervisory Engineering Work

It doesn't have to happen by
accident.

Thank you

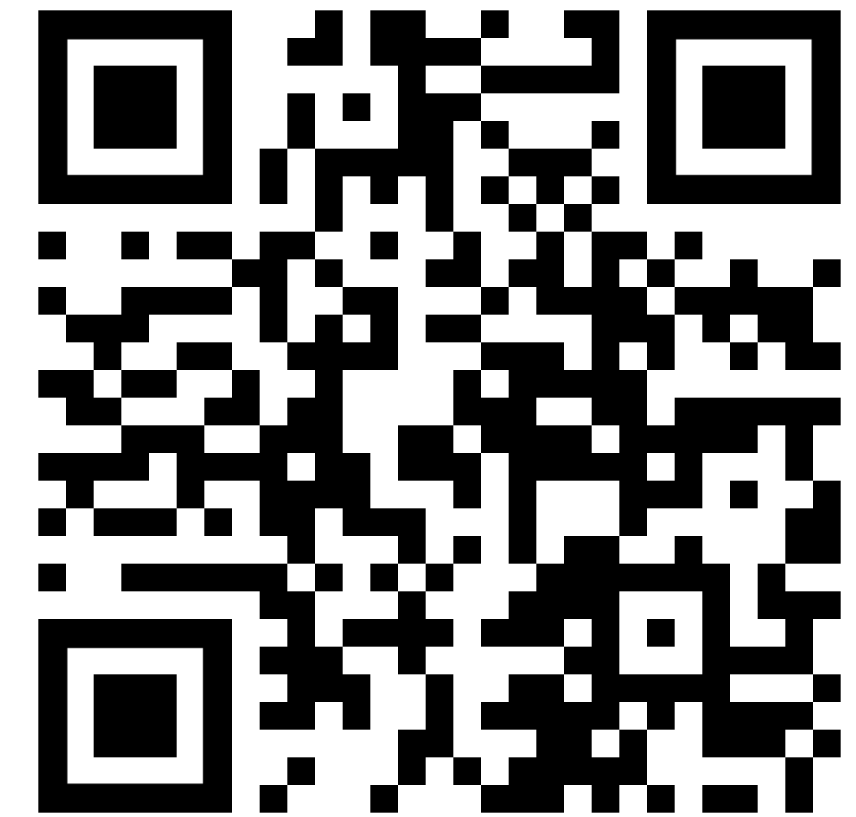
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Study Paper