SRE: High ROI Activity

The premise behind any investment is to capture value. An asset that generates income or appreciates would be considered an investment. Time can be an investment... and is a finite resource - every moment you spend on one thing is a moment that cannot be spent on another, therefore every moment matters. Where can an SRE invest their time and cause the greatest impact (and yield the highest value)? Let's take a step back and look at a physical manufacturing process (much of this is taken from Andrew Grove's book "High Output Management").

Take an imaginary furniture store that sells luxury wooden ergonomic chairs to SREs. The full manufacturing process looks like this: obtain the raw materials, assemble the raw materials into a chair and deliver the chair.

Assuming the raw materials chair costs $100 dollars, there are 5 steps in the process each costing $200 ($1100 – 5 hours per step) and $200 to deliver. The entire process costs $1300. A customer called us to say that the chair is defective, and they want the chair replaced. We lost $1300. **When was the best moment to catch a production issue? *Before* the chair is completed and the earlier the better.**

If the issue is caught pre-production when the raw materials arrive, only $10 is lost (not including time wasted, reputational damage avoided or the opportunity loss). The cost is the lowest at the beginning of the process.

Now let's upgrade this process. We introduce inspections and testing to our process. The new process: obtain the raw materials, inspect the raw materials, assemble the chair, after every assembly step test the chair, sit in the chair once it is completed, deliver the chair. Regardless of where the issue is located, by having this new process we will ensure our investment has the greatest yield.

In technology usually our assets are time instead of money. Where can we apply this to lesson in the world of technology? CICD, Observability ….

1. When we deploy a new feature are we testing it thoroughly before it reaches production?
2. When our monitoring detects an issue are we automating validation steps before involving an engineer?
3. When XYZ happens are we doing something to catch it or stop it before it incurs a greater cost?