

Fixing Tools Not Problems

Our Long Journey The Tool Treadmill Part 1

Part 2 of 7: Steps 1-3



The Software Treadmill

Solving One Problem Creating Another

How building software changed a long road kind of a **treadmill**.

Let's trace the steps and the pattern of added complexity.



Step 1 Starting Out

Raw Control e g C

- We had **full control** but wow hard work!
- Had to write everything manage memory carefully.
- Easy to make mistakes slow progress.



Step 1 Summary

Baseline Complexity

- Problem Solved Nothing (Baseline).
- New Problem Manual Effort/Risk.



Step 2 Libraries Frameworks Arrive

Reusable Code Components Helped

These helped!

Got pre-built code pieces.

Didn't have to rewrite basic stuff constantly.



Step 2 The Downside

Dependency Hell Framework Learning Curve

- But then we had "DLL Hell" things breaking from library conflicts.
- Had to learn huge complicated frameworks.



Step 2 Summary

Boilerplate vs Dependencies

Problem Solved Didn't have to write basic stuff.

New Problem Managing
dependencies and complex
frameworks.



Step 3 Easier Languages

VB C Java Python etc

Made coding faster with automatic memory management (GC).

Great!

Simplified many core coding tasks.



Step 3 The Ecosystem Explosion

Constant Change Information Overload

- But worlds around these languages got huge.
- So much to learn constantly changing.



Step 3 Summary

Less Low Level Work More Learning

- Problem Solved Less low-level coding work.
- New Problem Keeping up with giant ecosystems.



Insight

Early Layers of Complexity

- These first steps brought progress but also layers of overhead.
- We started spending time managing the tools themselves.



Next

Next The Treadmill Speeds Up

Next we enter the era of Big Data

Containers K8s Microservices.

The complexity pattern continues and intensifies.

Agi

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